

LONGHORN ARMY AMMUNITION PLANT

KARNACK, TEXAS

ADMINISTRATIVE RECORD

VOLUME 2 of 2

1988

**Bate Stamp Numbers
001252 - 001909**

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 2 of 2

1988

**B. Title: Final Report - RCRA Facility Assessment (RFA)
Group(s): All
Site(s): LHAAP-1 through LHAAP-34
Location: Longhorn Army Ammunition Plant, Marshall, Texas
Agency: Texas Water Commission
Author(s): Texas Water Commission
Recipient: U.S. Army, Longhorn Army Ammunition Plant
Date: April 8, 1988
Bate Stamp: 001252 - 001909**

July 12, 1995

001252

RCRA FACILITY ASSESSMENT (RFA)

CONDUCTED BY

TEXAS WATER COMMISSION

FOR

LONGHORN ARMY AMMUNITION PLANT

APRIL 8, 1988

PRELIMINARY REVIEW FACILITY CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
 EPA I.D.#: TX 6213820529
 HAZIT #: TX 05886

Reviewer: Alan Church
 Date: 8 April, 1988
 Amended: 9 June, 1988

A. Waste Management Units:

1. RCRA-Regulated Units (material partially derived from Reference 2)

LHAAP-2 Vacuum Truck Overnight Parking Lot
 LHAAP-10 Bldg. 31-W, Drum Storage
 LHAAP-15 49W Drummed Waste Storage Shed
 LHAAP-16 Old Landfill
 LHAAP-18 Burning Ground No. 3
 LHAAP-19 24X Holding Area
 LHAAP-22 Open Burning Cages, East, Center, and West Cages
 LHAAP-23 Open Burning Pans, North Pan & South Pan
 LHAAP-24 Unlined Evaporation Pond/ Rocket Motor Washout Lagoon
 LHAAP-25 Bldg. 41X
 LHAAP-28 Magazine Area
 LHAAP-35 Explosive Waste Pads (27 pads)

2. Solid Waste Management Units: (material partially derived from Reference 2)

LHAAP-1 Inert Burning Grounds
 LHAAP-3 Bldg. 722-P, Paint Shop
 LHAAP-4 Pilot Wastewater Treatment Plant
 LHAAP-5 Power House Boiler Ion Exchange Salt Evaporation
 LHAAP-6 Bldg. 54-F Collection Point
 LHAAP-7 Bldg. 50-G, Drum Processing Area
 LHAAP-8 Bldg. 29-A, Quality Assurance Laboratory Collection Point
 LHAAP-9 Sewage Treatment Plant
 LHAAP-11 Suspected TNT Burial Site at Avenues P and Q
 LHAAP-12 New/Active Landfill
 LHAAP-13 Suspected TNT Burial Between Old and Active Landfills/ Acid Dump
 LHAAP-14 Area 54, Burial Ground
 LHAAP-17 Burning Ground No. 2/ Flashing Area
 LHAAP-20 25X Washout Pad
 LHAAP-21 Air Curtain Destructor
 LHAAP-26 Construction Materials Landfill
 LHAAP-27 South Test Area/Bomb Test Area/ IST-1
 LHAAP-29 Former TNT Production Area
 LHAAP-30 TNT Red Water Pipeline
 LHAAP-32 Former TNT Waste Disposal Plant
 LHAAP-34 Industrial Wastewater Sump Network (124 sumps)

3. T.S.C.A. - Regulated Units: (material partially derived from Reference 2)

LHAAP-31 Bldg. 707C
 LHAAP-33 Bldg. 701

B. Reviewed Documents:

1. RCRA: Part A Yes Part B Yes Permit No
2. CERCLA: Notification - May 22, 1981, May 27, 1981 No
3. Inspection Reports: May 22, 1981, May 27, 1981
TWC, CMI Reports: 6/2/83, 6/6/84, 6/27/84, 6/29/84,
8/13/85, 11/20/86
TWC, CMI Reports: 6/2/83, 6/6/84, 6/27/84, 6/29/84,
8/13/85, 11/20/86
TWC Open Dump Inventory: 4/25/83, 1/20/86
TWC & EPA Joint Inspection: 11/11, 11/12, 11/13/1985
& EPA Joint Insp. 1/26, 1/27/88
11/11, 11/12, 11/13/1985
1/26 1/27/88
4. Enforcement Actions:
None found
5. Other Information:
Waste Analysis Plan Composed 9/84
Closure/Post Closure Plan Composed 9/84
NPDES Industrial Wastewater Treatment Permit No. TX 0000035
Rocket motor washout Pond Closure Plan approved 4/19/85. TX 0000035
Rocket motor washout Pond Clean Closed 4/28/86.
Groundwater monitoring initiated and continued on applicant's own volition, 1983 to present day.

C. Summary:

The Longhorn Army Ammunition Plant is located in the northeast corner of Harrison County, Texas, about 10 miles from the Louisiana border. The installation covers 8,521 acres and is responsible for the manufacture of propellants and chemical materials, and the loading, assembly and packing of pyrotechnic signals and rocket motors. The installation is operated under contract by Morton Thiokol, Inc. The facility workforce consists of approximately 900 civilian employees and military personnel.

Preliminary reconnaissance information suggests that RCRA Facility Investigation Studies (RFI's) be performed on some solid waste management units. Table 1 presents those units for which an RFI is considered apropos, and suggests an initial avenue of approach for each study. Tables 2 and 3 present constituents for which testing should be conducted.

TABLE 1²Units Under Suspicion for Release

<u>Unit</u>	<u>Recommended Action</u>
LHAAP-11	Several monitoring wells should be installed to verify presence or absence of significant ground-water pollution. The wells should be sited by a qualified professional with experience in geohydrology. Water Samples should be analyzed for the list of parameters shown in Tables 2 and 3.
LHAAP-12	Sampling of the existing monitoring wells should be resumed. Samples should be analyzed for the list of parameters shown in Tables 2 and 3.
LHAAP-13	Additional soil samples should be collected at the surface and at a depth of 5 feet in the bare ground areas. Samples should be analyzed for the parameters listed in Tables 2 and 3.
LHAAP-16	Additional monitoring wells should be installed in the downgradient direction. Those wells and the existing wells should be sampled and analyzed for the parameters shown in Tables 2 and 3.
LHAAP-17	Additional monitoring wells and soil samples are needed to define the extent of contamination from Burning Ground No. 2 and possible migration of contamination from Burning Ground No. 3. The soil and water samples should be analyzed for the parameters listed in Tables 2 and 3. Additional investigation and ground-water quality assessment that included additional wells was initiated by Army Corps of Engineers in September 1987.
LHAAP-18	The presence of high levels of methylene chloride in Well 120 suggests that the sawdust pits were a major source of ground-water contamination. Additional test wells are needed in the western and southwestern portion of Burning Ground No. 3 to define the extent of this contamination. The wells should be sampled and analyzed for the parameters listed in Tables 2 and 3. Additional investigation and ground-water quality assessment that included additional wells was initiated by Army Corps of Engineers in September 1987.
LHAAP-24	Continue the present monitoring program.
LHAAP-29	A thorough investigation of the soil and surface water drainage in the area should be conducted. Soil samples should be collected at the surface and at depth. The soil and water samples should be analyzed for explosives contamination. Recommended analyses appear in Tables 2 and 3.
LHAAP-30	The Redwater Pipeline should be removed. During its removal, samples should be collected from the underlying soil. Soil samples should be collected along the length of the pipeline at and below the pipeline depth. Soil samples should be analyzed for explosives contamination. Recommended analyses appear in Tables 2 and 3.

TABLE 2²

Analyses for Soil Samples

Explosive Compounds

TNT
 2,4-DNT
 2,6-DNT
 RDX
 HMX
 Tetryl

Extraction Procedure Toxicity - Metals

Arsenic	Mercury
Barium	Nitrate
Cadmium	Selenium
Chromium	Silver
Lead	

Other Parameters

Total Nitrogen

TABLE 3²

Analyses for Water Samples

Compounds

Volatile Organic Compounds
 Barium
 Cadmium
 Chromium
 Nitrate/Nitrite
 Chlorides
 Total Dissolved Solids

Explosive Compounds

TNT
 2,4-DNT
 2,4-DNT
 RDX
 HMX
 Tetryl
 Trinitrobenzene

D. Recommended Actions:

A visual site inspection (VSI) is recommended for the entire facility to 1) obtain design, operation, and closure information for units about which partial information is known, 2) look for visual signs of releases, 3) determine status of each unit, and 4) to look for waste management units which might not otherwise be found.

References

¹Department of the Army. Proposed Elimination of Intermediate-Range and Shorter-Range Missiles, February, 1988.

²U.S. Army Environmental Hygiene Agency. Groundwater Contamination Survey No. 38-26-0857-87 Evaluation of Solid Waste Management Units. Longhorn Army Ammunition Plant, Marshall, Texas, Aberdeen Proving Ground, Maryland: U.S. Army, 18-22 May, 1987.

ATTACHMENT I¹

Pollutant Dispersal Pathways

Surface Runoff Discharges:

The area surrounding Longhorn Army Ammunition Plant is characterized by rolling hills and lakes, with elevations ranging from 170 feet to 338 feet above MSL. Soils are a mixture of sand, silt and clay, with associated permeabilities.

The facility is located on the southwest shore of Caddo Lake, a shallow lake of approximately 40,000 acres. Surface runoff enters Caddo Lake via three small streams, Harrison Bayou, Caddo Lake Creek, and Goose Prairie Bay Creek, which flow through the installation. Water for installation use is obtained from Black Cypress Bayou, which connects nearby Lake of the Pines with Caddo Lake.

Any uncontained surface spills have the potential to migrate into Caddo lake via the three on-site streams. Moreover, it is possible that surface and lower level soil strata could become contaminated by spills and seepage from surface and below-grade waste management units. It is unlikely that any contaminated soils would be used to grow food chain crops considering the size and character of the immediate area (i.e., manufacturing industrial complex).

Groundwater Contamination:

Groundwater in the region is generally found in elongated, discontinuous aquifer sands at depths of 7 to 15 feet. Groundwater flows toward Caddo Lake. The relatively high annual precipitation (45 inches), the relative shallowness of the top of the aquifer, and the fairly high permeability of the soils (on the order of 3×10^{-3} feet per minute), would suggest that some potential avenue for groundwater pollution does exist.

Airborne Contamination:

The average annual precipitation in Harrison County is 45 inches per year. The weather is warm and relatively humid, with the mean January temperature being about 47° F and the mean July temperature being about 84°F. Winds are from the south in all months except September (east-northeast) and October (south-southeast). Harrison County is in attainment status for all the pollutants in the CAA except ozone, which is unclassifiable. No ambient air quality monitoring is currently in progress in the county.

Pollutants introduced into the atmosphere by incineration devices would most likely travel northward across Caddo Lake and the rural countryside beyond.

ATTACHMENT II

Target Populations of Concern¹

Socioeconomics and Transportation: The population of Harrison County as of July 1, 1986 was approximately 57,000. The installation workforce consists of approximately 900 civilian employees and military personnel, although the number varies with production demands.

Highway access to LHAAP is provided by State Highway (SH) 43 from Marshall, Texas (population 24,921; 1980 census) approximately 14 miles southwest of LHAAP. Spur Route 449 connects SH 43 to the main gate in Karnack. Interstate Highway 20 and U.S. Highway 80 cross east-west to the south of LHAAP. U.S. Highway 80 joins I-20 near Waskom, Texas. The installation is bordered on three sides by state roads which provide access to recreational areas and communities which include the following hamlets:

Long Point (about 20 homes) 1.2 miles east; Elizabeth Church 2.2 miles southeast; Caddo Lake State Park 2.8 miles west-northwest; Town of Karnack 2.7 miles west; Town of Uncertain 1.9 miles north; South Shore residential development 2-4 miles east; Potters Point residential development 3.2 miles northeast; Annie Glade Bluff residential area 3.5 miles northwest.

Land Use and Aesthetics: LHAAP is bordered by Caddo Lake, Caddo Lake State Park and the small town of Karnack. Other surrounding land is forested, with an oil and natural gas field located to the east of LHAAP, along the Louisiana border. Caddo Lake State park is located approximately 2.7 miles west northwest of the facility. Other recreational facilities and nearby lake shore communities are within 5 miles. The town of Uncertain is 1.9 miles from the facility.

Cultural Resources: The Army's RCRA Part B Permit Application states that there are no cultural resources on the installation. However, recent information shows that there are two small historic cemeteries in the northwest section of LHAAP, and two known prehistoric sites. Potential historical sites also include the Starr Ranch site and early settler homesteads. A civil war bullet manufacturing facility and early settler homesteads may lie beyond the plant site's north boundary.

Ecology: Mild temperatures and readily available water produce an abundant and diverse plant community. This, in turn, provides a number of niches for a rich faunal community. Protection of endangered species falls under the jurisdiction of both the State of Texas and the Federal government. Species listed as threatened or endangered by the Texas Parks and Wildlife Department and occurring or potentially occurring in Harrison County include the bald eagle, red-cockaded woodpecker, paddlefish, Rafinesque's big eared bat, American swallow-tailed kite, Bachman's sparrow, wood stork, Texas horned lizard, Louisiana milk snake, northern scarlet snake, alligator snapping turtle, bluehead shiner, creek chubsucker, and blackside darter. Black bear, Louisiana milk snake, white-faced ibis, timber rattlesnake, blue sucker, shovelnose sturgeon and arctic peregrine falcon are listed as unconfirmed and at periphery of their known distribution, and as possible species in the area.

Federally-listed protected species for the area include the bald eagle and American alligator. The bald eagle has been sighted along the Louisiana side of Caddo Lake.

The red-cockaded woodpecker is an endangered species on both the Federal and state lists. The federal listing does not include Harrison County as having known existing populations. Active colony sites are known in Cass County north of Harrison County and in several east Texas counties to its south. Harrison County is within the recent historical range of this species and is between counties with active colonies.

References

- ¹ Department of the Army. Proposed Elimination of Intermediate-Range and Shorter-Range Missiles, February, 1988.

LONGHORN ARMY AMMUNITION PLANT
Karnack, Texas

RELEASE ASSESSMENT INVESTIGATION

PART I - GENERAL INFORMATION

TWC Reg. No. ISW No. 30990

EPA I.D. No. TX 6213820529

Dates of Inspection:

April 25-28

and May 2-5, 1988

A. Type of Industry:

Government-owned, contractor-operated facility to manufacture, load, pack, and assemble pyrotechnic and other explosives for military use.

B. Surface Water

1. Description of drainage patterns from facility (include stream segment numbers and names, desirable uses, water quality standards, distance to nearest downgradient surface water body, average slope of facility in percent, average slope of terrain between facility and the surface water body in percent):

This facility is located in Segment 0401 of the Cypress Creek Basin. This facility drains to Caddo Lake via the four following bayous: Harrison, Sanders, Central, and Goose Prairie. The facility borders on Caddo Lake. The average distance from a production area to the shore is about one mile. The average slope which supports drainage away from the site is about 1 percent. Caddo Lake features a swampy (e.g., indefinite) shoreline which meanders with the mildly-sloping terrain.

2. 1-year, 24-hr. rainfall in inches: 3.75 inches
3. Net Precipitation:
 - a) Mean annual precipitation: 46 inches per year
 - b) Mean annual lake evaporation: 49 inches per year
 - c) Net precipitation (a-b): -3 inches per year

C. Ground Water

SITE HYDROGEOLOGY (Courtesy of Longhorn Army Ammunition Plant 06/88)

The Longhorn Army Ammunition Plant site is situated on the north flank of the Sabine Uplift and lies on Carrizo-Wilcox deposits. Carrizo and Wilcox formations are both made up of fine to medium-grained sand interbedded with silt and clay. The predominant difference between the two formations is the higher clay content of the Wilcox. These two formations are hydraulically interconnected and generally function as a single aquifer often referred to as the Cypress Aquifer. Wells at the facility are completed in the first water encountered in the Carrizo Formation, generally within 25 feet of grade.

Precipitation is the major source of recharge to the aquifer. The precipitation percolates downward by gravity through the zone of aeration to the zone of saturation.

Regional groundwater flow is towards Caddo Lake, which is northeast of and borders the facility.

Groundwater studies conducted at the facility have identified a two layered aquifer system at the former site of the unlined evaporation pond. The upper layer of the aquifer is predominantly silty sand and clay, and is perched on the lower aquifer. A leaky aquitard of clay separates the two layers. The second or lower aquifer is predominantly sand.

The upper Aquifer appears to be a recharge mound formed beneath the former unlined evaporation pond by infiltrating water. Now that the unlined evaporation pond is closed, the mound should dissipate.

Using values reported by the facility from aquifer tests performed on selected wells around the Unlined Evaporation Pond, the permeability for the monitored zones range from 9.9×10^{-5} ft/min. (upper aquifer layer) to 9.7×10^{-3} (lower aquifer layer). This range in values further confirms the possibility of a two layer aquifer system due to lithologic change and mounding. Using Darcy's Law and hydraulic gradients computed from a potentiometric map, groundwater flow velocities range from 1.87×10^{-6} ft/min. or 1.87 ft/yr (upper layer) to 1.08×10^{-4} ft/min or 1.08×10^2 ft/yr (lower layer) in the vicinity of the unlined evaporation pond. These are moderate to low relative permeability rates.

D. Population Information

1. Population density within one (1) mile radius: 1000 residents, 1050 workers
two (2) mile radius: 1500 residents, 1050 workers
four (4) mile radius: 1800 residents, 1050 workers
2. Total population served by groundwater within a 3-mile radius:
1750 residents, 1050 workers
3. Population served by surface water: Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the facility and population served by each intake: 1050 workers @ LHAAP where Big Cypress Bayou is the surface water supply.

The surface water path is as follows: Big Cypress Bayou to Caddo Lake which flows to 12-mile Bayou which empties into the Red River near Shreveport, Louisiana. Twelve-mile Bayou is the drinking water source for Shreveport, Louisiana.

E. Distance to a Sensitive Environment:

1. Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

N/A

2. Distance to 5-acre (minimum) freshwater wetland, if 1 mile or less:

One mile -- the shoreline of Caddo Lake.

3. Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

This facility offers refuge to many endangered species. For a complete list, please refer to Attachment II in the Preliminary Review.

PART III: VISUAL SITE INSPECTION

A. Listing of all units visually inspected (may attach annotated list of units from P.A.)

LHAAP-1 Inert Burning Grounds
LHAAP-2 Vacuum Truck Overnight Parking Lot
LHAAP-3 Bldg. 722-P, Paint Shop
LHAAP-4 Pilot Wastewater Treatment Plant
LHAAP-5 Power House Boiler Ion Exchange Salt Evaporation
LHAAP-6 Bldg. 54-F Collection Point
LHAAP-7 Bldg. 50-G, Drum Processing Area
LHAAP-8 Bldg. 29-A, Quality Assurance Laboratory Collection Point
LHAAP-9 Sewage Treatment Plant
LHAAP-10 Bldg. 31-W, Drum Storage
LHAAP-11 Suspected TNT Burial Site at Avenues P and A
LHAAP-12 New/Active Landfill
LHAAP-12A Asbestos Landfill
LHAAP-13 Suspected TNT Burial Between Old and Active Landfills/ Acid Dump
LHAAP-14 Area 54, Burial Ground
LHAAP-15 49W Drummed Waste Storage Shed
LHAAP-16 Old Landfill
LHAAP-17 Burning Ground No. 2/ Flashing Area
LHAAP-18 Burning Ground No. 3
LHAAP-19 24X Holding Area
LHAAP-20 25X Washout Pad
LHAAP-21 Air Curtain Destructor
LHAAP-22 Open Burning Cages, East, Center, and West Cages
LHAAP-23 Open Burning Pans, North Pan + South Pan
LHAAP-24 Unlined Evaporation Pond/ Rocket Motor Washout Lagoon
LHAAP-25 Bldg. 41X
LHAAP-26 Construction Materials Landfill
LHAAP-27 South Test Area/Bomb Test Area/ IST-1
LHAAP-28 Magazine Area
LHAAP-29 Former TNT Production Area
LHAAP-30 TNT Red Water Pipeline
LHAAP-31 Bldg. 707C
LHAAP-32 Former TNT Waste Disposal Plant
LHAAP-33 Bldg. 701
LHAAP-34 Industrial Wastewater Sump Network
Sump at P-1 / No. 1 Sump at P-118/No. 12
Sump at P-3 / No. 2 Sump at P-118/No. 13
Sump at P-3 / No. 3 Sump at B-5 /No. 14
Sump at P-3 / No. 4 Sump at B-7 /No. 15
Sump at P-3 / No. 5 Sump at B-7 /No. 16
Sump at P-116/No. 6 Sump at B-9 /No. 17
Sump at P-116/No. 7 Sump at B-9 /No. 18
Sump at P-117/No. 8 Sump at B-10 /No. 19
Sump at P-117/No. 9 Sump at B-11 /No. 20
Sump at P-118/No. 10 Sump at B-12 /No. 21
Sump at P-118/No. 11 Sump at B-13 /No. 22

LHAAP-34 Industrial Wastewater Sump Network (continued)

Sump at B-14 /No. 23	Sump at 54-G /No. 74
Sump at B-15 /No. 24	Sump at 54-G /No. 75
Sump at B-16 /No. 25	Sump at 54-H /No. 76
Sump at Shed "C"/No. 26	Sump at 54-H /No. 77
Sump at P-9 /No. 27	Sump at 68-C /No. 78
Sump at P-122/No. 28	Sump at 68-C /No. 79
Sump at P-123/No. 29	Sump at 68-C /No. 80
Sump at 212-12/No. 30	Sump at 68-F /No. 81
Sump at 212-12/No. 31	Sump at 68-F /No. 82
Sump at 212-14/No. 32	Sump at 68-F /No. 83
Sump at 212/14/No. 33	Sump at 68-G /No. 84
Sump at 212-16/No. 34	Sump at 68-G /No. 85
Sump at 212-18/No. 35	Sump at 68-G /No. 86
Sump at 212-20/No. 36	Sump at 68-G /No. 87
Sump at 212-29/No. 37	Sump at 68-G /No. 88
Sump at 212-32/No. 38	Sump at 68-G /No. 89
Sump at 212-33/No. 39	Sump at 68-G /No. 90
Sump at 212-33/No. 40	Sump at 75-I /No. 91
Sump at 212-35/No. 41	Sump at 75-I /No. 92
Sump at 212-37/No. 42	Sump at 75-I /No. 93
Sump at 212-38/No. 43	Sump at 16-Y /No. 94
Sump at 25-C /No. 44	Sump at 34-Y /No. 95
Sump at 25-C /No. 45	Sump at 34-Y /No. 96
Sump at 25-C /No. 46	Sump at 38-Y /No. 97
Sump at 25-D /No. 47	Sump at 38-Y /No. 98
Sump at 26-E /No. 48	Sump at 38-Y /No. 99
Sump at 26-E /No. 49	Sump at 45-Y /No. 100
Sump at 26-E /No. 50	Sump at 45-Y /No. 101
Sump at 26-E /No. 51	Sump at 16-T /No. 102
Sump at 28-G /No. 52	Sump at 16-T /No. 103
Sump at 29-D /No. 53	Sump at 16-T /No. 104
Sump at 31-G /No. 54	Sump at 16-T /No. 105
Sump at 31-G /No. 55	Sump at 401 /No. 106
Sump at 32-H /No. 56	Sump at 403 /No. 107
Sump at 33-G /No. 57	Sump at 406 /No. 108
Sump at 36-B /No. 58	Sump at 408 /No. 109
Sump at 41-E /No. 59	Sump at 207 /No. 110
Sump at 42-E /No. 60	Sump at 722-P/No. 111
Sump at 42-H /No. 61	Sump at 722-P/No. 112
Sump at 45-E /No. 62	Sump at 744 /No. 113
Sump at 45-E /No. 63	Sump at 25-X /No. 114
Sump at 45-E /No. 64	Sump at 33-X /No. 115
Sump at 45-E /No. 65	Sump at 37-X /No. 116
Sump at 45-E /No. 66	Sump at 744-A/No. 117
Sump at 45-E /No. 67	Sump at 813 /No. 118
Sump at 46-A /No. 68	Sump at 725 /No. 119
Sump at 46-B /No. 69	Sump at 725 /No. 120
Sump at 50-G /No. 70	Sump at 32-H /No. 121
Sump at 54-F /No. 71	Sump at 401-C/No. 122
Sump at 54-F /No. 72	Sump No. 123
Sump at 54-G /No. 73	Sump No. 124

LHAAP-35 Explosive Waste Pads

X-1	X-14
X-2	X-15
X-3	X-16
X-4	X-17
X-5	X-18
X-6	X-19
X-7	X-20
X-8	Waste Pad @ P-116
X-9	Waste Pad @ 75-I
X-10	Waste Pad @ 54-B
X-11	Waste Pad @ Bldg. 54-F
X-12	Waste Pad @ Bldg. 26-E
X-13	Waste Pad @ Bldg. P-3
	Waste Pad @ Bldg. 813

B. Attach Site Map

Individual site maps accompany unit narratives in the Preliminary Review.

C. Areas of Concern

For the following units, which historically have managed explosive-contaminated materials, an RFI is recommended to characterize the nature and extent of releases: LHAAP-11, LHAAP-13, LHAAP-14, LHAAP-16, LHAAP-17, LHAAP-18, LHAAP-24, LHAAP-29.

The construction materials landfill is sloppily kept. Waste deposits in this non-RCRA landfill are unmonitored. A better waste management plan is recommended for this SWMU.

D. Dates of inspection: April 25-28 and May 2-5, 1988

Participants: Alan P. Church, Walter Franke, TWC; and A. Bruce Childress and Jerry Thurman, of Morton Thiokol (Longhorn).

Alan Church
Inspector Signature

21 June, 1988
Date prepared

PART IV: PENDING ACTIONS/CONCLUSIONS

(Awaiting sample results, company information)

Nothing pending.

Conclusions:**Evaluations units which have not had a consequential release:**

LHAAP-2, LHAAP-3, LHAAP-4, LHAAP-5, LHAAP-6, LHAAP-7, LHAAP-8, LHAAP-9, LHAAP-10, LHAAP-12, LHAAP-12A, LHAAP-15, LHAAP-19, LHAAP-20, LHAAP-21, LHAAP-22, LHAAP-23, LHAAP-25, LHAAP-26, LHAAP-27, LHAAP-28, LHAAP-30, LHAAP-31, LHAAP-32, LHAAP-33, LHAAP-34, LHAAP-35

Evaluated units which require further monitoring:

LHAAP-1

Evaluated units which have had evidence of a release:

LHAAP-11, LHAAP-13, LHAAP-14, LHAAP-16, LHAAP-17, LHAAP-18, LHAAP-24, LHAAP-29

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

SWMU: LHAAP-1, Inert Burning Grounds

Evidence of Release:

Very low-level explosive contamination (1.8 ug/L 1-3-5-TNB), in ground-water sample from downgradient well.

Pollutant Dispersal Pathways:

Residues could become mobilized when exposed to precipitation. Infiltration through the soil into the underlying ground water is possible. See Attachment I for further discussion.

Waste Characteristics:

Type of Wastes Placed in the Site: Burning site for inert materials identified as trash, ashes, scrap lumber, and waste from burned TNT. Also used to burn photo flash powder and other discarded materials from the Universal Match Corporation operations during the 1950's.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Burning ground.
- (2) Unit Size: 1-2 acres.
- (3) Period of Operation: 1942 until early 1950's.
- (4) General Physical Conditions: Area heavily wooded with pine forest.
- (5) Closure Method: Reforestation.

Summary:

Additional information is needed about this unit, and the area upon which it rested.

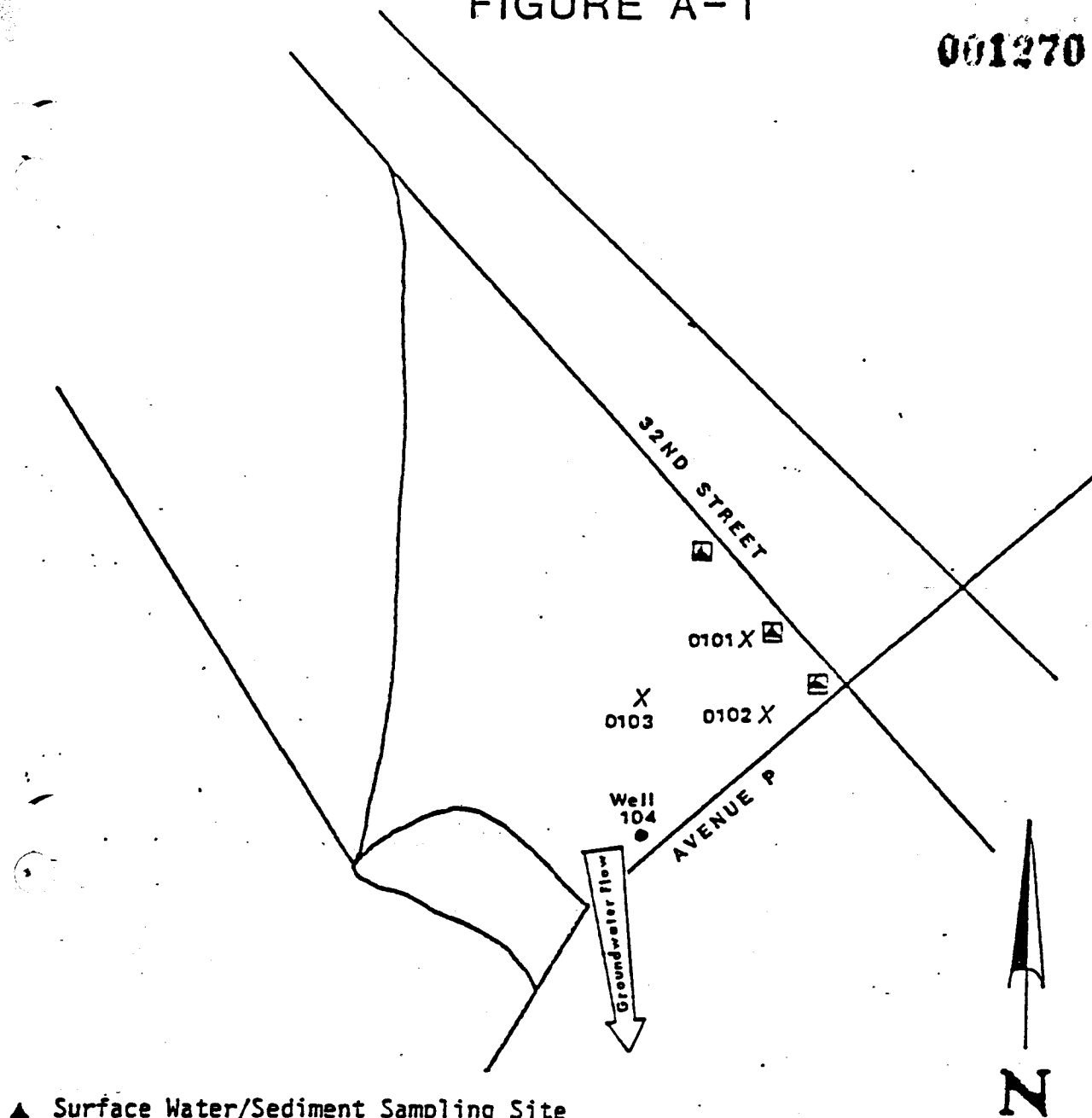
Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) visual evidence of releases, and 5) final disposition of unit.

FIGURE A-1

001270

18



- ▲ Surface Water/Sediment Sampling Site
- X Soil Sampling Site
- Well Installed During Project
- ▲ Existing AEHA Well (*AEHA No.)
- ▲ Proposed Surface Water/Sediment Sampling Site
- Proposed Well Location
- X Proposed Soil Sampling Location

APPROX SCALE 1:3400

Inert Burning Grounds

LHAAP-1

SOURCE: REFERENCE 7d

Longhorn Army Ammunition Plant 1 of 3
Karnack, Tx

April 25-28 & May 2-5 1988

PART II - UNIT EVALUATION Inert Burning Grounds

TWC Regis. No. _____

WASTE MANAGEMENT UNIT LHAAP-1

Regis. Facility No. ISW 30990

- A. Verification and description of Physical Construction and Operation
(dimensions, years of service, containment features, e.g. concrete pads,
dikes, indoor)

As depicted in the Preliminary Review.

(NO PHOTOGRAPH AVAILABLE)

- B. Characterization of Waste Materials (facility records, sample results,
process description, constituents of concern, documentation)

As depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions unit and support apparatus

Thick vegetative growth suggest that area has
not recovered from being a burning ground.

2. Rainfall controls (run-on/run-off controls, stormwater collection and disposal, analyses)

None necessary - no erosion due to
presence of vegetative mat.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

None

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

See Preliminary Review.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None

D. Other Areas of Concern

E. Summary/General Comments

Suggest sampling groundwater from well # 104 on an annual basis.

No further RFA action is recommended at this time.

001274

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

RCRA: LHAAP-2, Vacuum Truck Overnight Parking Lot with 2 tank trailers.

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

Because the truck is not always emptied before the end of the day, the possibility exists for spillage to occur in the overnight parking area. Should spillage occur, surface water and ground water could become contaminated. For further discussion, see Appendix I.

Waste Characteristics:

Industrial wastewater from plant production areas, which may include water with traces of methylene chloride, explosive powders, and epoxy resins.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Storage (< 90 days)
- (2) Design Features: Parking lot for two 5,500-gallon capacity, and two 18-wheel tank trailers each having an updraft carbureted vacuum pump engine.
- (3) Operating Practices: The tank trucks are used to pump liquid waste from the various sumps located across the installation and transport that waste to the Pilot Wastewater Treatment Plant. The trucks are not always emptied at the end of the day and are sometimes parked for the night containing a load of waste. The parking lot is located next to Bldg 704D.
- (4) Period of Operation: 15 June 1973 until present.

Summary:

Additional information is needed about this unit, and the area which it occupies.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

001276 25
Longhorn Army Ammunition Plant
Karnack, Tx
APRIL 25-26 & MAY 2-5 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-2 TANK TRUCK PARKING LOT

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

Asphalt Parking Area 150' x 120' ±, which is
isolated by a metal railing and a drainage ditch.

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

Industrial wastewater as depicted in the Preliminary
Review.

- C. Visual/Physical Inspection of Unit

1. ~~Conditions of drums~~ CONDITION OF TANKERS

The tankers were functional, free of leaks, and
in good condition. The parking lot was
without ~~ex~~ substantial cracking or holes.

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

No controls for run-on or runoff. The parking lot drains into the drainage ditch.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There was no evidence of any spillage or leakage attributable to this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known

D. Other Areas of Concern

E. Summary/General Comments

[REDACTED]

*This unit is governed by the Regulations published
in 40 CFR PART 265 SUBPART I*

*Because this is a well-managed unit, and
because there is no evidence of past mis-management,
no further RFA action is recommended.*

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

SWMU: LHAAP-3, Bldg 722-P, Paint Shop

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

Lack of impermeable containment pad allows for small possibility of offsite migration of drum spillage should spillage occur. Spilled material could migrate through soil to ground water or through surface runoff to surface water. Emissions are also possible through volatilization.

Waste Characteristics:

Paint residues including paint thinner, paints, and kerosene.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Collection point.
- (2) Design Features: One 55-gallon drum set on a gravel pad in an open-sided shed with galvanized metal roof.
- (3) Operating Practices: Paint residues from paint shop are collected here until drum becomes full. Full drum is taken from here to Bldg 31-W.
- (4) Period of Operation: Early 1970's until present.

Summary:

Additional information is needed about this unit, and the area which it occupies.

001280

29

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, and 4) visual evidence of releases.

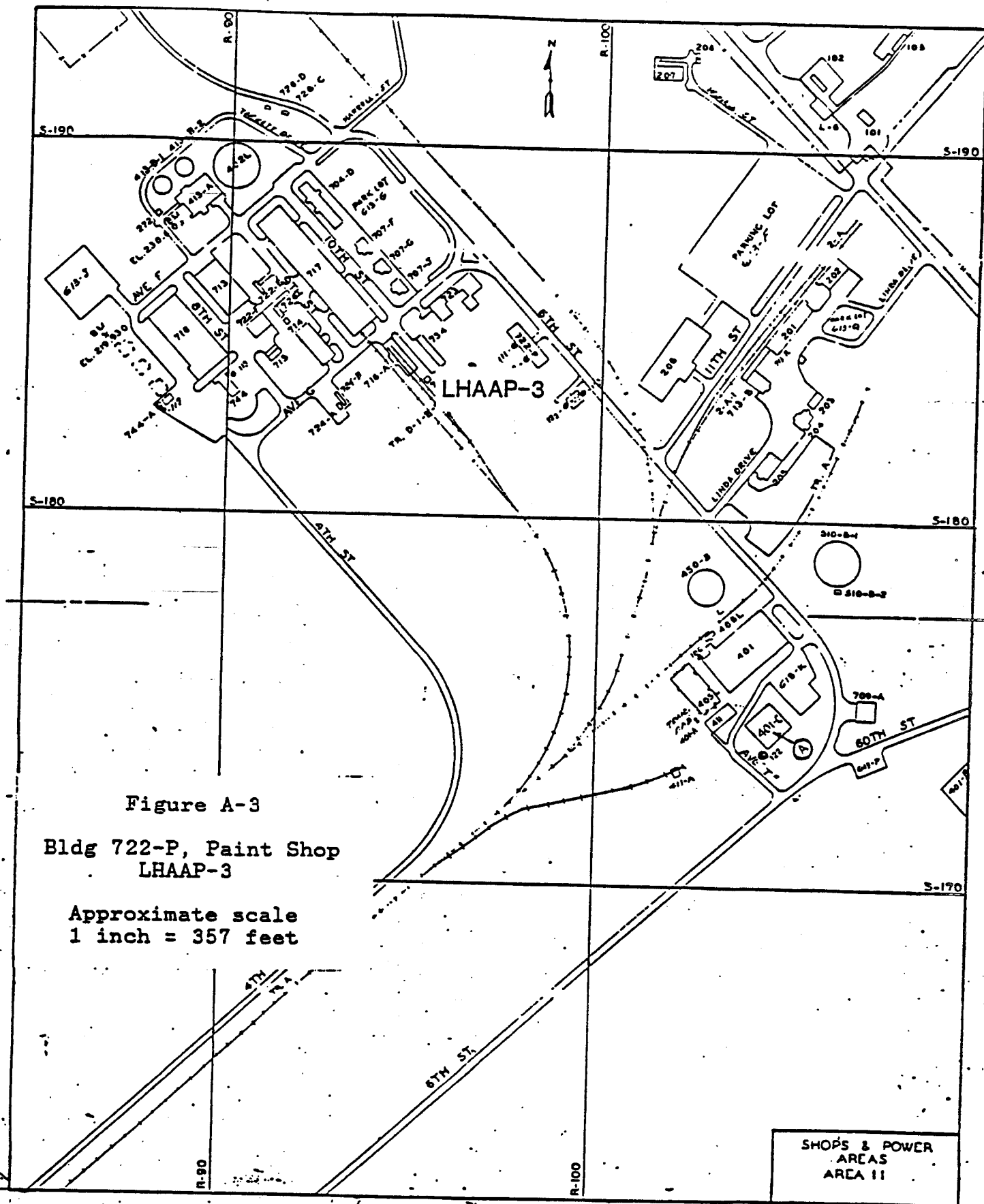


Figure A-3

Bldg 722-P, Paint Shop
LHAAP-3

Approximate scale
1 inch = 357 feet

SHOPS & POWER
AREAS
AREA II

SK-7197
CHIT 5 OF 10

Longhorn Army Ammunition Plant
Karnack, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. ISW 30990UNIT IDENTIFICATION: LHAAP-3 Paint Shop Container Accumulation

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted on the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted on the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of drums

Good Condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

*A modest sheet metal roof covers the drum.
The drum is elevated above base grade by
a wooden pallet.*

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

*No evidence of spillage or leakage that would suggest
mismanagement of this unit.*

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

*Upon inspection, it seems unlikely that this
unit would contribute to any significant
groundwater contamination.*

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

SWMU: LHAAP-4, Pilot Wastewater Treatment Plant

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

Earthen berm not impermeable to any onsite spillage. Spilled material could migrate through earthen berm into surface drainage or into ground water. Air emissions are also possible.

Waste Characteristics:

Industrial waste water from sumps across the installation.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Design Features: This plant receives the waste water from all sumps on the installation. This waste is delivered by tank truck into a cone bottomed settling tank (approximately 12,000 gallons). After settling, the wastewater is transferred to one of two storage tanks (42,000 gallons each) and then pumped through a heat exchanger to an evaporation tower. Brine water/sludge is pumped into a fiberglass brine tank (8,000 gallons), or in the past, a brine vat (200 gallons). The solids from the brine tank or vat are drummed and shipped offsite as hazardous waste. Sludges from the settling tank are blown down and drummed on a weekly basis and burned at Burning Ground No. 3.
- (2) Period of Operation: September 1984 until present.

- (3) General Physical Conditions: All of the pilot wastewater treatment plant tanks (except one of the two 42,000 gallons tanks) are enclosed within one earthen berm. The other 42,000-gallon tank is enclosed in a separate earthen berm.
- (4) Permit: Included in Texas Water Commission Permit No. 02713 as "no discharge" facility. Operating under Texas Air Control Board Exemption X-15354.

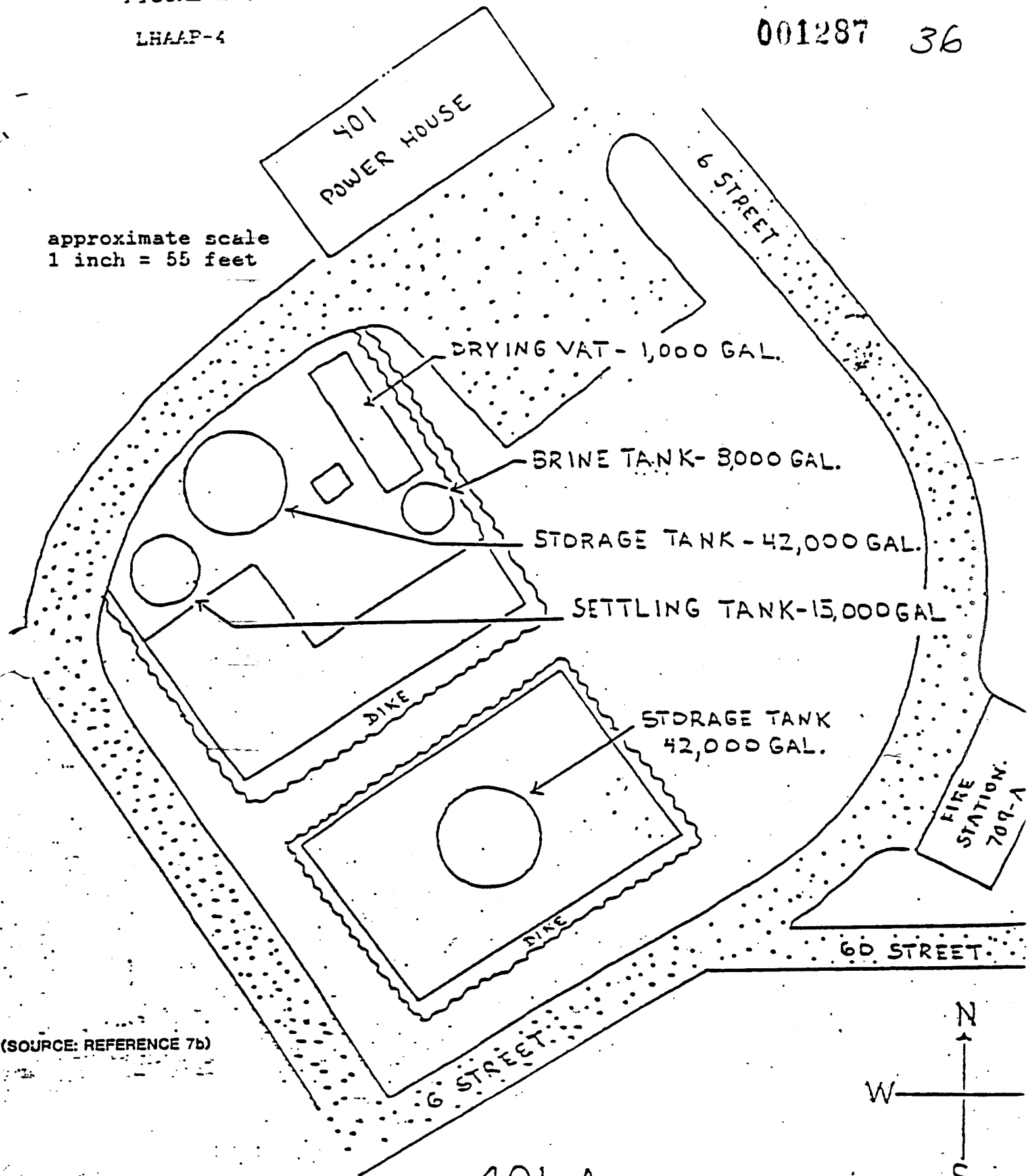
Summary:

Additional information is needed about this unit, and the area which it occupies.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

approximate scale
1 inch = 55 feet



(SOURCE: REFERENCE 7b)

401-A
PILOT WASTE WATER
TREATMENT FACILITY

001288 37

Longhorn Army Ammunition 1 of 3
Karnack, TX

April 25-28 & May 2-5, 1968

Pilot Wastewater Treatment Plant

PART II - UNIT EVALUATION

TWC Regis. No. _____

WASTE MANAGEMENT UNIT SHAAP-4

Regis. Facility No. ISW 30990

- A. Verification and description of Physical Construction and Operation (dimensions, years of service, containment features, e.g. concrete pads, dikes, indoor)

As depicted in the Preliminary Review.
This evaporative unit is the terminus of the wastewater industrial
wastewater treatment system.

- B. Characterization of Waste Materials (facility records, sample results, process description, constituents of concern, documentation)

Industrial wastewater having traces of (1) spent organic
solvents, (2) metallic salts, and (3) inert debris.

- C. Visual/Physical Inspection of Unit

1. Conditions unit and support apparatus

Upon visual inspection, it appears that this
unit is functioning well.

2. Rainfall controls (run-on/run-off controls, stormwater collection and disposal, analyses)

The unit and support apparatus occupy a concrete slab which is open to the elements.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There is no evidence of any spills or leaks attributable to this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection it seems unlikely that this unit would ~~con~~ contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

none known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 264.1 g (6) this unit
is exempt from permitting requirements -

Because this unit is well managed and gives
no evidence of past mismanagement, no further
RFA action is recommended -

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

SWMU: LHAAP-5, Power House Boiler Ion Exchange Salt Evaporation Pond .

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

See Attachment I

Waste Characteristics:

Water containing calcium, magnesium, and sodium chloride in about a 3 percent concentration.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Lagoon.
- (2) Unit Size: 5.5 Acres.
- (3) Period of Operation: 1978 until present.
- (4) General Physical Conditions: The 4-foot deep earthen lagoon is lined with polyvinyl chloride (PVC).
- (5) Operating Practices: The lagoon receives approximately 3,000 gallons per day of backwash water from zeolite treatment units at the Bldg 401 Powerhouse. Water is either evaporated from the lagoon or discharged to the sewage treatment plant.

Summary:

Additional information is needed about this unit, and the area which it occupies.

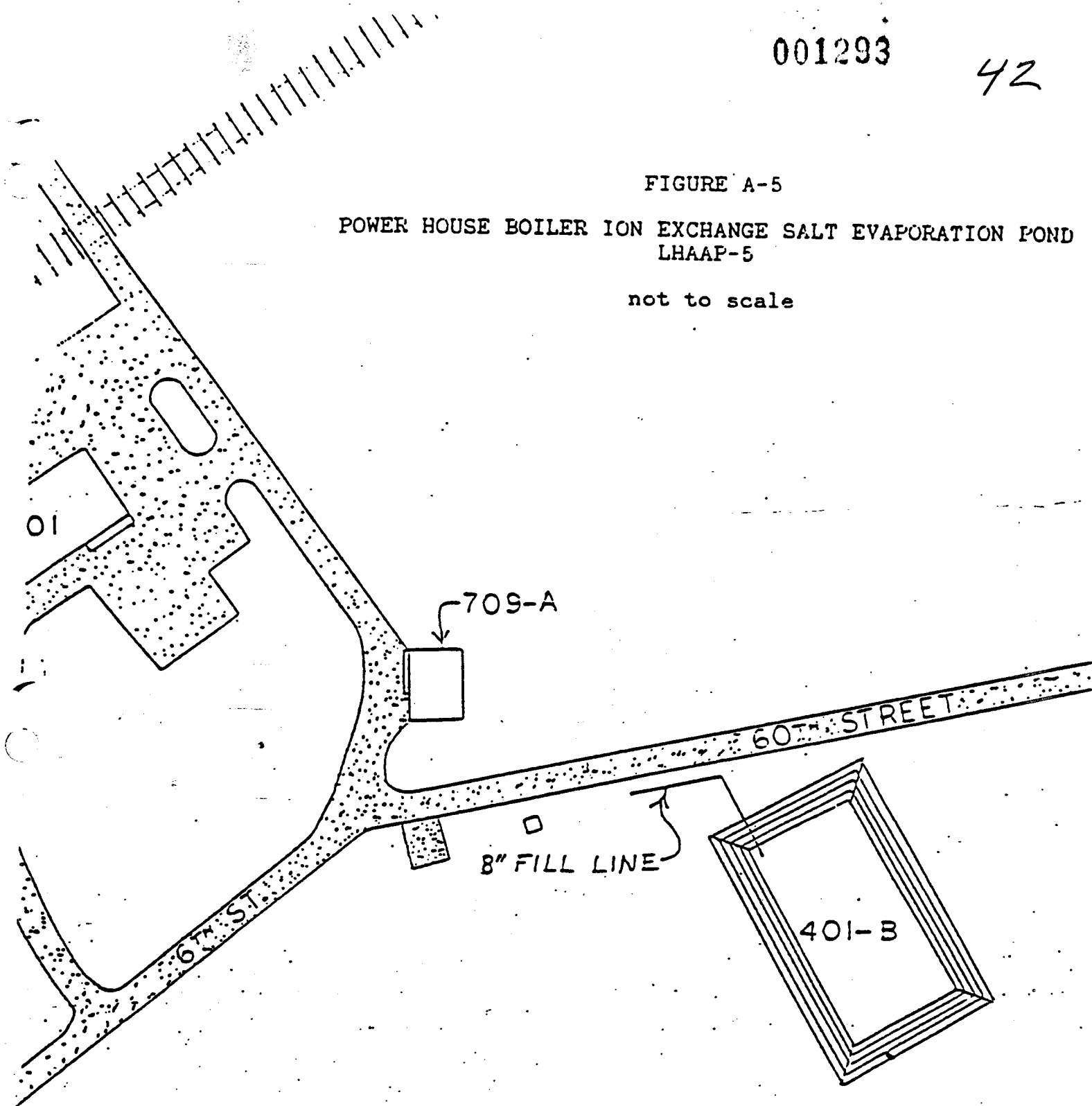
Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

FIGURE A-5

POWER HOUSE BOILER ION EXCHANGE SALT EVAPORATION POND
LHAAP-5

not to scale





East Texas Testing Laboratory Inc.

GEOTECHNICAL • MATERIALS • ENVIRONMENTAL

ENGINEERS • CHEMISTS • CONSULTANTS

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43

HOME OFFICE
1717 East Erwin
Tyler, Texas 75702
Main Office 214/595-4421
Analytical Lab 214/595-6402

HUNTSVILLE
1790 Highway 19
Huntsville, Texas 77340
409/295-5431

LONGVIEW
707 West Cotton Street
Longview, Texas 75601
214/758-0402

LUFKIN
2012 North Timberland
Lufkin, Texas 75901
409/634-5777

SULPHUR SPRINGS
1242 Main Street
Sulphur Springs, Texas 75482
214/885-6223

SAMPLE DATE 5/5/88

Date 6/28/88

Job No. 860-88

Report No. 6-8

Client: Morton Thiokol, Inc., Longhorn Army Ammunition Plant, Marshall, Texas
Date Sampled: 5/13/88 Attn: Mr. Bruce Childress
Type of Sample: Grab by Client & WITNESSED BY TWC REPRESENTATIVE
Identification or Sample No.: 88-1961 (#2067) A. CHURCH

E P TOXICITY (METALS)

<u>PARAMETER</u>	<u>RESULTS</u>	<u>EPA LIMIT</u>	<u>ANALYST</u>	<u>DATE/TIME</u>	<u>METHOD*</u>
Arsenic (mg/l)	< 0.01	5.0	Markgraf	6/21 1300	7060
Barium (mg/l)	0.40	100.0	Markgraf	6/20 1530	7080
Cadmium (mg/l)	< 0.01	1.0	Markgraf	6/6 1330	7130
Chromium (mg/l)	< 0.01	5.0	Markgraf	6/2 1300	7190
Lead (mg/l)	< 0.05	5.0	Markgraf	6/5 1120	7470
Mercury (mg/l)	< 0.001	0.2	Frazier	6/20 1004	7420
Selenium (mg/l)	< 0.01	1.0	Markgraf	6/13 1530	7740
Silver (mg/l)	< 0.01	5.0	Markgraf	6/13 1530	7760

*Test Methods for Evaluating Solid Waste, Physical Chemical Methods, SW 846, 3rd Edition
(Washington D.C.: US EPA) November 1986.

Copy to: Mr. Alan P. Church, P.E.
Texas Water Commission Hazardous
and Solid Waste Permit Section
13087 Capitol Street
Austin, Texas 78711-3087

Submitted by:

EAST TEXAS TESTING LABORATORY, INC.

Fred K. Smith, Director
Analytical and Environmental Services

001295
Longhorn Army Ammunition Plant
Karnack, Texas 44
April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
SURFACE IMPOUNDMENTS

TWC Regis. No. _____
Regis. Facility No. DSW 30990

UNIT IDENTIFICATION: LHAAP-5 Salt Evaporation Pond

- A. Verification of physical construction and operation
(dimensions, years of service, materials of construction)

As depicted in the Preliminary Review

- B. Characterization of waste materials (Facility records, sample results, process description, constituents of concern, documentation)

a mild concentration of Brine

- C. Visual/physical inspection of unit:

1. Description of dike structure, height and freeboard:

4:1 sideslope, 3 feet of freeboard
Clayey, compacted soil over a PVC liner

2. Evidence of discharges from impoundment (spill history, bypassing, inadequate run-on/run-off controls, flood prone area):

There is no evidence of the dike being
breached.

3. Evidence of actual or potential groundwater contamination (samples from mon. wells, knowledge of shallow water table, liner integrity, active seeps, leak detection records, operating practices)

Upon inspection it is unlikely that this
unit would introduce any significant contamination
into the groundwater.

4. Air quality concerns (TACB complaints, odors, air sampling records)

None known.

D. Other areas of concern:

E. Summary/General Comments:

This unit does not manage hazardous waste, or waste having hazardous constituents.

Because this is a well-managed unit, no further RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

SWMU: LHAAP-6, Bldg. 54-F, Collection Point.

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

Lack of curbing on concrete pad allows for small potential of uncontained drum spillage.

Waste Characteristics:

Acids and solvents.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Collection point.
- (2) Design Features: A single 55-gallon drum stored in a three-sided shed, approximately 8 x 10 feet in size, with fiberglass siding and a roof of galvanized metal and fiberglass. Shed was set on curbless concrete pad.
- (3) Operating Practices: Drum is used as collection point for waste solvents from production processes. Full drums are taken to Bldg 31-W.
- (4) Period of Operation: Mid 1985 until present.

Summary:

Additional information is needed about this unit, and the area which it occupies.

001299

48

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

001300

49

Longhorn Army Ammunition Plant
Karnack, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990UNIT IDENTIFICATION: LHAAP-6 - Bldg 54 F, Collection Point

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

Waste acids and solvents

- C. Visual/Physical Inspection of Unit

1. Conditions of drums

Good Condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

Protected on 3 sides and the roof -

There is little exposure to the elements

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

SWMU: LHAAP-7, Bldg. 50-G, Drum Processing Area.

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

See Attachment I.

Waste Characteristics:

Solvents, oils, and organic liquids, which include Hycar/methylethyl ketone (MEK), acid, acid/silver, solvents, polymer, paint residue, diesel fuel and water mixture, antifreeze, diacetyl pentamethylene tetramine (DAPT), and non-PCB oil.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units. Longhorn Army Ammunition Plant. Marshall. Texas 18-22 May. 1987.

Site Description:

- (1) Type of Unit: Washdown area for empty drums used in production.
- (2) Design Features (size, etc.): The drum processing is conducted in a wooden frame building 30 x 100 feet, set on concrete and having transite walls. Main washdown takes place in a separate bay, 20 x 30 feet.
- (3) Operating Practices: All washdown activities take place in a completely enclosed area. All washdown water drains to a 3,000-gallon sump outside, sump No. 70. Empty drums are either reused or flashed at the Air Curtain Destructor and sent to Bldg 49-W for disposal as scrap.
- (4) Period of Operation: June 1985 until present.

Summary:

Additional information is needed about this unit, and the area which it occupies.

Recommended Actions:

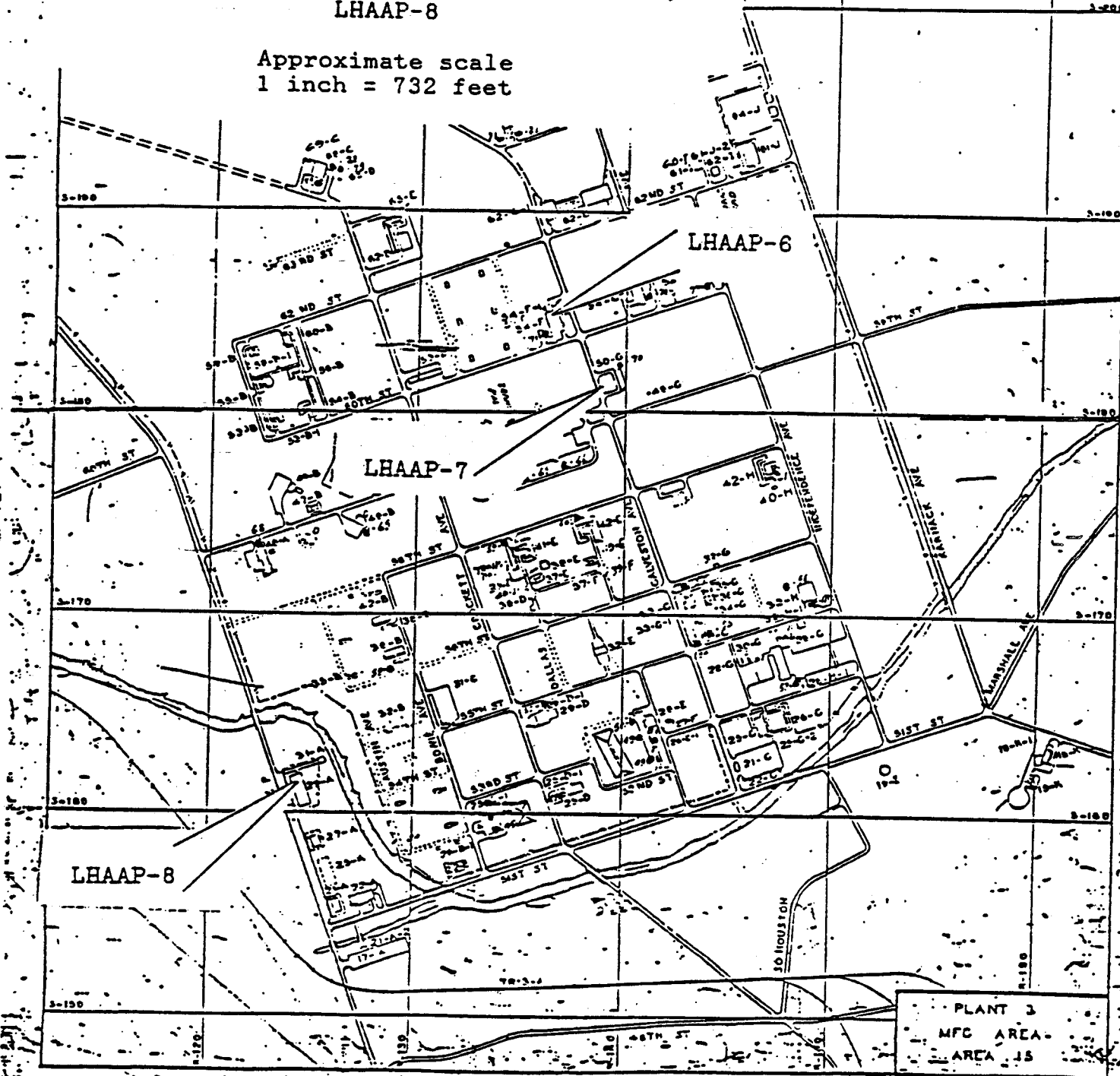
A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

Bldg 54-F
LHAAP-6

Bldg 50-G, Drum Processing Area
LHAAP-7

Bldg 29-A, Quality Assurance Laboratory
LHAAP-8

Approximate scale
1 inch = 732 feet



001306 55
Longhorn Army Ammunition Plant
Karnack, Texas
April 25 → 28 & May 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-7 Drum Processing Area

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

The building houses a concrete, above-grade
vault where (1) empty drums are rinsed with
hot water and (2) spent H_2SO_4 is neutralized in
limestone.

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted in the preliminary review.

- C. Visual/Physical Inspection of Unit

1. Conditions of drums

Empty as defined in Title 40 CFR PART 261.7

001307

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

The elementary neutralization unit is within
the confines of a weather-proof building.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There is no evidence that suggests any spillage or
leakage attributable to this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit
would contribute to any significant groundwater
contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Inasmuch as this unit serves to (1) neutralize H_2SO_4 and (2) rinse empty containers, it is exempt from permitting requirements (Ref. 40 CFR 261.7, 260.10, 265.1 c 10).

Because this unit exhibits no evidence of mismanagement, no further RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

SWMU: LHAAP-8, Bldg 29-A, Quality Assurance Laboratory Collection Point

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

Lack of curbing on pad allows for small possibility of spillage. Spilled material could migrate through soil to ground water or through surface runoff to surface water. Air emissions are also possible through volatilization. See Attachment I for further discussion.

Waste Characteristics:

Residues from production material testing (e.g., spent solvents).

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Collection point.
- (2) Design Features: One 55-gallon plastic Department of Transportation-approved drum set on concrete pad.
- (3) Operating Practices: Spent solvents from lab collected in drums. Full drum is sent to Bldg 31-W.
- (4) Period of operation: 1985 until present.

Summary:

Additional information is needed about this unit, and the area which it occupies.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

001311

Longhorn Army Ammunition Plant
Karneck, Texas

60

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION: LHAAP-8 Q.A. Lab Collection Point

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of drums

Waste containers in outstanding condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

Sheet Metal Roof -

Waste containers above grade

There is little exposure to direct rainfall or runoff.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

001344

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

SWMU: LHAAP-9, Sewage Treatment Plant.

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

See Attachment I.

Waste Characteristics:

Sanitary sewage and stormwater infiltration.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Sewage treatment.
- (2) Design Features: Plant consists of Imhoff tank, sand filter, and three sludge beds. Plant capacity, 0.87 million gallons per day.
- (3) Operating Practices: Permitted treated effluent is discharged to Center Bayou. Sludge dried on sand beds then shipped to the new landfill.
- (4) Period of operation: 1942 until present.

Summary:

Additional information is needed about this unit, and the area which it occupies.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, 5) visual evidence of releases, and 6) final disposition of unit.

64



Scale - $1'' = 47'$

A-17

Longhorn Army Ammunition Plant

Karnack Texas

April 25-28 & May 2-5, 1988

PART II - UNIT EVALUATION SURFACE IMPOUNDMENTS

TWC Regis. No.

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION:

Sewage Treatment Plant LHAAP-9

- A. Verification of physical construction and operation
(dimensions, years of service, materials of construction)

Concrete Tanks as depicted in the
Preliminary Review

- B. Characterization of waste materials (Facility records, sample results, process description, constituents of concern, documentation)

Sanitary Sewage and Infiltration - Inflow

- C. Visual/physical inspection of unit:

1. Description of dike structure, height and freeboard:

Concrete Tanks with $1\frac{1}{2}$ - 2' Freeboard

2. Evidence of discharges from impoundment (spill history, bypassing, inadequate run-on/run-off controls, flood prone area):

There is no evidence of any uncontrolled
releases from this unit.

001317

3. Evidence of actual or potential groundwater contamination (samples from mon. wells, knowledge of shallow water table, liner integrity, active seeps, leak detection records, operating practices)

Upon inspection it seems unlikely that this
treatment facility would introduce any hazardous
water or waste with hazardous constituent into
the groundwater.

4. Air quality concerns (TACB complaints, odors, air sampling records)

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g (6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

RCRA: LHAAP-10, Bldg 31-W, Drum Storage.

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

See Attachment I.

Waste Characteristics:

Toxic and/or flammable liquid waste including oils (non-PCB), solvents, adhesives, antifreeze, Hycar/MEK, kerosene, mercury, acid, silver, and DAPT.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Storage area for containers of liquid hazardous waste.
- (2) Design Features: Bldg 31-W consists of two adjoining areas. The original area is a 100 x 50 foot structure with transite siding and has been in existence since at least the 1950's. The newer area consists of a structure approximately 80 x 50 feet enclosed with galvanized metal siding that was completed in April 1987. Within the older area are three concrete troughs, 6 x 31 feet with 6-inch curbs, that were used for PCB storage. No PCB is presently being stored there, but the area is used for various chemicals held in lab pack for disposal. The newer area consists of eight concrete pads enclosed by 6-inch concrete curbs, 20 feet 1 inch x 25 feet 10 inches. Drums on pallets are stored on the pads.
- (3) Period of Operation: Used for liquid waste storage during the early 1950's. Used for hazardous waste storage from 1984 until present.

Summary:

Additional information is needed about this unit, and the area which it occupies.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

001321

20

FIGURE A-8

BUILDING 31-W, DRUM STORAGE

LHAAP-10

Approximate scale
1 inch equals 200 feet

N

RADIUS
POINT
BUILDING
31-W

ELEVATION OF
BUILDING
AREA
197

001322

71

Longhorn Army Ammunition Plant
Karnack, Texas

APRIL 25-28 & May 2-5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-10 Drum Storage BLDG 31W

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As Depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted in the Preliminary Review.

- C. Visual/Physical Inspection of Unit

1. Conditions of drums

Drums are in good condition - everything is
arranged in an orderly manner.

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

All of the segregated drum storage bags are within the confines of this metal building.

--- No exposure to rainfall, runoff or runoff ---

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There is no manifestation of spillage or leakage attributable to this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it appears unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known

D. Other Areas of Concern

E. Summary/General Comments

Because this is a well-managed unit, and because there is no evidence that suggests past mismanagement, no further RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

SWMU: LHAAP-11, Suspected TNT Burial Site at Avenues P and Q.

Evidence of Release:

Very low levels of explosives contamination in soil.

Pollutant Dispersal Pathways:

Residues may become mobilized when exposed to precipitation. Possible infiltration through soil into ground water. See Attachment I for further discussion.

Waste Characteristics:

Possible TNT burial.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Burial site.
- (2) Unit Size: Approximately 1 to 1.5 acres.
- (3) Period of Operation: 1940's.
- (4) General Physical Conditions: Area grassed and wooded.
- (5) Closure Method: Site abandoned and allowed to revegetate naturally.

Summary:

Additional information is needed about this unit, and the area which it occupies.

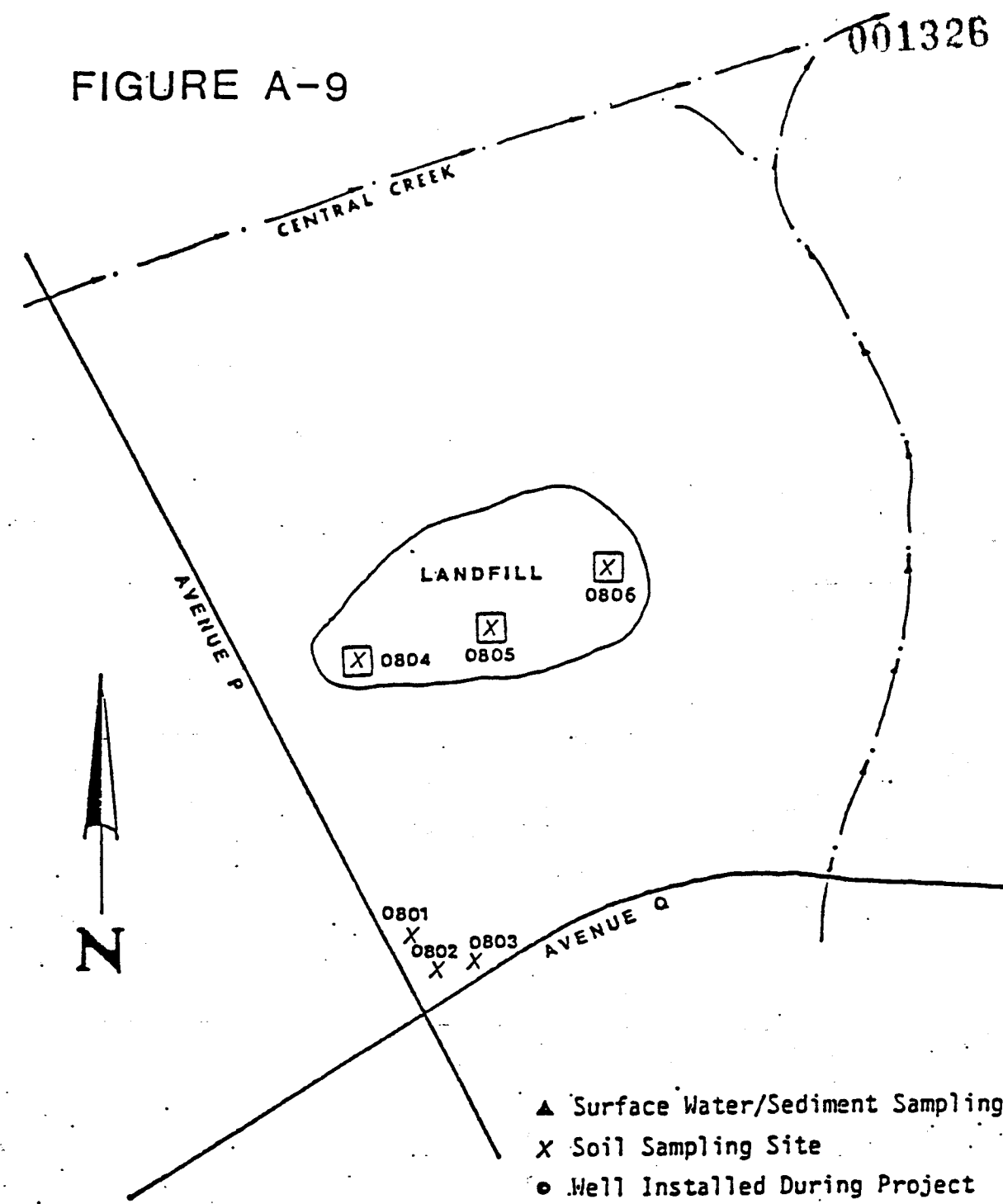
Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, 5) visual evidence of releases, and 6) final disposition of unit.

FIGURE A-9

001326

75



APPROX SCALE 1:6500

- ▲ Surface Water/Sediment Sampling Site
- X Soil Sampling Site
- Well Installed During Project
- ▲ Existing AEHA Well (*AEHA No.)
- ▲ Proposed Surface Water/Sediment Sampling Site
- Proposed Well Location
- X Proposed Soil Sampling Location

Suspected TNT

Burial Site

LHAAP-11

SOURCE: REFERENCE 7d

001327

Longhorn Army Ammunition Plant 76
Karnack, TX

April 25-28 & May 2-5, 1988

PART II - UNIT EVALUATION

LANDFILLS LHAAP-11SUSPECTED TNT BURIAL SITE
AREA AVE. P & Q

TWC Regis. No. _____

Regis. Facility No. ISW 30990UNIT IDENTIFICATION: Suspected TNT BURIAL SITE AT AVENUES P & Q

- A. Verification of physical construction and operation (dimensions, years of service, materials of construction above and below grade).

As depicted on the Preliminary Review

- B. Characterization of waste materials (facility records, sample results, process description, constituents of concern, documentation).

Possible Trinitrotoluene

- C. Visual/physical inspection of unit:

1. Active Landfill N.A.

- a. Observations of potential problem areas (water in trench, blowing debris/waste liner integrity, waste compatibility)

- b. Operation evaluation (compaction of deposited waste, daily cover, contaminant dispersal by equipment, disposal of liquid waste, waste stabilization)

- c. Rainfall controls (run-on/runoff control, leachate collection and disposal, stormwater collection and disposal analysis)

2. Inactive/closed landfill

- a. Description of cap (cap materials, thickness of cap, vegetation or other cover)

*Well-Compacted, well-vegetated, well graded
Cover.*

- b. Potential problem areas (cracking, erosion, subsidence, water ponding on cap, surfacing wastes, land use on and adjacent to closed fill)

*No problem areas noted - site is well
drained.*

3. Evidence of actual or potential ground water contamination (samples from monitor wells, knowledge of shallow water table, liner integrity, leak detection records)

There is a modicum of explosives contamination
in the soil. It is likely that biological oxidation
of TNT has almost exhausted all contaminants
present.

4. Air quality concerns (TACB complaints odors, particulate dispersal, sampling records)

None.

D. Other Areas of Concern

E. Summary/General Comments

Inasmuch as an RFI is underway for groundwater contamination attributable to this site, no additional RFA action is recommended (Reference LHAAP-17). However, the scope, progress, and results of this RFI must be submitted to the Texas Water Commission and EPA, Region VI -

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

SWMU: LHAAP-12, New/Active Landfill.

Evidence of Release:

Low levels of ground-water contamination detected.

Pollutant Dispersal Pathways:

Possible leachate formation. Infiltration through soil into ground water. See Attachment I.

Waste Characteristics:

Type of Wastes Placed in the Site: Putrescible and nonputrescible wastes from administrative, dining, and dispensary areas, nontoxic burning ground ash, and asbestos from building renovation projects. the total waste received per month is about 20 cubic yards, of which 1 cubic yard is asbestos material, which is placed into a separate landfill area.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units. Longhorn Army Ammunition Plant. Marshall. Texas 18-22 May. 1987.

Site Description:

- (1) Type of Unit: Landfill
- (2) Design Features: The landfill consists of a series of cells 150 feet square. The total size is approximately 5 acres.
- (3) Operating Practices: Trenches are dug the approximate size needed to accept a day's waste. The normal size is about 10 x 20 x 10 feet. At the end of each day, the trench is covered with soil.
- (4) Period of Operation: Early 1970's until present.

Summary:

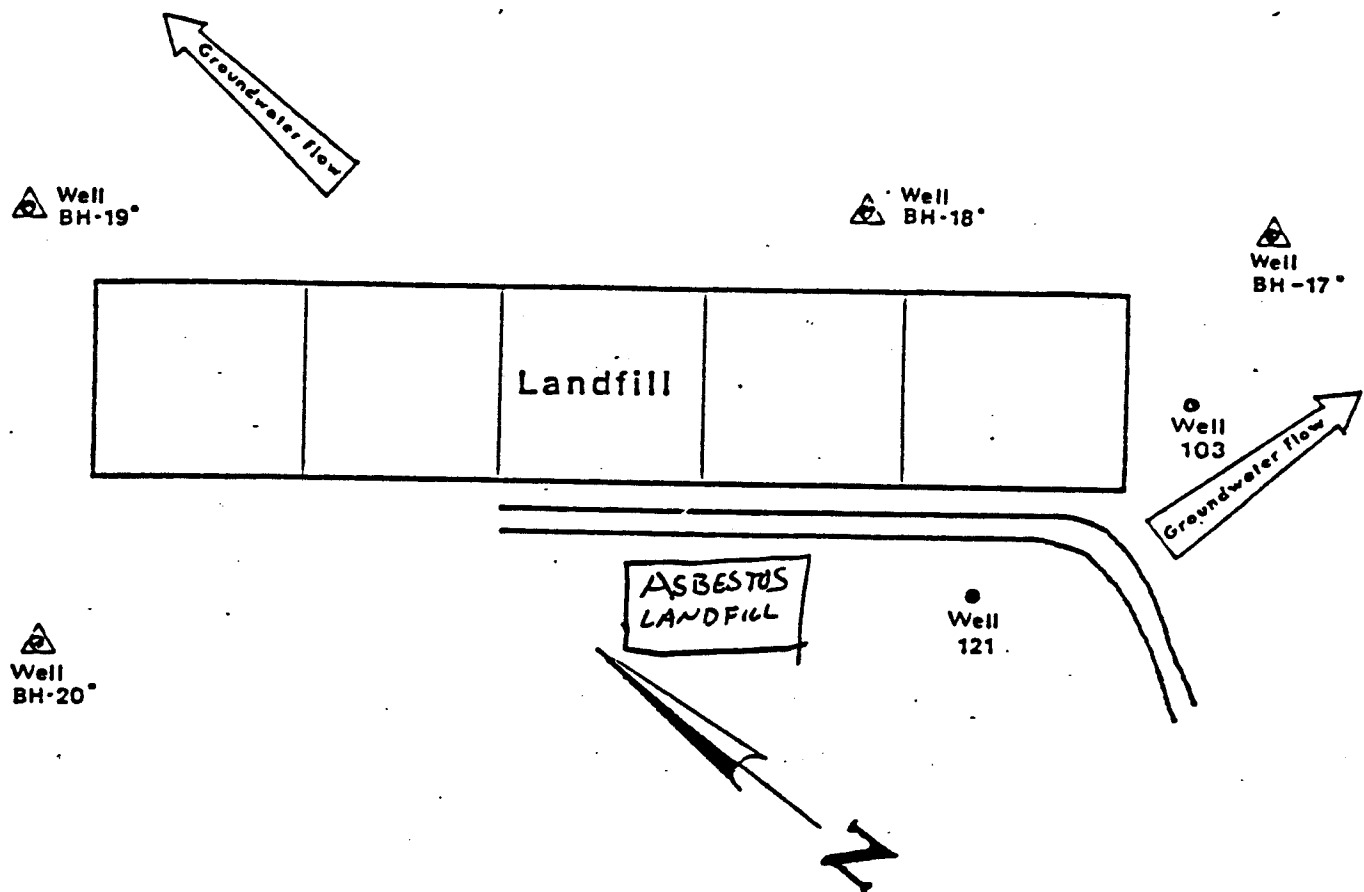
Additional information is needed about this unit, and the area which it occupies.

001332

81

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, and 4) visual evidence of releases.



- ▲ Surface Water/Sediment Sampling Site
- X Soil Sampling Site
- Well Installed During Project
- ▲ Existing AEHA Well (*AEHA No.)
- ▲ Proposed Surface Water/Sediment Sampling Site
- Proposed Well Location
- X Proposed Soil Sampling Location

APPROX SCALE 1:4600

Active Landfill
LHAAP-12

SOURCE: REFERENCE 7d

Longhorn Army Ammunition Plant

83

Karnack, Texas

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

LANDFILLS

LHAAP 12

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION:

New / active Landfill

- A. Verification of physical construction and operation (dimensions, years of service, materials of construction above and below grade).

As depicted in the Preliminary Review

- B. Characterization of waste materials (facility records, sample results, process description, constituents of concern, documentation).

Non Hazardous Waste as depicted in the Preliminary Review

- C. Visual/physical inspection of unit:

1. Active Landfill

- a. Observations of potential problem areas (water in trench, blowing debris/waste liner integrity, waste compatibility)

No potential problem areas noted

- b. Operation evaluation (compaction of deposited waste, daily cover, contaminant dispersal by equipment, disposal of liquid waste, waste stabilization)

This landfill is well managed.

- c. Rainfall controls (run-on/runoff control, leachate collection and disposal, stormwater collection and disposal analyses)

Sloped uniformly so that positive drainage is achieved

2. Inactive/closed landfill

- a. Description of cap (cap materials, thickness of cap, vegetation or other cover)

- b. Potential problem areas (cracking, erosion, subsidence, water ponding on cap, surfacing wastes, land use on and adjacent to closed fill)

3. Evidence of actual or potential ground water contamination (samples from monitor wells, knowledge of shallow water table, liner integrity, leak detection records)

4. Air quality concerns (TACB complaints odors, particulate dispersal, sampling records)

D. Other Areas of Concern

E. Summary/General Comments

Because this unit is well managed, and
because this unit does not manage hazardous waste
or waste having hazardous constituents, no further
REA action is recommended.

Longhorn Army Ammunition Plant
Karnach, TX
April 25-28, and May 2-5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

LANDFILLS TSCA UNIT

Regis. Facility No. ISW 30990UNIT IDENTIFICATION: ASBESTOS LANDFILL @ LHAAP 12

- A. Verification of physical construction and operation (dimensions, years of service, materials of construction above and below grade).

A well-~~an~~ graded, covered, non-lined
landfill 150 feet x 150 feet $\pm$ which contains
Asbestos

- B. Characterization of waste materials (facility records, sample results, process description, constituents of concern, documentation).

Construction MATERIAL ASBESTOS

- C. Visual/physical inspection of unit:

1. Active Landfill

- a. Observations of potential problem areas (water in trench, blowing debris/waste liner integrity, waste compatibility)

No Problems NOTED

3. Evidence of actual or potential ground water contamination (samples from monitor wells, knowledge of shallow water table, liner integrity, leak detection records)

4. Air quality concerns (TACB complaints odors, particulate dispersal, sampling records)

D. Other Areas of Concern

E. Summary/General Comments

Because asbestos is not soluble in water, and
because this is a well-managed unit, no
further action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

SWMU: LHAAP-13, Suspected TNT Burial Between Old and Active Landfills/Acid Dump.

Evidence of Release:

Lack of vegetative cover.

Pollutant Dispersal Pathways:

Residues may become mobilized when exposed to precipitation. Possible infiltration through soil into ground water. See Attachment I for further discussion.

Waste Characteristics:

Unknown.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Burial.
- (2) Unit Size: 50 x 50 feet.
- (3) Period of Operation: Unknown.
- (4) General Physical Conditions: Grassed over area along edge of forested area and clearing for electric pole line. Some bare patches of ground within grassed area.

Summary:

Additional information is needed about this unit, and the area upon which it rested.

Recommended Actions:

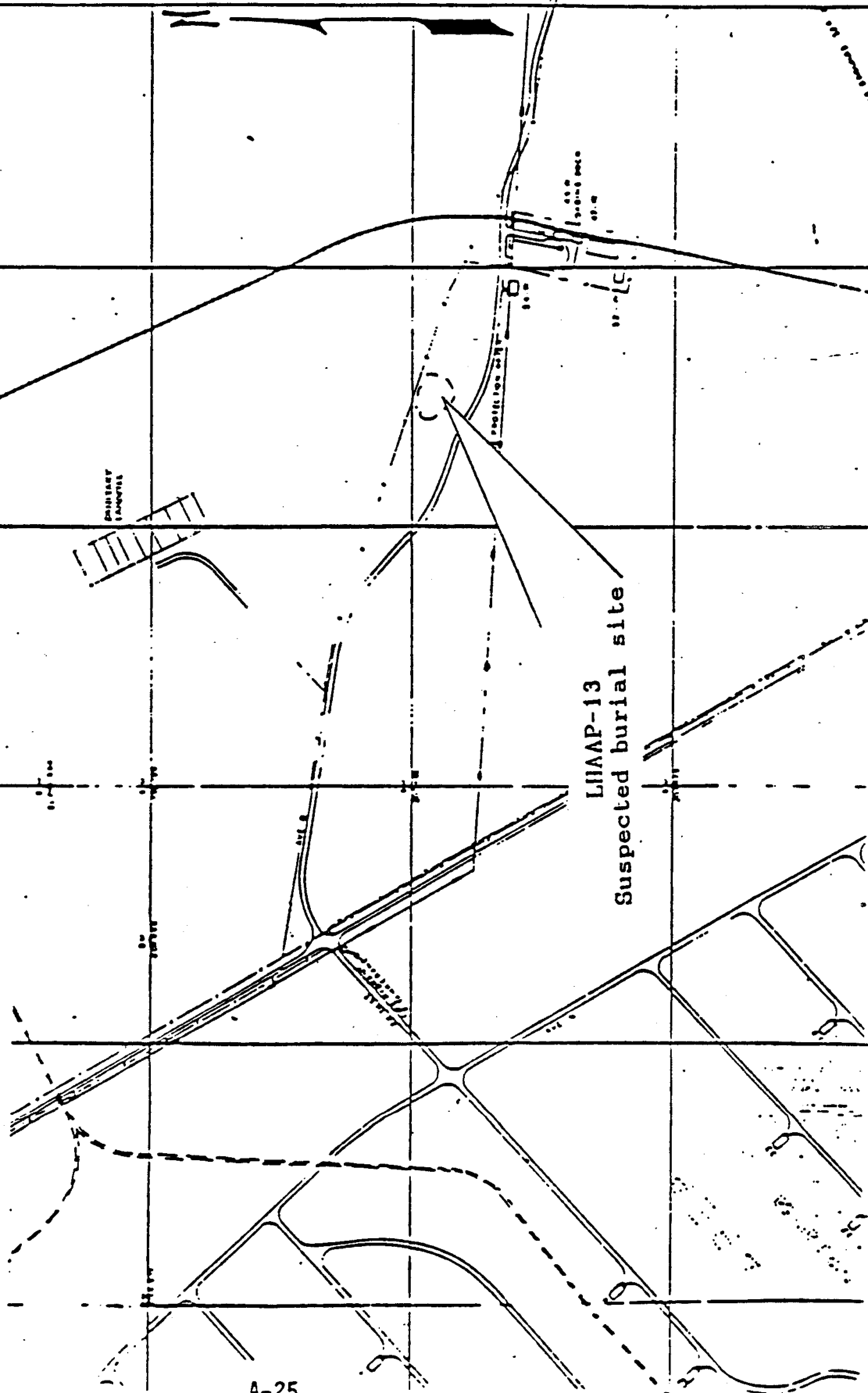
A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, and 4) visual evidence of releases.

FIGURE A-11

SUSPECTED TNT BURIAL BETWEEN OLD
AND ACTIVE LANDFILLS

LHAAP-13

Approximate scale
1 inch = 600 feet



001344 94
Longhorn Army Ammunition Plant
Kamsack, TX
April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

LANDFILLS *Suspected TNT Burial Between*
Old and Active Landfills

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP 13

- A. Verification of physical construction and operation (dimensions, years of service, materials of construction above and below grade).

At this time the Preliminary Review
presents all available information

- B. Characterization of waste materials (facility records, sample results, process description, constituents of concern, documentation).

Unknown

- C. Visual/physical inspection of unit:

1. Active Landfill

- a. Observations of potential problem areas (water in trench, blowing debris/waste liner integrity, waste compatibility)

- b. Operation evaluation (compaction of deposited waste, daily cover, contaminant dispersal by equipment, disposal of liquid waste, waste sterilization)

- c. Rainfall control (run-on/runoff control, leachate collection and disposal, stormwater collection and disposal analyses)

2. Inactive/closed landfill

- a. Description of cap (cap materials, thickness of cap, vegetation or other cover)

A modicum of weeds over a well-compacted native soil.

- b. Potential problem areas (cracking, erosion, subsidence, water ponding on cap, surfacing wastes, land use on and adjacent to closed fill)

No problem areas were noted, other than the inability of the cover soil to support dense weed growth.

001346

3. Evidence of actual or potential ground water contamination (samples from monitor wells, knowledge of shallow water table, liner integrity, leak detection records)

There are no data from which any conclusions
on ground water contamination can be drawn.

4. Air quality concerns (TACB complaints odors, particulate dispersal, sampling records)

None known

D. Other Areas of Concern

E. Summary/General Comments

an RFI is recommended to determine the presence,
nature, and extent of contamination to the soil
and groundwater which is attributable to this unit.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

SWMU: LHAAP-14, Area 54W; (Burial Ground)

Evidence of Release:

Minor amounts of chrome contamination occasionally detected in nearby well (55.8 ug/L), and also 6 Mg/l Trinitrobenzene

Pollutant Dispersal Pathways:

Residues may become mobilized if exposed to precipitation. Infiltration through soil into ground water. See Attachment I for further discussion.

Waste Characteristics:

Suspected acids, building rubble, and explosives (not confirmed).

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Burial.
- (2) Unit Size: 10 x 20 feet.
- (3) Period of Operation: 1940's until early 1950's.
- (4) General Physical Conditions: Site is presently paved over and used as parking lot.
- (5) Closure Method: (Paving was method)

Summary:

Additional information is needed about this unit, and the area upon which it rested.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, and 4) visual evidence of releases.

Longhorn Army Ammunition Plant
KARNACK, TX
April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

LANDFILLS

Regis. Facility No. ^{ISW} 30990UNIT IDENTIFICATION: LHAAP-14 area 54W BURIAL GROUND

- A. Verification of physical construction and operation (dimensions, years of service, materials of construction above and below grade).

As depicted in the Preliminary Review

- B. Characterization of waste materials (facility records, sample results, process description, constituents of concern, documentation).

The best data available only suggest the presence of acids, building rubble, and explosives.

- C. Visual/physical inspection of unit:

1. Active Landfill N.A.

- a. Observations of potential problem areas (water in trench, blowing debris/waste liner integrity, waste compatibility)

- b. Operation evaluation (compaction of deposited waste, daily cover, contaminant dispersal by equipment, disposal of liquid waste, waste stabilization)

- c. Rainfall controls (run-on/runoff control, leachate collection and disposal, stormwater collection and disposal analyses)

2. Inactive/closed landfill

- a. Description of cap (cap materials, thickness of cap, vegetation or other cover)

Asphalt Pavement

- b. Potential problem areas (cracking, erosion, subsidence, water ponding on cap, surfacing wastes, land use on and adjacent to closed fill)

None Noted

3. Evidence of actual or potential ground water contamination (samples from monitor wells, knowledge of shallow water table, liner integrity, leak detection records)

Minor amounts of contaminants have been observed in the groundwater - (see the Preliminary Review)

4. Air quality concerns (TACB complaints odors, particulate dispersal, sampling records)

NONE

D. Other Areas of Concern

E. Summary/General Comments

An RFI is recommended to continue sampling wells 12 & 13 to detect the appearance of any significant Contamination Plumes.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

RCRA: LHAAP-15, 49-W, Drummed Waste Storage Shed.

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

See Attachment I.

Waste Characteristics:

Brine sludge, oil-contaminated material, batteries, adhesives and dirt, contaminated dirt, mercury and dirt, ash.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Storage facility for drummed solid and hazardous waste.
- (2) Design Features: Metal building 50 feet x 100 feet x 10/16 foot (sloped) with concrete floor.
- (3) Operating Practices: Drums stacked three high stored on pallets and held for shipment to Defense Reutilization and Marketing Service (DRMS).
- (4) Period of Operation: 1984 until present.

Summary:

Additional information is needed about this unit, and the area which it occupies.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

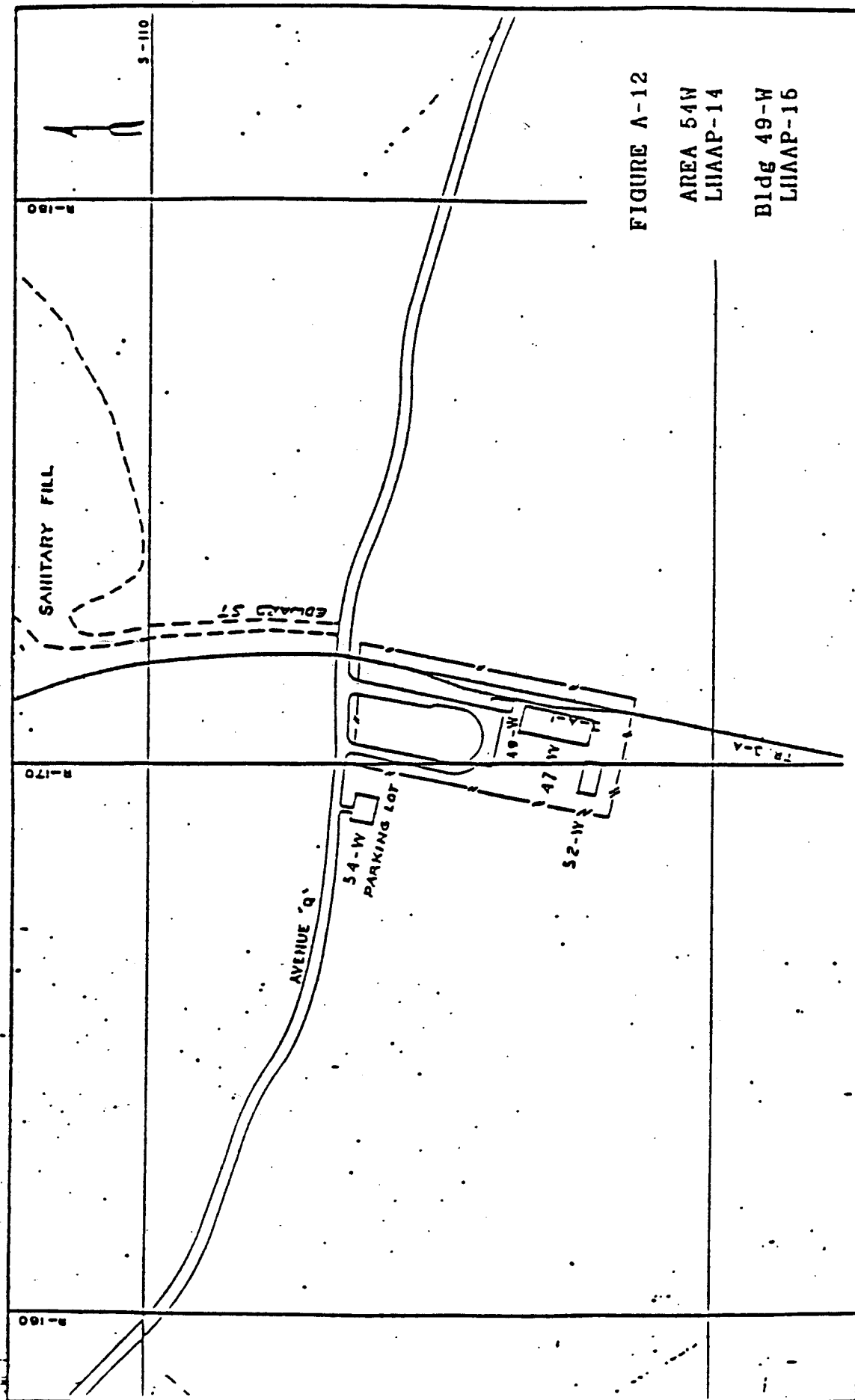


FIGURE A-12

AREA 54W
LHAAP-14

Bldg 49-W
LHAAP-16

Approximate scale
1 inch = 260 feet

001355

105

Longhorn Army Ammunition Plant
Karnack, Texas

April 25-28 & May 2-5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-15 Containerized Waste

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted on the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted on the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of drums

Good Condition, neat and orderly.

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

Metal Sides and Roof. Concrete Slab above grade. No exposure to rainfall or runoff.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There is no evidence of spillage or leakage attributable to this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it is unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known

D. Other Areas of Concern

E. Summary/General Comments

Because this is a well-managed unit, no further RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

RCRA: LHAAP-16, Old Landfill.

Evidence of Release:

Low levels of contamination in soil, sediment, and ground-water samples.

Pollutant Dispersal Pathways:

Possible leachate formation. Infiltration through soil into the ground water and possible runoff into surface water. Low possibility of migration into Harrison Bayou and off the installation. See Attachment I for further discussion.

Waste Characteristics:

Type of Wastes Placed in the Site: TNT redwater ash material from 1942 to 1944; all purpose junkyard for disposal of such materials as substandard TNT, barrels of chemicals, oil, paint, scrap, iron and wood; and more recently inert rubble. Three rocket motor casings were reportedly buried on the western side of this landfill in the mid to late 1950's.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units. Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

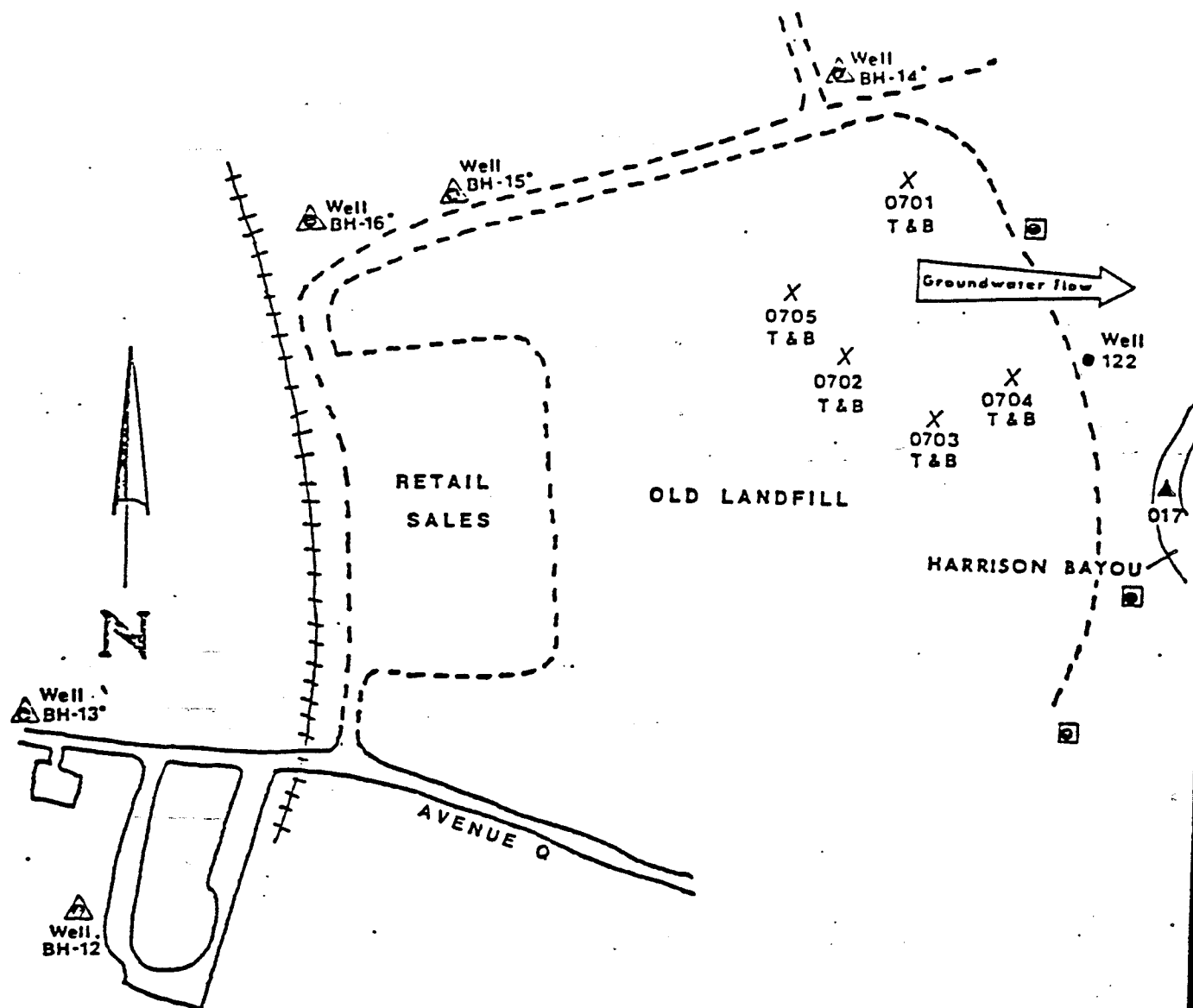
- (1) Type of Unit: Landfill.
- (2) Unit Size: Approximately 20 acres.
- (3) Period of Operation: 1942 until 1985.
- (4) General Physical Conditions: Flat area with cover varying between grass and bare ground. Glass and wood fragments, roofing material and building rubble were visible on ground surface.
- (5) Closure Method: Covered with soil.

Summary:

Additional information is needed about this unit, and the area upon which it rested.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, and 4) visual evidence of releases.



- ▲ Surface Water/Sediment Sampling Site
- X Soil Sampling Site
- Well Installed During Project
- ▲ Existing AEHA Well (*AEHA No.)
- ▲ Proposed Surface Water/Sediment Sampling Site
- Proposed Well Location
- X Proposed Soil Sampling Location

APPROX SCALE 1:3620

Old Landfill

LHAAP-16

Longhorn Army Ammunition Plant
KARNACK, TEXAS

APRIL 25-28 AND MAY 2-5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

LANDFILLS *OLD LANDFILL*

Regis. Facility No. *ISW 30990*

UNIT IDENTIFICATION: *LHAAP-16*

- A. Verification of physical construction and operation (dimensions, years of service, materials of construction above and below grade).

As Depicted in the Preliminary Review

- B. Characterization of waste materials (facility records, sample results, process description, constituents of concern, documentation).

AS Depicted in the Preliminary Review

- C. Visual/physical inspection of unit:

1. Active Landfill *NA*

- a. Observations of potential problem areas (water in trench, blowing debris/waste liner integrity, waste compatibility)

- b. Operation evaluation (compaction of deposited waste, daily cover, contaminant dispersal by equipment, disposal of liquid waste, waste stabilization)

- c. Rainfall controls (run-on/runoff control, leachate collection and disposal, stormwater collection and disposal analyses)

2. Inactive/closed landfill

- a. Description of cap (cap materials, thickness of cap, vegetation or other cover)

2-foot clay cap cover which
supports a healthy stand of weeds.

- b. Potential problem areas (cracking, erosion, subsidence, water ponding on cap, surfacing wastes, land use on and adjacent to closed fill)

NONE NOTED

3. Evidence of actual or potential ground water contamination (samples from monitor wells, knowledge of shallow water table, liner integrity, leak detection records)

An owner-initiated RFI presents evidence
that soils and groundwater contamination are
present in the landfill area

4. Air quality concerns (TACB complaints odors, particulate dispersal, sampling records)

NONE

D. Other Areas of Concern

E. Summary/General Comments

An RFI is recommended to determine the nature and extent of soils and groundwater contamination attributable to this unit-

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

SWMU: LHAAP-17, Burning Ground No. 2/Flashing Area.

Evidence of Release:

Contaminated groundwater samples exist.

Pollutant Dispersal Pathways:

Residues are water soluble. Possible infiltration through soil into ground water. Possible migration of contamination into Harrison Bayou and off the installation. See Attachment I for further discussion.

Waste Characteristics:

Type of Wastes Placed in the Site: Area used for burning bulk TNT, photoflash powder, and reject material from the Universal Match Corporation production processes.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Burning ground.
- (2) Unit Size: Approximately 4 acres.
- (3) Period of Operation: Operated as burning ground from 1959 until 1980. Evidence of bulk burial of TNT prior to 1954.
- (4) General Physical Conditions: Two burning pads enclosed in a 2-acre fenced area surrounded by a flat grassed area. Burning Ground No. 2 is situated approximately 400-500 feet to the southwest of Burning Ground No. 3 on adjoining property.
- (5) Closure Method: Waste residues removed in 1984 and area grassed over.

Summary:

Additional information is needed about this unit, and the area upon which it rested.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, and 4) visual evidence of releases.

Contaminated Burning Pits
5' deep, 10' wide

Surface Burn Area

THT Tower Packing
& Filters

Burn Pit 5'Dx10'W

OLD BURNING GROUND

LONG POINT RD

AVE

Figure A-14

Burning Grounds #2
LHAAP-17

not to scale

001967

Longhorn Army Ammunition Plant 1 of 3
Karnack, TX
April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION LHAAP-17

TWC Regis. No. _____

WASTE MANAGEMENT UNIT Burning Ground No. 2 / FLASHING AREA Regis. Facility No. JSW 30990

- A. Verification and description of Physical Construction and Operation
(dimensions, years of service, containment features, e.g. concrete pads,
dikes, indoor)

as depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample results,
process description, constituents of concern, documentation)

Waste materials from the pyrotechnic manufacturing
process

- C. Visual/Physical Inspection of Unit

1. Conditions unit and support apparatus

Completely covered with grasses, weeds, and
saplings. All vestiges of visible waste have
vanished.

2. Rainfall controls (run-on/run-off controls, stormwater collection and disposal, analyses)

None. However, area is well drained.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There is no evidence of any spillage or leakage attributable to this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

There are insufficient data to assess the actual or potential groundwater contamination attributable to this unit.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known

D. Other Areas of Concern

E. Summary/General Comments

An RFI is recommended to (1) characterize waste, (2) determine the nature and extent of soils contamination, and (3) determine the nature and extent of groundwater contamination.

NE

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

RCRA: LHAAP-18, Burning Ground No. 3. (This is the field which contains the current burning apparatus.)

Evidence of Release:

Contaminated ground-water samples exist.

Pollutant Dispersal Pathways:

Infiltration through soil into ground water and surface water. Ground water and surface water. Possible contamination of Harrison Bayou and Caddo Lake. See Attachment I for further discussion.

Waste Characteristics:

Flammable wastes burned on the site include production waste, laboratory waste, chemical contaminated scrap, and red phosphorus. Buried waste included wastes from rocket motors, illuminating mixtures, oxidizing agents (including ammonium perchlorate and sodium nitrate), waste oil, and methylene chloride.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Open burning, and burial.
- (2) Unit Size: 34.5 acres.
- (3) Period of Operation: Early 1950's until present.
- (4) General Physical conditions: Burning Ground No. 3 is a 34.5-acre fenced area where current SWMU activities are in operation and other historical activities were carried out. Current activities include the air curtain destructor, the open burning cages, the open burning pans, the 24X washout pad, the 24X holding area, and several sumps.
 - (a) Historical SWMU's include open burning pits, the unlined evaporation pond, the stockpiling of sawdust impregnated with methylene chloride, and suspected waste burial. For activities such as the open burning pits and suspected waste burial for which there is no longer any visible surface evidence.

- (b) A total of 18 small burning pits, 10 x 10 x 1 feet, plus several elongate pits, 100 x 15 x 4 feet, were used to burn explosive waste material from about 1955 until 1984.
- (c) Sawdust impregnated with methylene chloride from cleaning operations was stockpiled in the northwest corner of the burning grounds in the vicinity of the present air curtain destructor.
- (d) Disposal pits were reported to have been dug along the western edge of the area.
- (5) Closure Method: Prior to construction of the air curtain destructor, the methylene chloride contaminated sawdust and underlying contaminated soil were reported to have been removed. In 1984, the open burning pits were sampled and all contaminated soil and ash were removed to a permitted facility. The pits were backfilled with clean soil and grassed. The area of suspected waste burial pits is now also grassed over.

Summary:

Additional information is needed about this unit, and the area upon which it rested.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, and 4) visual evidence of releases.

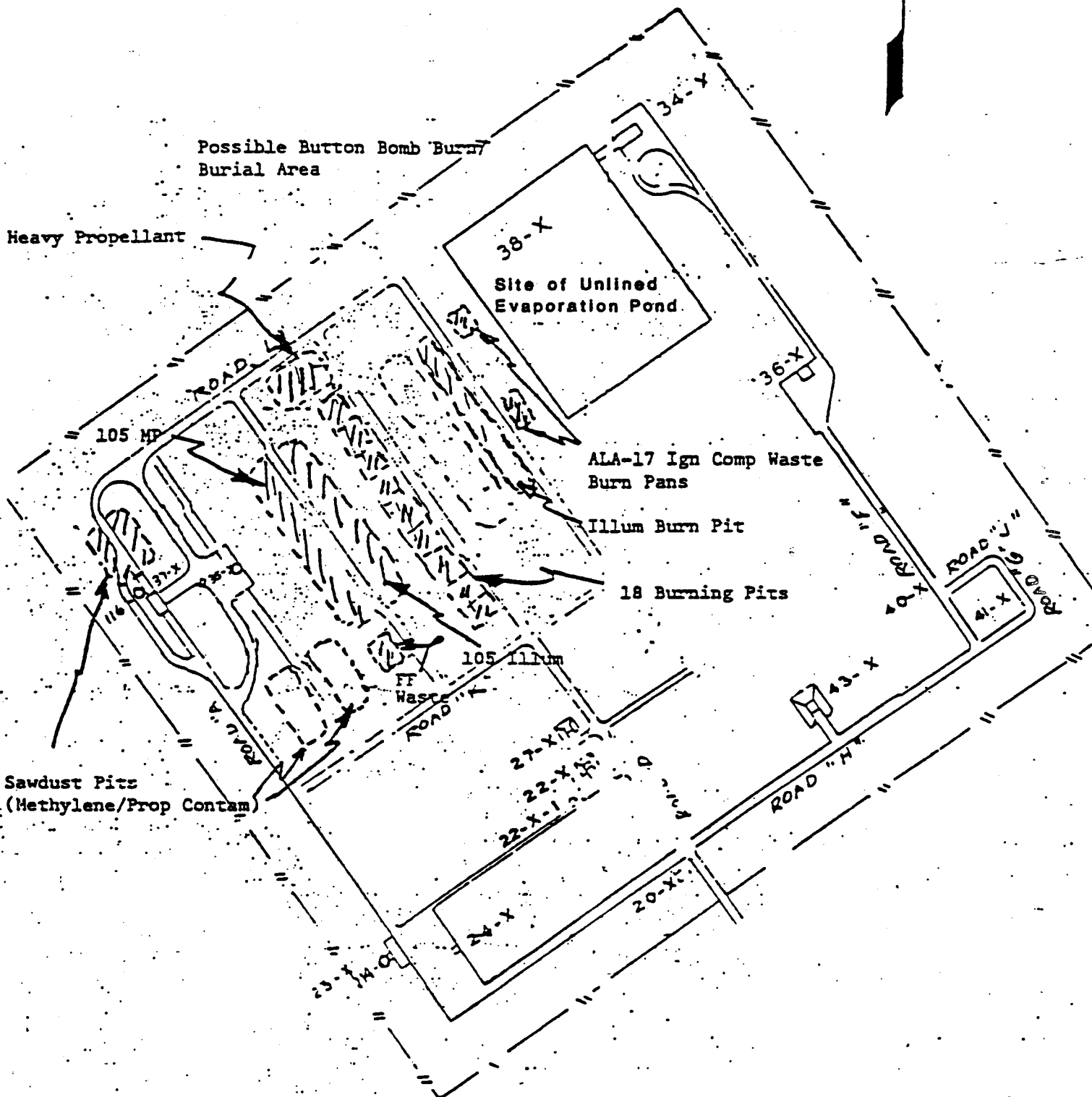
FIGURE A-15

001373

123

BURNING GROUND #3
LHAAP-18

APPROXIMATE SCALE: 1 inch = 200 feet



Longhorn Army Ammunition Plant ^{1 of 3}
Karnach, TX
April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. ISW 30990WASTE MANAGEMENT UNIT LHAAP-18
BURNING GROUND No. 3

Regis. Facility No. _____

- A. Verification and description of Physical Construction and Operation
(dimensions, years of service, containment features, e.g. concrete pads,
dikes, indoor)

As depicted on the Preliminary Review (PR)

- B. Characterization of Waste Materials (facility records, sample results,
process description, constituents of concern, documentation)

As depicted on the PR

- C. Visual/Physical Inspection of Unit

1. Conditions unit and support apparatus

Considering the precarious nature of the waste material
(i.e. explosive), this burning ground operation reflects
special care and a high degree of quality in
operations.

2. Rainfall controls (run-on/run-off controls, stormwater collection and disposal, analyses)

currently-used units have rainfall
controls, typically in the form of roofs
and concrete aprons.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There was no evidence of leakage or spillage attributable
to this burning ground

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

See owner-initiated RFI, which is
ATTACHED

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

NONE



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

(Texas Water Commission Copy)

ABC 001376
H/C 126

CESWF-ED-G (415-10f)

28 April 1988

MEMORANDUM FOR: Commander, Longhorn Army Ammunition Plant, ATTN: SMCLO-EN (Maley), Marshall, TX 75670-1059

SUBJECT: Ground-Water Quality Assessment at Longhorn Army Ammunition Plant, Marshall, TX 75670-1059

1. Reference meeting on 21 April 1988, with personnel from Corps of Engineers, Fort Worth District (CESWF), Corps of Engineers, Huntsville Division (CEHND), Army Armament, Munitions, and Chemical Command (AMCCOM), Longhorn Army Ammunition Plant (LHAAP), and Morton Thiokol, Inc., SAB.

2. As was discussed at the referenced meeting, request the following tasks be performed by Morton Thiokol personnel for CESWF as part of the ongoing Ground-Water Quality Assessment at the Active Burning Ground.

a. Sample 11 monitoring wells (130, C2, C3, C4, C5, MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6) and analyze for the same parameters used in LHAAP's quarterly ground-water monitoring program.

b. A drilling crew from CESWF will be at LHAAP within the next month to drill an additional six borings at the air curtain destructor for the purpose of delineating the extent of the trenches in the vicinity of the facility. Three soil samples will be taken from each boring. Request that each sample be analyzed for volatile organic compounds using EPA Method 8240 and for explosives using either USATHAMA Method 8H or a comparable approved method.

c. Obtain a copy of the analytical laboratory's quality control plan.

3. Request the above analytical and quality control data be furnished to CESWF as it becomes available.

4. The POC for this study is Deborah Fitzgerald, CESWF-ED-GG, telephone 817/334-3221.

FOR THE COMMANDER:

B. B. Steele
B. B. STEELE, P.E.
Chief, Engineering Division

CF:

CEHND-ED-PM (Gary East)

Morton Thiokol, Inc., ATTN: Jerry Thurman
P.O. Box 1149
Marshall, TX 75670

Groundwater Contamination Assessment Meeting

April 21, 1988

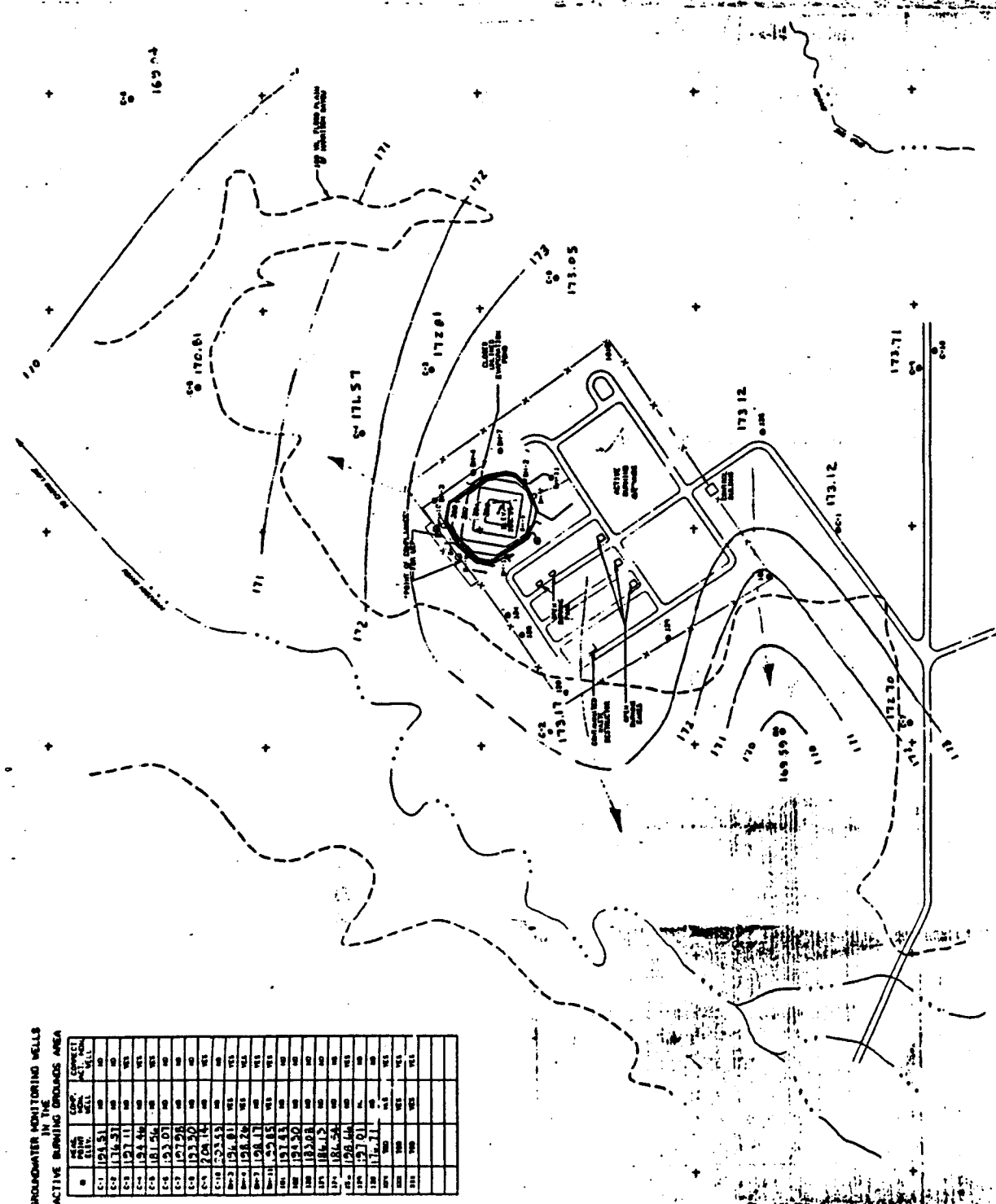
1. Corps of Engineers continue assessment, with emphasis on Air Curtain Destructor (ACD) area and methylene chloride source. Eight wells will be put in this area.
2. Corps of Engineers to do borings in paved areas to determine/verify that original contractor did remove all saw dust from under structure.
3. Corps of Engineers will further define problem and will plan to conduct source removal in FY89 (1 OCT 1988 to 30 Sept 1989).
4. Fort Worth District Corps of Engineers will develop proposal for cluster wells and Huntsville will attempt funding.
5. Surface water sampling by LHAAP.
6. LHAAP will notify SWMU of possible contamination.
7. LHAAP will officially notify TWC when problem is better defined.

Longhorn AAP
Burning Grounds Groundwater Quality Assessment
April 21, 1988

<u>Name</u>	<u>Organizations</u>	<u>Phone Number</u>
Roger Young	COE, Huntsville	205-895-5170
Kevin Traly	COE, Huntsville	205-895-5170
Deborah Fitzgerald	COE, Ft. Worth	817-334-3221
Jerry Thurman	Morton Thiokol, Inc.	214-679-2219
Don E. Maley	LHAAP/SMCLO-EN/OR	AV 956-2613 214-679-2613
Bruce Childress, Jr.	Morton Thiokol, Inc.	AV 956-2804 214-679-2804
Marvin Naron	Morton Thiokol, Inc.	AV 956-2824 214-679-2824
Clyde E. Renz	AMCCOM-ISE-E	309-787-1379
Gary East	COE Huntsville	AV 742-5142 205-895-5142
Bob Behm	COE, Ft. Worth	817-334-2223

GROUNDWATER MONITORING WELLS
IN THE
ACTIVE BURNING GROUNDS AREA

WELL	DATE	DEPTH	COMPLETION
G-1	1945.51	100	100
G-2	1946.37	100	100
G-3	1947.11	100	100
G-4	1947.44	100	100
G-5	1948.15	100	100
G-6	1948.07	100	100
G-7	1948.08	100	100
G-8	1948.10	100	100
G-9	1948.12	100	100
G-10	1948.13	100	100
G-11	1948.14	100	100
G-12	1948.15	100	100
G-13	1948.16	100	100
G-14	1948.17	100	100
G-15	1948.18	100	100
G-16	1948.19	100	100
G-17	1948.20	100	100
G-18	1948.21	100	100
G-19	1948.22	100	100
G-20	1948.23	100	100
G-21	1948.24	100	100
G-22	1948.25	100	100
G-23	1948.26	100	100
G-24	1948.27	100	100
G-25	1948.28	100	100
G-26	1948.29	100	100
G-27	1948.30	100	100
G-28	1948.31	100	100
G-29	1948.32	100	100
G-30	1948.33	100	100
G-31	1948.34	100	100
G-32	1948.35	100	100
G-33	1948.36	100	100
G-34	1948.37	100	100
G-35	1948.38	100	100
G-36	1948.39	100	100
G-37	1948.40	100	100
G-38	1948.41	100	100
G-39	1948.42	100	100
G-40	1948.43	100	100
G-41	1948.44	100	100
G-42	1948.45	100	100
G-43	1948.46	100	100
G-44	1948.47	100	100
G-45	1948.48	100	100
G-46	1948.49	100	100
G-47	1948.50	100	100
G-48	1948.51	100	100
G-49	1948.52	100	100
G-50	1948.53	100	100
G-51	1948.54	100	100
G-52	1948.55	100	100
G-53	1948.56	100	100
G-54	1948.57	100	100
G-55	1948.58	100	100
G-56	1948.59	100	100
G-57	1948.60	100	100
G-58	1948.61	100	100
G-59	1948.62	100	100
G-60	1948.63	100	100
G-61	1948.64	100	100
G-62	1948.65	100	100
G-63	1948.66	100	100
G-64	1948.67	100	100
G-65	1948.68	100	100
G-66	1948.69	100	100
G-67	1948.70	100	100
G-68	1948.71	100	100
G-69	1948.72	100	100
G-70	1948.73	100	100
G-71	1948.74	100	100
G-72	1948.75	100	100
G-73	1948.76	100	100
G-74	1948.77	100	100
G-75	1948.78	100	100
G-76	1948.79	100	100
G-77	1948.80	100	100
G-78	1948.81	100	100
G-79	1948.82	100	100
G-80	1948.83	100	100
G-81	1948.84	100	100
G-82	1948.85	100	100
G-83	1948.86	100	100
G-84	1948.87	100	100
G-85	1948.88	100	100
G-86	1948.89	100	100
G-87	1948.90	100	100
G-88	1948.91	100	100
G-89	1948.92	100	100
G-90	1948.93	100	100
G-91	1948.94	100	100
G-92	1948.95	100	100
G-93	1948.96	100	100
G-94	1948.97	100	100
G-95	1948.98	100	100
G-96	1948.99	100	100
G-97	1949.00	100	100
G-98	1949.01	100	100
G-99	1949.02	100	100
G-100	1949.03	100	100



LEGEND

- ACTIVE BURNING GROUNDS
- MONITORING WELLS
- CONTOUR LINES
- ROADS
- RAILROADS
- WATERWAYS
- UTILITIES

113 - Groundwater surface elevation 173.12



SCALE IN FEET
0 200 400

THIS DRAWING HAS BEEN
REDUCED TO 1/4 SCALE.

PRELIMINARY DWG.
NOT FIELD CHECKED.

001379

129

DESCRIPTION		DATE	
ACTIVE BURNING GROUNDS		1948.12	
AS SHOWN ENGINEER'S OFFICE, WASHINGTON, D.C.		1948.12	
BY: [Signature]		[Signature]	
CHECKED BY: [Signature]		[Signature]	
APPROVED BY: [Signature]		[Signature]	
DATE: 13 NOV 48		SHEET NO. 1	
DRAWING NO. C-1		SHEET 1	

D. Other Areas of Concern

E. Summary/General Comments

The attached owner-initiated RFI study outlines the method and intensity of evaluating the size and character of pollutants which are migrating away from this site.

The Texas Water Commission recommends that the above-described RFI commence according to the indicated schedule.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

RCRA: LHAAP-19, 24X Holding Area (sorting of waste to be burned)

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

See Attachment I.

Waste Characteristics:

Explosive waste, explosive-contaminated waste, ash, and scrap metal.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Temporary holding area.
- (2) Design Features: Asphalt pad approximately 75 x 100 feet adjoining 25X, not curbed.
- (3) Operating Practices: This site is used to sort items to be burned at the air curtain destructor or burning pans and cages, and for processing ash and scrap metal after burning has taken place.
- (4) Period of Operation: 1955 until present.

Summary:

Additional information is needed about this unit, and the area which it occupies.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

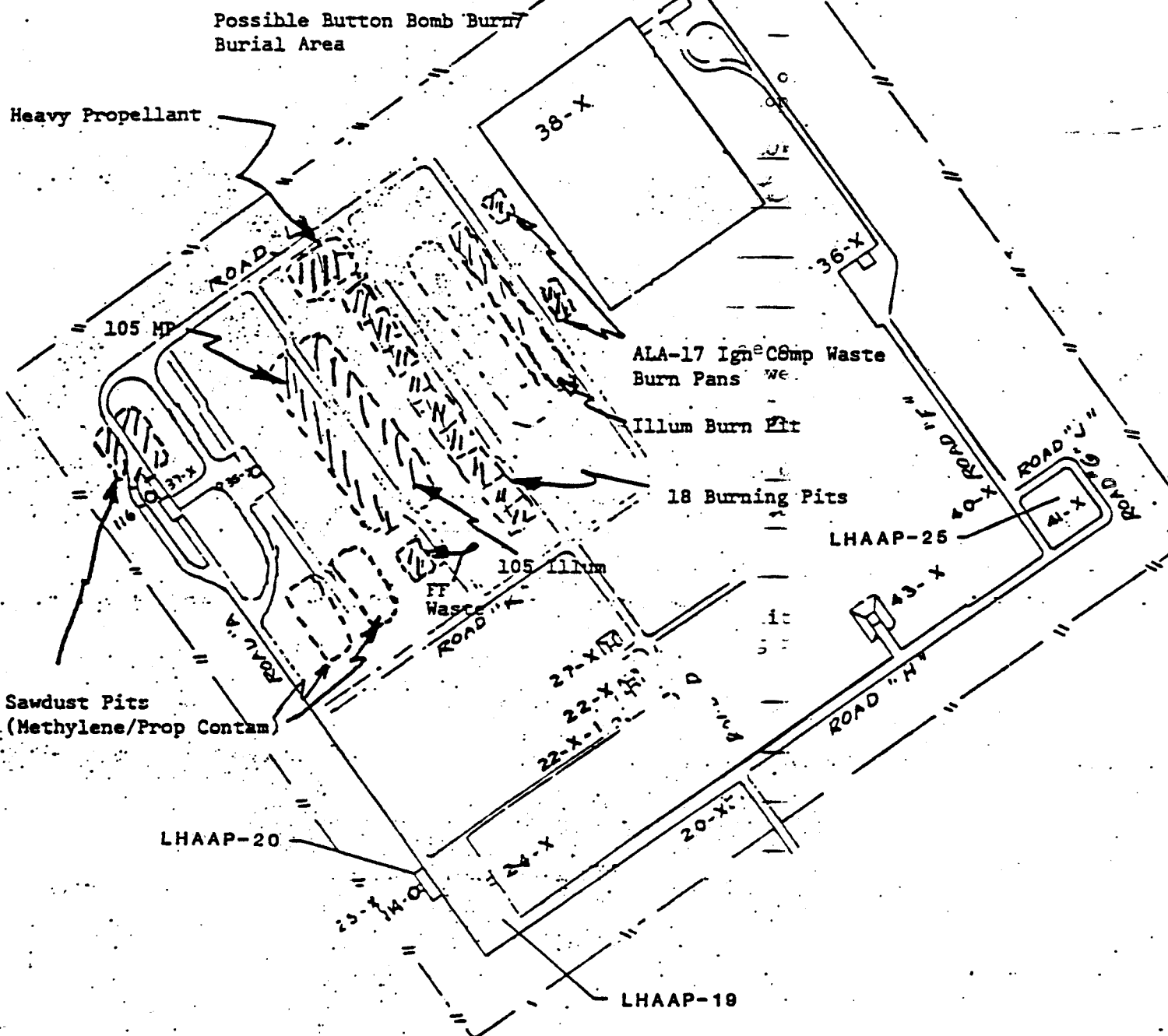
FIGURE A-16

24X HOLDING AREA
LHAAP-19

25X WASHOUT PAD
LHAAP-20

BLDG. 41-X
LHAAP-25

APPROXIMATE SCALE: 1 inch = 200 feet



001383
Longhorn Army Ammunition Plant
Karnack, Texas 133
April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-19 24X HOLDING AREA

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

as depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of drums

Portable bins in excellent condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

Portables Bins are sheltered from direct
Precipitation by a corrugated metal roof.
No other run-on/runoff controls are present.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There is no evidence of spillage or leakage
attributable to this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection it appears unlikely that
this unit contributed to any significant
groundwater contamination

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known

D. Other Areas of Concern

E. Summary/General Comments

This unit is governed by the regulations that appear in 40 CFR Part 265, Subpart I.

Because this is a well-managed unit, no further RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

SWMU: LHAAP-20, 25X Washout Pad.

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

See Attachment I.

Waste Characteristics:

Minute residues of explosive waste and explosive-contaminated waste deactivated with fuel oil.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Washdown area.
- (2) Design Features: Concrete pad with 6-inch curb approximately 16 x 30 feet. Within pad area is a three-sided galvanized metal shed that houses an actual wash rack. Pad is drained to Sump No. 114.
- (3) Operating Practices: Empty five-gallon pails used to contain explosive waste for disposal, and empty 30-gallon drums used to contain explosive-contaminated waste, are washed down here.
- (4) Period of Operation: 1955 until present.

Summary:

Additional information is needed about this unit, and the area which it occupies.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

Longhorn Army Ammunition Plant
Karnack, Texas

April 25-28 & May 2-5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE LHAAP-20

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: BLDG 25X, WASHOUT PAD

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

Historically, rinseate from the cleaning process
employed at this unit has not been
hazardous either by characteristic or by
listed constituent.

- C. Visual/Physical Inspection of Unit

1. Conditions of drums

Empty as defined in 40 CFR Part 261.7

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

The open area of the unit is concrete curbed and
slopped. ~~There is no~~ The housed portion
is protected from direct rainfall by a building
having 3 walls and a roof.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There is no evidence that suggests any past
spills or leaks attributable to this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection it seems unlikely that this
unit would contribute to any significant groundwater
contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known

D. Other Areas of Concern

E. Summary/General Comments

At this Particular Unit, empty containers (as defined in 40 CFR Part 261.7) are rinsed and allowed to air dry. Therefore, this unit is exempt from permitting requirements.

Because this is a well-managed unit, and because this unit exhibits no manifestation of past mismanagement, no further RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

SWMU: LHAAP-21, Air Curtain Destructor.

Evidence of Release:

Visible smoke.

Pollutant Dispersal Pathways:

Particulates and sulfur oxides discharged to atmosphere during burning. Ash can contain high levels of barium. Air emissions. See Attachment I for further discussion.

Waste Characteristics:

Wood, paper, and explosive-contaminated inert and flammable waste. Wastes processed in this unit are not hazardous by characteristic or by listed constituent concentration.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Air curtain destructor.
- (2) Design Features: The air curtain destructor is a 24-foot long, 7-foot wide, 10-foot deep burning chamber with a refractory lining. A 125 horsepower air blower and an overfire air curtain are the major ancillary components of the destructor.
- (3) Operating Practices: Combustion in the destructor is accomplished in batch operation. Propane gas is used as an auxiliary fuel in the burning process. A 250-gallon propane gas tank with piping, located in a remote vicinity, ensures the availability of auxiliary fuel whenever needed. The burned residue is removed manually and tested for EP-toxicity. Runoff from the site is collected in a sump near the bottom of the burning pit. The destructor's capacity is rated at 1,000 pounds per hour.
- (4) Period of Operation: May 1980 until present.

- (5) Permit: Texas Air Control Board No. R-6356.
- (6) T.A.C.B. Exemption No. X 15354

Summary:

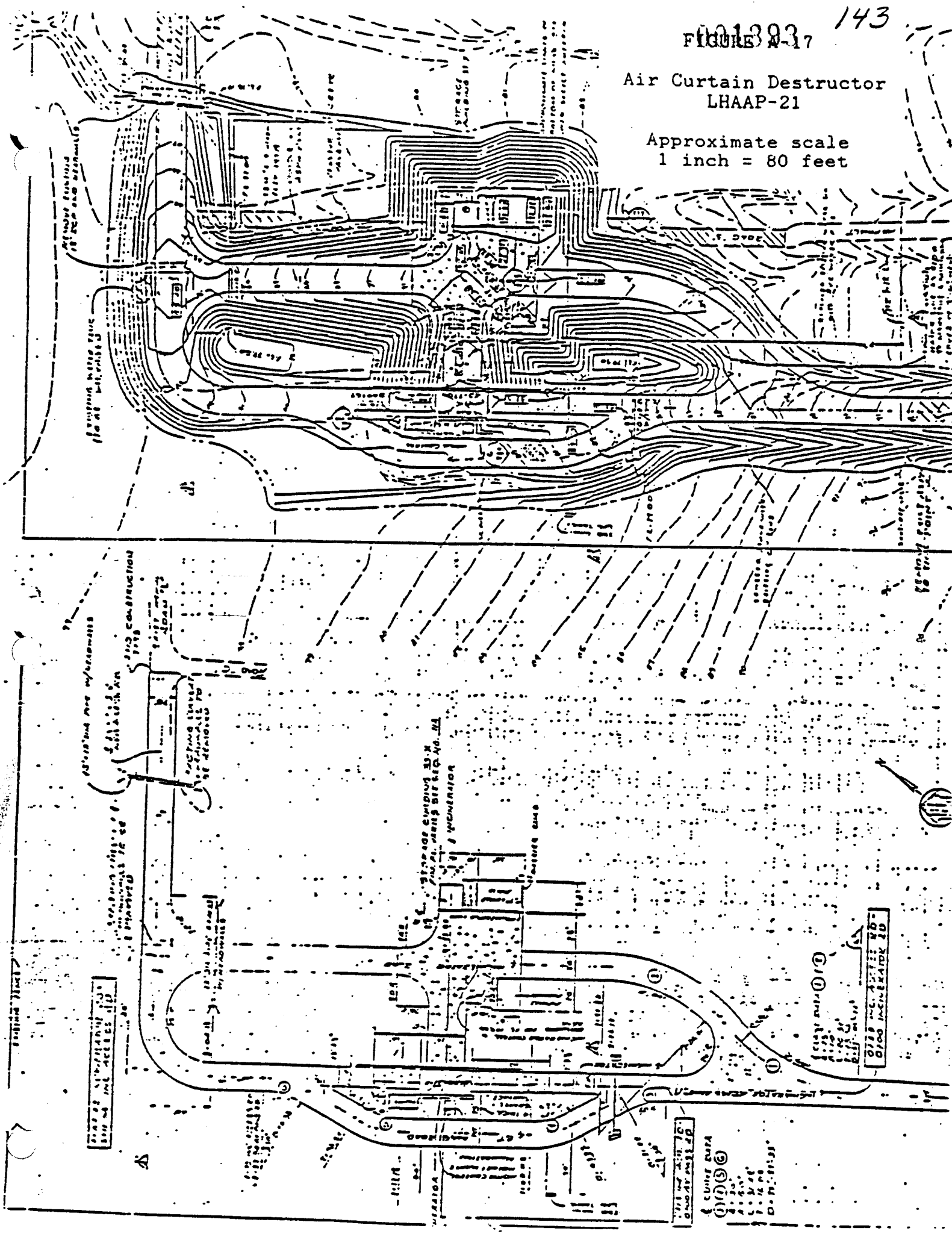
Additional information is needed about this unit, and the area which it occupies.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

Air Curtain Destructor
LHAAP-21

Approximate scale
1 inch = 80 feet



Longhorn Army Ammunition Plant of 3
Karnack, TX

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION LNAPP-21

TWC Regis. No. _____

WASTE MANAGEMENT UNIT Air Curtain Destructor

Regis. Facility No. ISW 30990

- A. Verification and description of Physical Construction and Operation
(dimensions, years of service, containment features, e.g. concrete pads,
dikes, indoor)

Rapid oxidation of non-hazardous waste materials
as depicted in the Preliminary Review.

- B. Characterization of Waste Materials (facility records, sample results,
process description, constituents of concern, documentation)

as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions unit and support apparatus

The unit and accompanying support apparatus
function well and are in good condition

2. Rainfall controls (run-on/run-off controls, stormwater collection and disposal, analyses)

As depicted in the Preliminary Review

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There was no evidence of any spillage or leakage attributable to this unit

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection it appears unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known

D. Other Areas of Concern

E. Summary/General Comments

Because this is a well-managed unit, no further RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

RCRA: LHAAP-22, Open burning cages; LHAAP-22(E) - East cage, LHAAP-22(C) - Center cage, LHAAP-22(W) - West cage.

Evidence of Release:

Visible smoke.

Pollutant Dispersal Pathways:

Particulate matter may become airborne during burning. See Attachment I for further discussion.

Waste Characteristics:

Explosive wastes from production of munitions.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Open burning.
- (2) Design Features: Each of three cages consists of a steel frame 12 x 12 x 12 feet enclosed with 1-inch grating set on 4-foot clay-lined pan. The entire structure is set on a gravel pad and underlain with nylon-reinforced plastic. The top of the cage consists of one 6-inch steel tank filled with water.
- (3) Operating Practices: Wastes placed inside of cage and ignited with safety fuse.
- (4) Period of Operation: March 1984 until present.
- (5) Permit: TACB No. R-6356
- (6) TACB Exemption No. X 15354

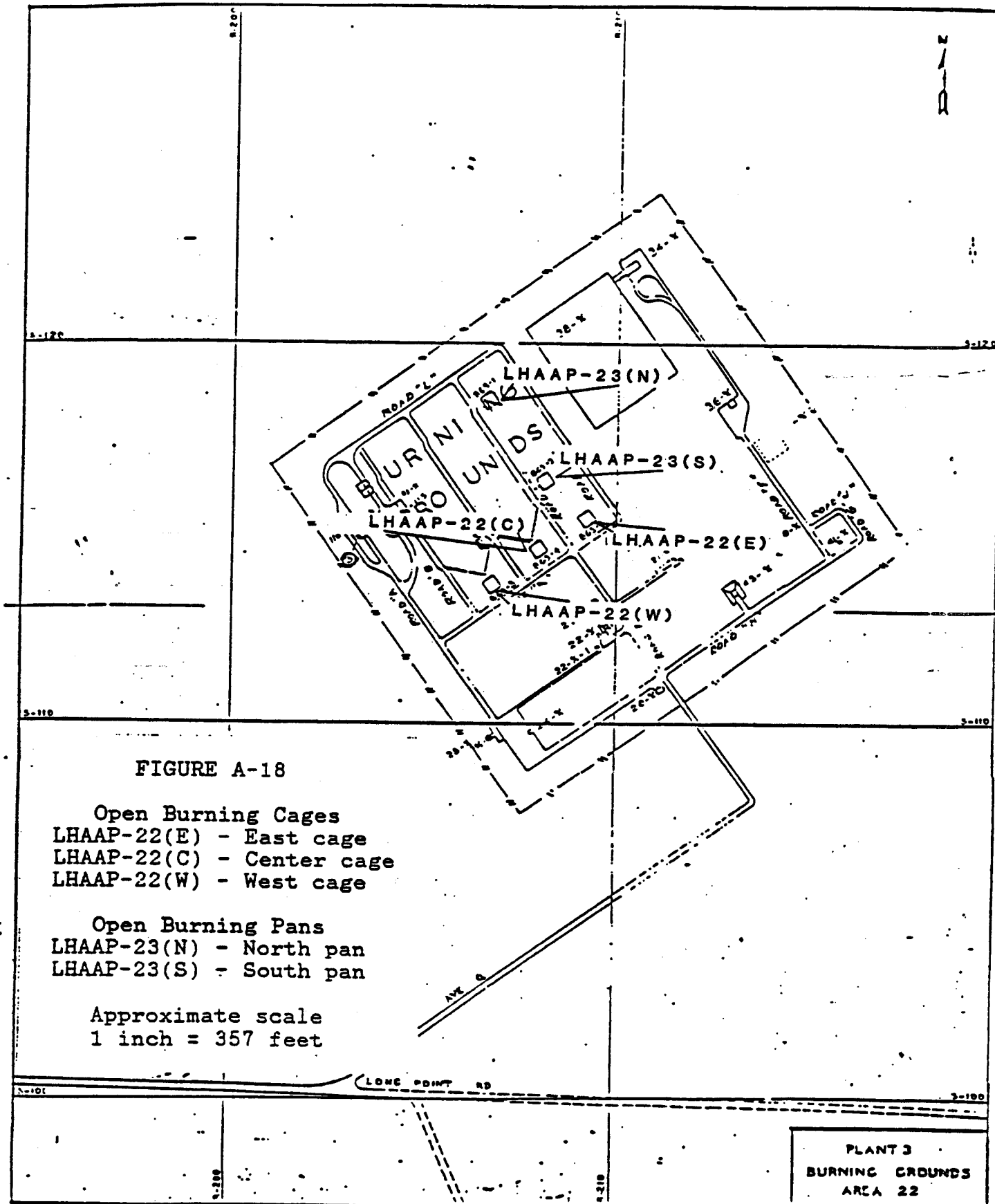
Summary:

Additional information is needed about this unit, and the area which it occupies.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

Ground-Water Contamination Surv No. 38-26-0851-87, LHAAP, Marshall, TX,
18-22 May 87



1 of 3

Longhorn Army Ammunition Plant
Karnack, TX

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION *open BURNING Cages*
EAST - center WEST

TWC Regis. No. _____

WASTE MANAGEMENT UNIT *LHAAP-22*

Regis. Facility No. *ISN 30990*

- A. Verification and description of Physical Construction and Operation
(dimensions, years of service, containment features, e.g. concrete pads,
dikes, indoor)

As depicted in the Preliminary Review

(All three cages were approximately identical)

- B. Characterization of Waste Materials (facility records, sample results,
process description, constituents of concern, documentation)

As depicted in the Preliminary Review

(All 3 cages processed the same form of waste)

- C. Visual/Physical Inspection of Unit

1. Conditions unit and support apparatus

All 3 units were in good, well-maintained condition. The photographs show (1) an empty cage, and (2) a cage during a burning event. The west cage depicted is shown in the photograph both before and during a burn event.

2. Rainfall controls (run-on/run-off controls, stormwater collection and disposal, analyses)

As depicted in the Preliminary Review

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

~~There~~ There was no evidence of any spillage or leakage attributable to any of the three burning cages.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that any of the three burning cages would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

none known, however it is obvious that some emissions occur coincidentally with burning events.

D. Other Areas of Concern

E. Summary/General Comments

These 3 units will require separate permits under
40 CFR Part 264, subpart X.

Because these units appear to be well managed,
no further RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

RCRA: LHAAP-23, Open Burning Pans; LHAAP-23(N) - North pan, LHAAP-23(S) - South pan.

Evidence of Release:

Visible smoke.

Pollutant Dispersal Pathways:

Particulate matter may become airborne during burning. See Attachment I for further discussion.

Waste Characteristics:

Explosive wastes.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Thermal Processor.
- (2) Design Features: Steel-framed box with galvanized steel lid, 2 x 8 x 16 feet. Pan is clay lined and set on gravel pad over plastic liner. Steel sheets are set in front of pan to catch ashes.
- (3) Operating Practices: Wastes placed inside pan and ignited with safety fuse.
- (4) Period of Operation: March 1984 until present.
- (5) Permit: TACB No. R-6356
- (6) TACB Exemption No. X 15354

Summary:

Additional information is needed about this unit, and the area which it occupies.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

001405

155

Longhorn Army Ammunition Plant ^{1 of 3}
Karnack, Tx

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION ^{OPEN BURNING PANS}
^{NORTH PAN & SOUTH PAN}

TWC Regis. No. _____

WASTE MANAGEMENT UNIT LHAAP-23

Regis. Facility No. ^{ESW} 30990

- A. Verification and description of Physical Construction and Operation
(dimensions, years of service, containment features, e.g. concrete pads,
dikes, indoor)

As depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample results,
process description, constituents of concern, documentation)

Explosive Wastes

- C. Visual/Physical Inspection of Unit

1. Conditions unit and support apparatus

Both units appeared to be in good condition.

2. Rainfall controls (run-on/run-off controls, stormwater collection and disposal, analyses)

The units each feature a roll-away metal roof which shelters the burning area from direct precipitation.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There was no evidence of spillage or leakage attributable to ~~either~~ either unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection it seems unlikely that either unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known, except that emissions of contaminants are typically coincidental with this type of burning event.

D. Other Areas of Concern

E. Summary/General Comments

These units will require permitting under Title 40 CFR, Subpart X.

Because these are well-managed units, no further RFA action is recommended for either unit.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

RCRA: LHAAP-24, Unlined Evaporation Pond/Rocket Motor Washout Lagoon.

Evidence of Release:

Contaminated ground-water samples were collected during lagoon operation. However, since lagoon closure, ground-water contamination has all but disappeared.

Pollutant Dispersal Pathways:

Through the soil into the ground water and possible discharge into nearby Harrison Bayou. See Attachment I for further discussion.

Waste Characteristics:

The lagoon received wastewater from the sumps located across the installation. The waste predominantly contained magnesium, sodium nitrates, potassium nitrate, and ammonium nitrate.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Waste disposal lagoon.
- (2) Unit Size: Surface area; 1.55 acres, design capacity; 7,079,653 gallons, operating depth; 14 feet.
- (3) Period of Operation: 1963 until October 1985.
- (4) General Physical Conditions: A grassed mound of soil approximately 10 feet in height presently exists at the site of the lagoon.
- (5) Closure Method: Water was removed and disposed of offsite by deep well injection. All contaminated sludges and soils were removed and disposed of offsite at an approved hazardous waste landfill. The excavated area was backfilled with clean common fill to a height of about 6 feet above the surrounding ground level. An impervious clay layer cap 4 feet thick was

placed on top of the fill. A 1-foot-thick layer of filter sand was placed on top of the clay cap. A 1-foot-thick layer of topsoil with turf was placed on top of the filter sand. A French drain system was located along the outer rim of the top of the filter cap to prevent ponding of rainwater.

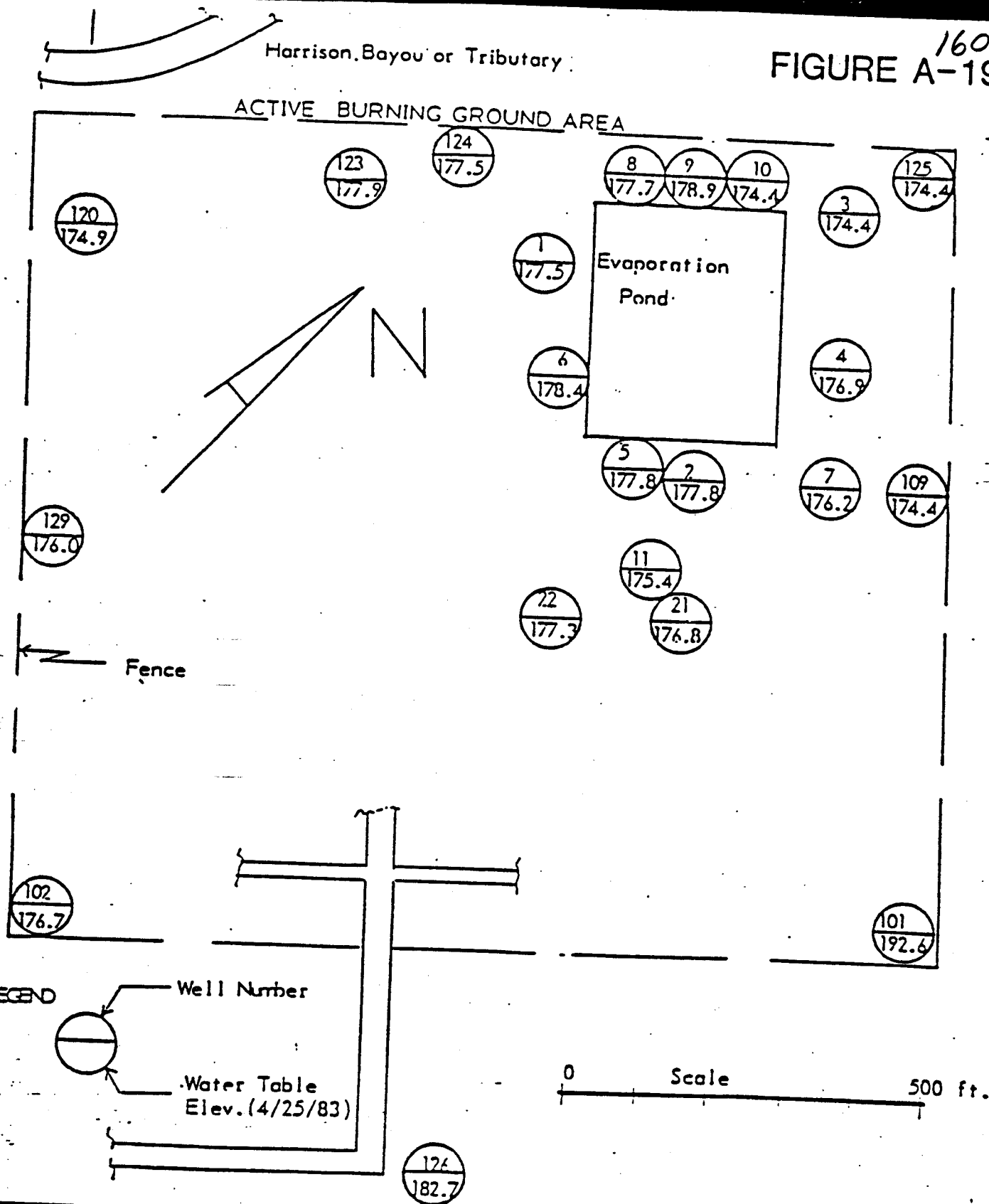
Summary:

Additional information is needed about this unit, and the area upon which it rested.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, 5) visual evidence of releases, and 6) final disposition of unit.

160
FIGURE A-19



Unlined Evaporation Pond
LHAAP-24

SOURCE: REFERENCE 7d

Longhorn Army Ammunition Plant 00441161
Karnach, TX
April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
SURFACE IMPOUNDMENTS

LHAAP-24

TWC Regis. No.

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION: Unlined Evaporation Pond / Rocket Motor Washout Lagoon

- A. Verification of physical construction and operation
(dimensions, years of service, materials of construction)

A grassed mound of soil is all that is
visible

- B. Characterization of waste materials (Facility records, sample results, process description, constituents of concern, documentation)

As depicted in the Preliminary Review.

- C. Visual/physical inspection of unit: CLOSED

1. Description of dike structure, height and freeboard:

2. Evidence of discharges from impoundment (spill history, bypassing, inadequate run-on/run-off controls, flood prone area)

3. Evidence of actual or potential groundwater contamination (samples from mon. wells, knowledge of shallow water table, liner integrity, active seeps, leak detection records, operating practices)

Historically, evidence of groundwater
contamination has appeared in groundwater samples
downgradient of the unit.

4. Air quality concerns (TACB complaints, odors, air sampling records)

None known

D. Other areas of concern:

E. Summary/General Comments:

An RFI is recommended to (1) characterize the nature of any soils and groundwater contamination; (2) the extent of any contamination. This RFI may be done in conjunction with the burning ground recommended RFI (LHAAP - 18)

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

RCRA: LHAAP-25, Bldg 41-X.

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

See Attachment I.

Waste Characteristics:

Explosive wastes.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Storage.
- (2) Design Features: Shed, 8 x 10 feet in size, with fiberglass siding on concrete pad.
- (3) Operating Practices: Used to store explosives awaiting disposal.
- (4) Period of Operation: 1955 until present.

Summary:

Additional information is needed about this unit, and the area upon which it rested.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

Longhorn Army Ammunition Plant 001415-
Karnack, Tx
April 25-28 & May 2-5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

LHAAP-25

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: Building 41-X

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As Depicted in the Preliminary Review.

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

Explosive WASTES AWAITING DETONATION

- C. Visual/Physical Inspection of Unit

1. Conditions of drums

Good Condition, neat and orderly

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

Within a totally enclosed, weather-proof building.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There was no evidence that suggested the presence of any spillage or leakage attributable to this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection it appears unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known

D. Other Areas of Concern

E. Summary/General Comments

This unit is governed under 40 CFR PART 265,
Subpart I.

Because this is a well-managed unit, no further
RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

SWMU: LHAAP-26, Construction materials Landfill.

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

See Attachment I.

Waste Characteristics:

Class No. III Demolition Waste.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units. Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Landfill.
- (2) Design Features: A fenced area 400 x 800 feet. Of that fenced area, approximately 400 x 100 feet is presently in use.
- (3) Operating Practices: Trench and burial; trenches sized large enough to receive 1 week's waste and covered at the end of that week. Approximately 35-400 cubic yards of waste are disposed of per month.
- (4) Period of Operation: 1985 until present.

Summary:

Additional information is needed about this unit, and the area which it occupies.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

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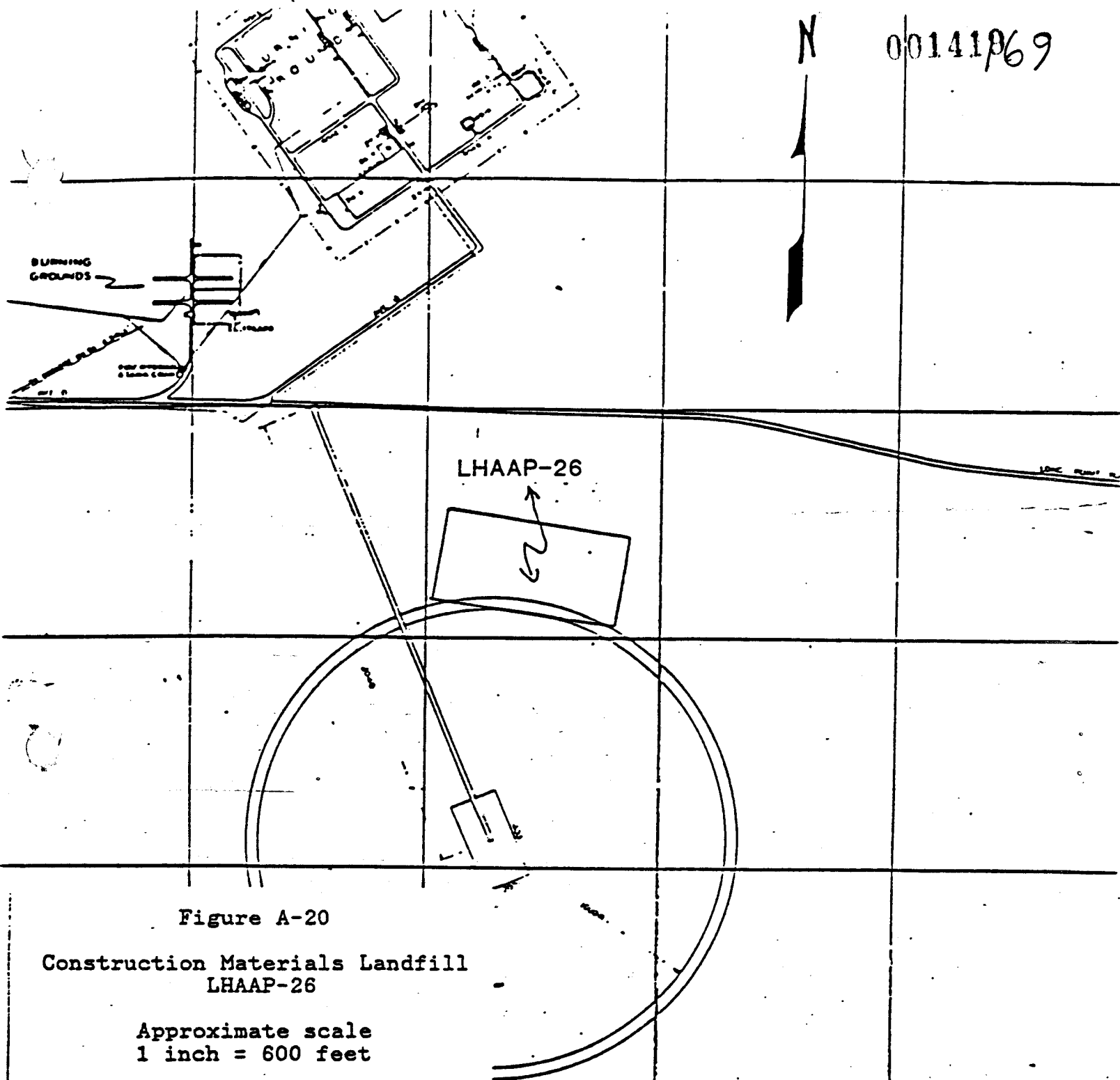


Figure A-20

Construction Materials Landfill
LHAAP-26

Approximate scale
1 inch = 600 feet

GROUND SIGNAL TEST AREA

Longhorn Army Ammunition Plant
Karnack, Tx

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

LANDFILLS LHAAP-26

Regis. Facility No. FSW 30990

UNIT IDENTIFICATION: Construction Materials Landfill

- A. Verification of physical construction and operation (dimensions, years of service, materials of construction above and below grade).

As depicted in the Preliminary Review

- B. Characterization of waste materials (facility records, sample results, process description, constituents of concern, documentation).

Demolition and construction debris, (inert)
Empty Paint Cans

- C. Visual/physical inspection of unit:

1. Active Landfill

- a. Observations of potential problem areas (water in trench, blowing debris/waste liner integrity, waste compatibility)

Some evidence of rainwater in trench
which requires periodic pumping -
Perhaps a smaller area of excavation would
result in containing less stormwater.

- b. Operation evaluation (compaction of deposited waste, daily cover, contaminant dispersal by equipment, disposal of liquid waste, waste stabilization)

COVERED weekly as per standard.

However, it may be advantageous to cover the debris daily in order to reduce the opportunity for stormwater ~~seepage~~ impounding.

- c. Rainfall controls (run-on/runoff control, leachate collection and disposal, stormwater collection and disposal analyses)

There are no rainfall controls or leachate collection devices.

2. Inactive/closed landfill **NA**

- a. Description of cap (cap materials, thickness of cap, vegetation or other cover)

- b. Potential problem areas (cracking, erosion, subsidence, water ponding on cap, surfacing wastes, land use on and adjacent to closed fill)

3. Evidence of actual or potential ground water contamination (samples from monitor wells, knowledge of shallow water table, liner integrity, leak detection records)

4. Air quality concerns (TACB complaints odors, particulate dispersal, sampling records)

D. Other Areas of Concern

It may be worthwhile to monitor the contractors as they make "deposits" in the landfill to reduce the possibility of placing hazardous or toxic waste in this landfill.

E. Summary/General Comments

We suggest that the following 3 measures be employed to improve this unit:

1) Excavate a smaller area/volume

2) cover the trench at intervals smaller than weekly

3) monitor the contractor as deposits are made

No further RFA action is recommended for this unit.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

SWMU: LHAAP-27, South Test Area/Bomb Test Area/IST-1.

Evidence of Release:

Low levels of explosives contamination detected in soil samples. Ground-water samples from two wells detected no explosives and only very minor organic contamination.

Pollutant Dispersal Pathways:

Residues could become mobilized when exposed to precipitation. Infiltration into soil and ground water and possible surface-water runoff. See Attachment I for further discussion.

Waste Characteristics:

Testing area for photo flash bombs, and demilitarization site for illuminating devices and leaking production items.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Demilitarization and burial of illuminating devices.
- (2) Unit Size: Approximately 1/2 acre.
- (3) Period of Operation: 1942 until 1953.
- (4) General Physical Conditions: Grassed over, flat area.
- (5) Closure Method: Area abandoned and allowed to revegetate.

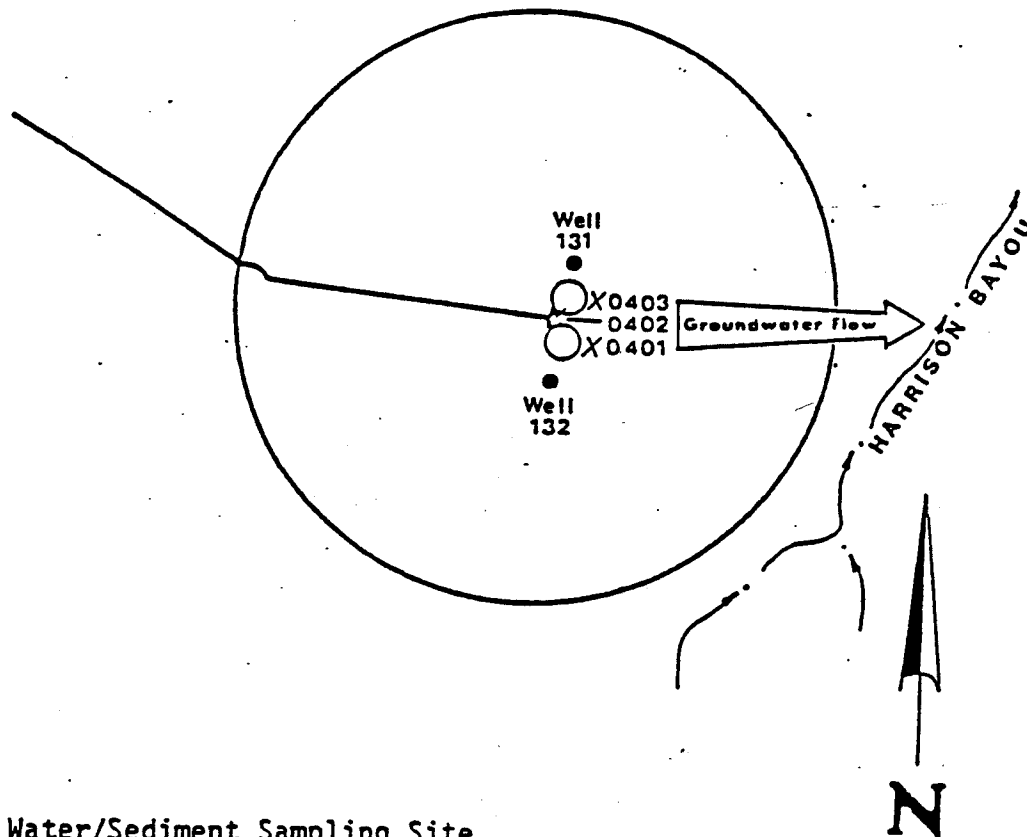
Summary:

Additional information is needed about this unit, and the area upon which it rested.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, 5) visual evidence of releases, and 6) final disposition of unit.

FIGURE A-21



- ▲ Surface Water/Sediment Sampling Site
- X Soil Sampling Site
- Well Installed During Project
- ▲ Existing AEHA Well (*AEHA No.)
- ▣ Proposed Surface Water/Sediment Sampling Site
- ⊙ Proposed Well Location
- ⊗ Proposed Soil Sampling Location

APPROX SCALE 1:7240

South Test Area
LHAAP-27

SOURCE: REFERENCE 7d

001427 177

Longhorn Army Ammunition Plant 1 of 3
Karnack, TX
April 25-28 & May 2-5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

WASTE MANAGEMENT UNIT LHAAP-27

Regis. Facility No. ISW 30990

- A. Verification and description of Physical Construction and Operation
(dimensions, years of service, containment features, e.g. concrete pads,
dikes, indoor)

as depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample results,
process description, constituents of concern, documentation)

as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions unit and support apparatus

Completely Revegetated.

2. Rainfall controls (run-on/run-off controls, stormwater collection and disposal, analyses)

No erosion visible

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

no evidence of past spillage or leakage

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

See the Preliminary Review

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known

D. Other Areas of Concern

E. Summary/General Comments

Because no significant groundwater contamination exists, and because the kinetics of soil-based biological oxidation of explosives have stabilized, no further RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

RCRA: LHAAP-28, Magazine Area, Bldg. 811-1.

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

See Attachment I.

Waste Characteristics:

Munitions products determined to be unsuitable. These products are dry and are canned in weather-proof packing.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Munitions storage.
- (2) Design Features: The magazine area is a separate, fenced area within the installation used for munitions storage. The total enclosed area is over 800 acres. Within this area are located 58 bunkers and two buildings. Each bunker consists of three concrete walls and a concrete floored structure 26 x 60 x 10 feet with a wooden roof and doors. Earthen embankments surround the nondoor sides of the bunker. The two buildings are steel-framed structures with corrugated metal siding set on an elevated concrete pad. The approximate size of those buildings is 150 x 75 x 20 feet.
- (3) Operating Practices: The bunkers are used to store munitions products. Should a particular product lot be determined by testing, shelf-life, or some other means to be unsuitable, that product lot is either remanufactured or disposed of at the installation burning grounds. If the product is designated for disposal, then that product becomes a waste and the product is moved to Bldg. 811-1 where it is out processed in less than 90 days.
- (4) Period of Operation: 1942 until present.

Summary:

Additional information is needed about this unit, and the area which it occupies.

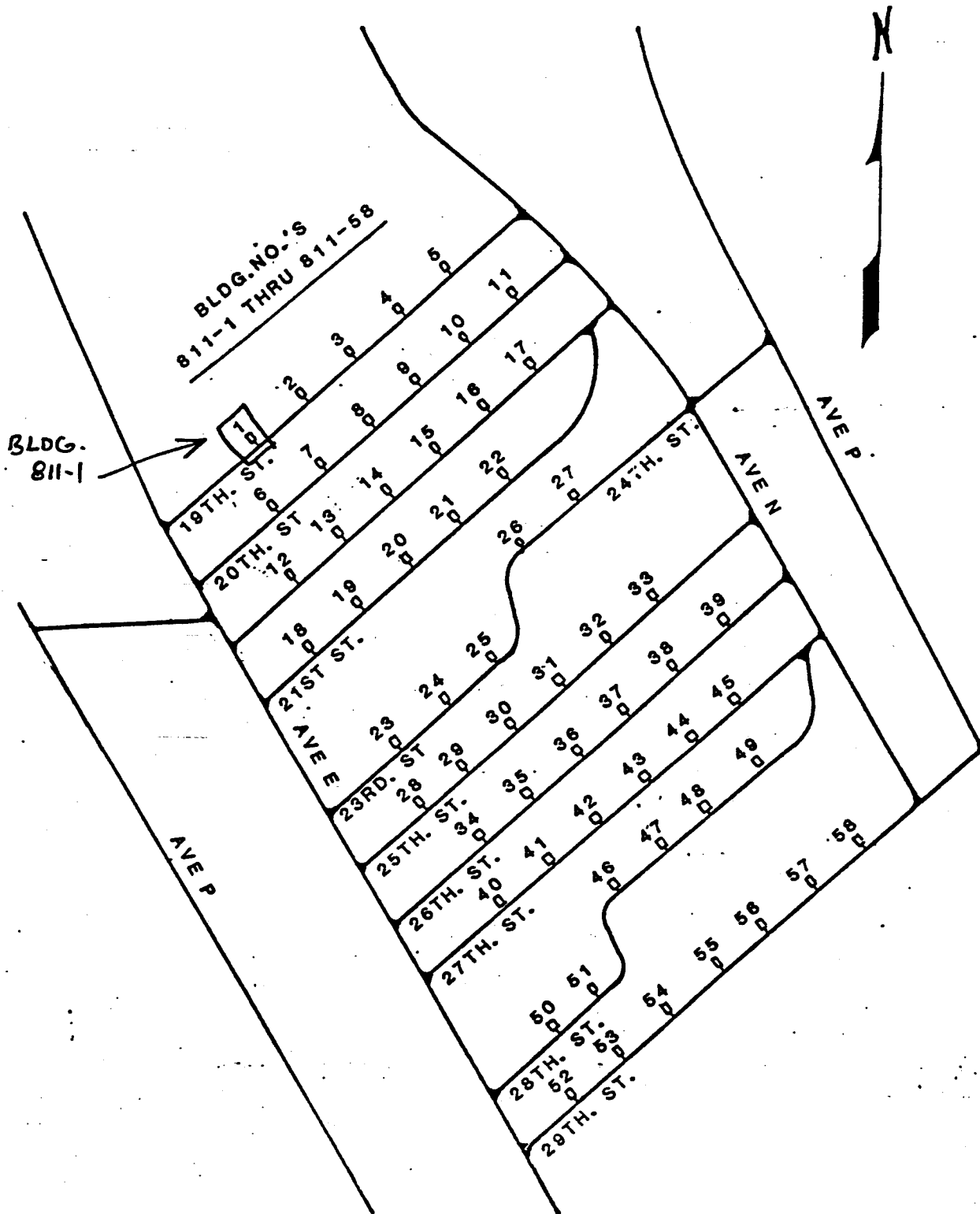
Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

FIGURE A-22

001432
182

MAGAZINE AREA
LHAAP - 28



APPROXIMATE SCALE: 1 inch = 1000 feet

Longhorn Army Ammunition Plant 1433
Karnack, TX 183
April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-28, BLDG. 811-1

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

A Bunker as depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

Expired Munitions as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Condition of drums

None Present

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

Waste materials managed within the confines of a weather-proof building.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage from this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known

D. Other Areas of Concern

E. Summary/General Comments

*Because there is no evidence of mis management,
no further RFA action is recommended for the unit.*

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

SWMU: LHAAP-29, Former TNT Production Area.

Evidence of Release:

Explosives contamination was detected in surface water, sediment, and soil samples. No explosives contamination was detected in the ground water.

Pollutant Dispersal Pathways:

Residues could become mobilized when exposed to precipitation. Infiltration through soil and surface water runoff. See Attachment I for further discussion.

Waste Characteristics:

Industrial waste from TNT manufacturing.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: TNT manufacturing area.
- (2) Unit Size: Approximately 85 acres.
- (3) Period of Operation: 1943 until 1945.
- (4) General Physical Conditions: Heavily forested area.
- (5) Closure Method: Plant razed in 1959 and area allowed to reforest.

Summary:

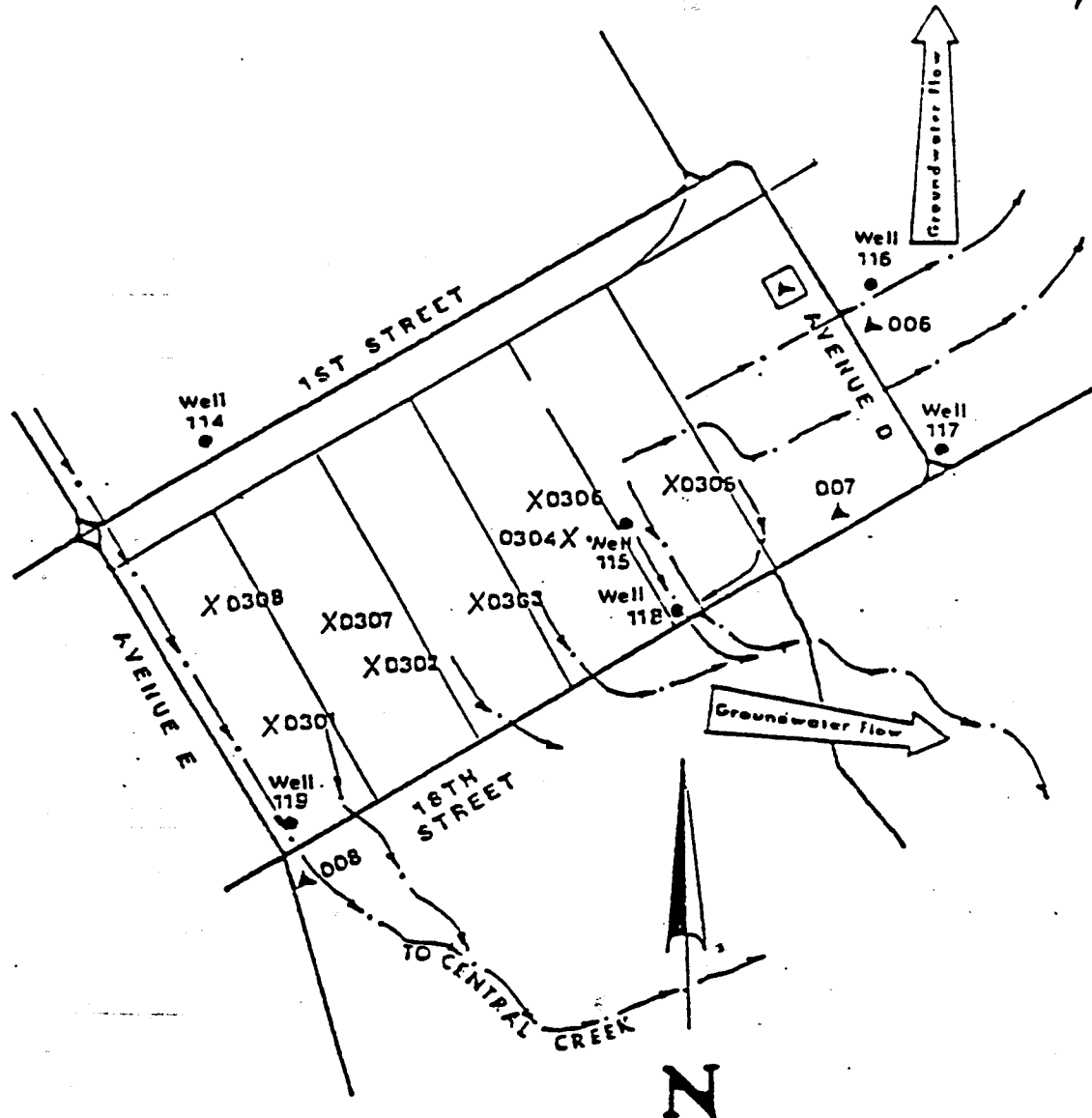
Additional information is needed about this unit, and the area upon which it rested.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, 5) visual evidence of releases, and 6) final disposition of unit.

FIGURE A-23

001437 187



- ▲ Surface Water/Sediment Sampling Site
- X Soil Sampling Site
- Well Installed During Project
- ▲ Existing AEHA Well (*AEHA No.)
- ▲ Proposed Surface Water/Sediment Sampling Site
- Proposed Well Location
- X Proposed Soil Sampling Location

APPROX SCALE 1:10900

Former TNT
Production Area
LHAAP-29

SOURCE: REFERENCE 7d

Longhorn Army Ammunition 1 of 3 Plat
Kearney, TX

April 25 - 28 & May 2 - 5 1988

PART II - UNIT EVALUATION Former TNT PRODUCTION AREA TWC Regis. No. _____

WASTE MANAGEMENT UNIT LHAAP-29

Regis. Facility No. ISW 30990

- A. Verification and description of Physical Construction and Operation
(dimensions, years of service, containment features, e.g. concrete pads,
dikes, indoor)

The remains of a WW-II - Vintage Ordnance Production
Area - Replete with concrete foundations, water and wastewater
systems, and deteriorated roadways.

- B. Characterization of Waste Materials (facility records, sample results,
process description, constituents of concern, documentation)

Tri nitro toluene and simpler forms (e.g. di nitro toluene,
di nitro benzene, mono nitro toluene) - Perhaps some
HNO₃ which has subsequently dissociated

- C. Visual/Physical Inspection of Unit

1. Conditions unit and support apparatus

Completely revegetated.

2. Rainfall controls (run-on/run-off controls, stormwater collection and disposal, analyses)

Rainfall runoff follows natural topography toward Caddo Lake.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There is no evidence of any appreciable spillage or leakage.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Through groundwater monitoring, no explosives were detected in the groundwater. Tri nitro toluene is biologically oxidizable and therefore probably became substrate for soil microorganisms.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known

D. Other Areas of Concern

E. Summary/General Comments

[REDACTED]

The TWC recommends that copies of the RFI in progress for this unit along with accompanying results of the RFI be provided as soon as the results are available.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

SWMU: LHAAP-30; TNT Red Water Pipeline.

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

Possible line leakage of residues into soil surrounding pipeline. Possible infiltration through soil into ground water and surface water.

Waste Characteristics:

TNT redwater.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: pipeline.
- (2) Unit Size: Approximate length, 4,200 feet, diameter unknown.
- (3) Period of Operation: 1942 until 1946.
- (4) General Physical Conditions: Wooden pipeline system approximately 5-feet deep used to transport redwater from Former TNT Production Area to pumphouse and then to Former TNT Waste Disposal Plant.
- (5) Closure Method: Pipeline abandoned in place. Ground surface above pipeline allowed to reforest.

Summary:

Additional information is needed about this unit, and the area upon which it rested.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, 5) visual evidence of releases, and 6) final disposition of unit.

001443

193

TNT REDWATER PIPELINE
(APPROXIMATE LOCATION)

N

FIGURE A-24 TNT RED WATER PIPELINE
LHAAP-30

APPROXIMATE SCALE: 1" = 600

001444 194
Longhorn Army Ammunition Plant
Karnack, TX
April 25-28 & May 2-5, 1988
1 of 3

PART II - UNIT EVALUATION TNT REDWATER PIPELINE

TWC Regis. No. _____

WASTE MANAGEMENT UNIT LHAAP-30

Regis. Facility No. ISW 30990

- A. Verification and description of Physical Construction and Operation
(dimensions, years of service, containment features, e.g. concrete pads,
dikes, indoor)

As depicted in the Preliminary Review - further
described a being 2 feet in diameter (I.D.) Cypress
Sewer --- Gravity Feed.

- B. Characterization of Waste Materials (facility records, sample results,
process description, constituents of concern, documentation)

Between 2 → 50 mg/l trinitrotoluene in
wastewater at th time of active use.

- C. Visual/Physical Inspection of Unit

1. Conditions unit and support apparatus

A. Bruce Childress of LHAAP reported that a section
of pipeline was recently exposed via excavation, and that
the cypress line was structurally sound and bedded
securely -

2. Rainfall controls (run-on/run-off controls, stormwater collection and disposal, analyses)

Inconsequential for a below-grade pipeline. Moreover,
because this is an inactive line, there is no way to
measure infiltration/inflow.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

The proliferation of surface weeds suggests that
no unfavorable soil condition exists.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

See Paragraph E

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

NONE

D. Other Areas of Concern

E. Summary/General Comments

Inasmuch as no trinitrotoluene has been detected in downgradient monitoring wells, and considering that this pipeline was clear-flushed in 1946, it is recommended no further RFA action is necessary for this unit.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

T.S.C.A. Unit: LHAAP-31, Bldg 707-C. (closed)

Evidence of Release:

There is no evidence of release of toxic waste or toxic constituents to the environment from this unit.

Pollutant Dispersal Pathways:

See Attachment I.

Waste Characteristics:

PCB-contaminated oil (at one time; however, no longer contains any waste materials).

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: building for storage.
- (2) Design Features: Wooden building, 30 x 150 feet, with shingle siding and concrete floor.
- (3) Operating Practices: Drums or transformers containing PCB-contaminated oil were stored inside galvanized steel cattle watering troughs inside the building. Two sizes of steel troughs were used, (3 x 8 x 2 x feet and 2 x 6 x 2 feet.) The building was empty except for the used cattle troughs.
- (4) Period of Operation: 1980 until March 1986.

Summary:

Additional information is needed about this unit, and the area upon which it rested.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, 5) visual evidence of releases, and 6) final disposition of unit.

FIGURE A-25

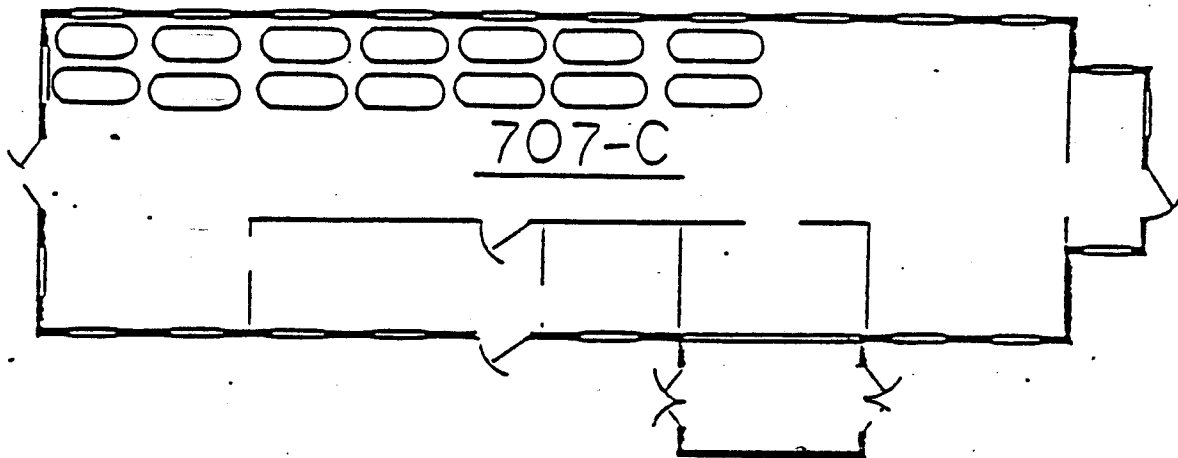
001449 199

BLDG 707-C

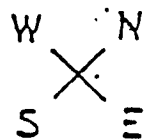
LHAAP-31

Not to scale

FIRST STREET



(SOURCE: REFERENCE 7b)



Longhorn Army Ammunition Plant
Karnack, Texas
April 25-28 & May 2-5, 1988

001450

200

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE (TSCA UNIT)

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-31

BLDG 707 C

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

as depicted in the [REDACTED] Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of drums

The building is empty

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

This unit is a completely-enclosed building.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There was no evidence of any spillage or leakage attributable to this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it appears unlikely that this unit would have contributed to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

none known

D. Other Areas of Concern

E. Summary/General Comments

The building was closed in 1987, with all of the remaining PCB-containing waste being transferred to building 31-W. No further RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988

Waste Management Unit:

SWMU: LHAAP-32, Former TNT Waste Disposal Plant.

Evidence of Release:

None. No explosives detected in ground water or soil samples collected on the site.

Pollutant Dispersal Pathways:

Residues could become mobilized if exposed to precipitation. Infiltration through soil into ground water is possible.

Waste Characteristics:

Industrial waste generated during TNT production.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Industrial waste treatment and burning.
- (2) Unit Size: 2 acres.
- (3) Period of Operation: 1943 until 1945.
- (4) General Physical Conditions: Area heavily wooded with only foundations of buildings remaining.
- (5) Closure Method: Plant razed in 1959 and area allowed to reforest.

Summary:

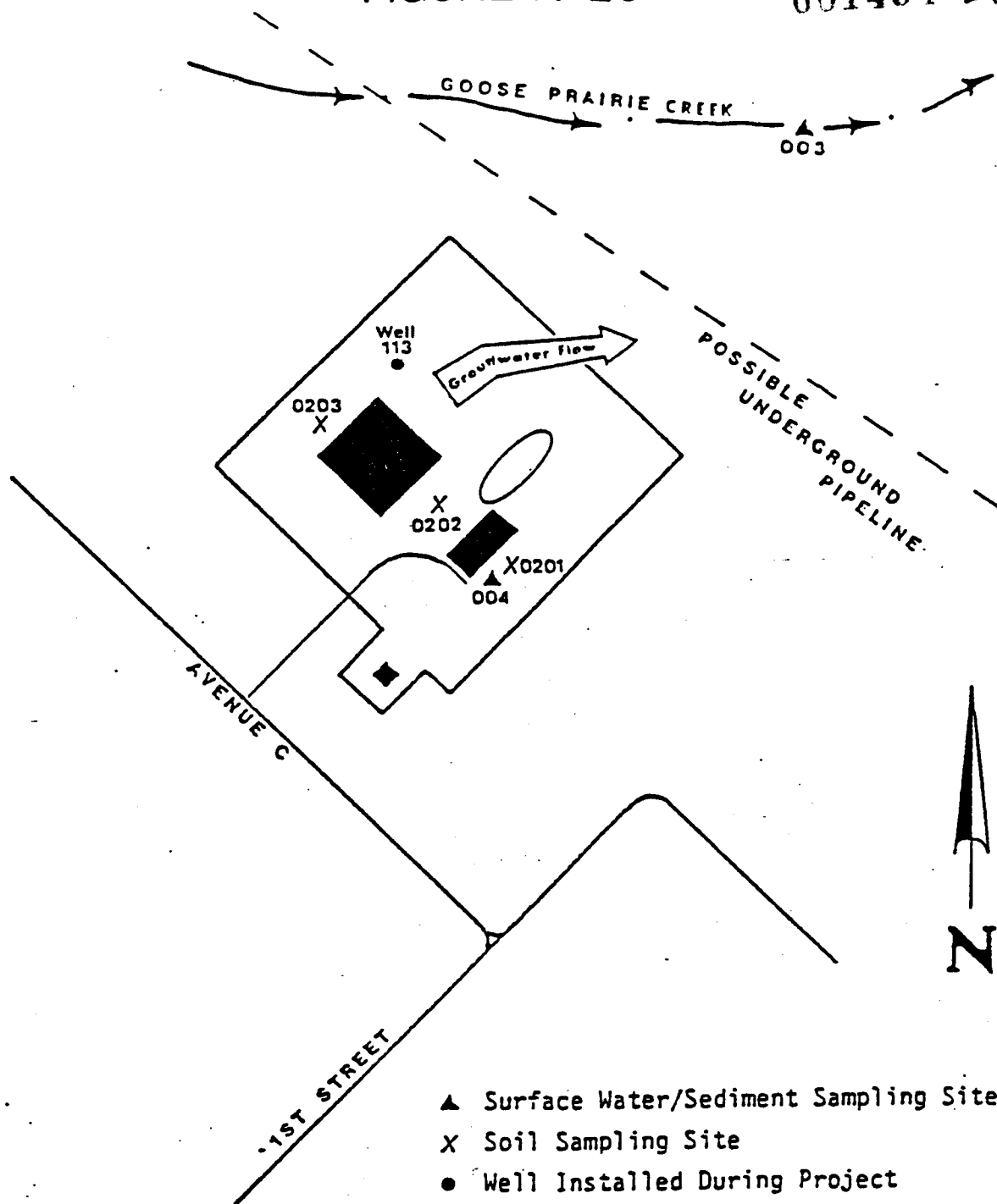
Additional information is needed about this unit, and the area upon which it rested.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

FIGURE A-26

001454 204



Approx Scale 1:5100

- ▲ Surface Water/Sediment Sampling Site
- X Soil Sampling Site
- Well Installed During Project
- ▲ Existing AEHA Well (*AEHA No.)
- ▲ Proposed Surface Water/Sediment Sampling Site
- Proposed Well Location
- X Proposed Soil Sampling Location

Former TNT Waste
Disposal Plant
LHAAP-32

SOURCE: REFERENCE 7

001455

205

Longhorn Army Ammunition Plant
Karnack, TX

1 of 3

April 25-28 & May 2-5, 1988

PART II - UNIT EVALUATION Former TNT waste disposal plant TWC Regis. No. _____

WASTE MANAGEMENT UNIT LHAAP-32

Regis. Facility No. ISW 30990

- A. Verification and description of Physical Construction and Operation
(dimensions, years of service, containment features, e.g. concrete pads,
dikes, indoor)

As depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample results,
process description, constituents of concern, documentation)

As depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions unit and support apparatus

Completely overgrown with vegetation

2. Rainfall controls (run-on/run-off controls, stormwater collection and disposal, analyses)

*As much as the area is revegetated, no
rainfall controls are necessary.*

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There is no evidence of any spillage or leakage

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

*Groundwater samples from Well #113
have shown no contamination exists.*

Soil Samples also show no contamination

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

NONE

D. Other Areas of Concern

E. Summary/General Comments

Because there is no evidence that this unit introduced any significant contamination into the environment, no further RFA action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

T.S.C.A. Unit: LHAAP-33, Bldg-701. (closed)

Evidence of Release:

There is no evidence of release of toxic waste or toxic constituents to the environment from this unit.

Pollutant Dispersal Pathways:

See Attachment I.

Waste Characteristics:

PCB-contaminated solid material (mostly soil) from spill cleanup.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units. Longhorn Army Ammunition Plant. Marshall. Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: Building.
- (2) Design Features: Wooden frame building with shingles and concrete floor, approximately 25 x 110 feet. Only the north half of the building was used for storage.
- (3) Operating Practices: PCB-contaminated material from the cleanup of transformer spills was stored in 30 and 55-gallon drums. The building was currently being used by security to shred classified documents.
- (4) Period of Operation: 1980 until 1984.

Summary:

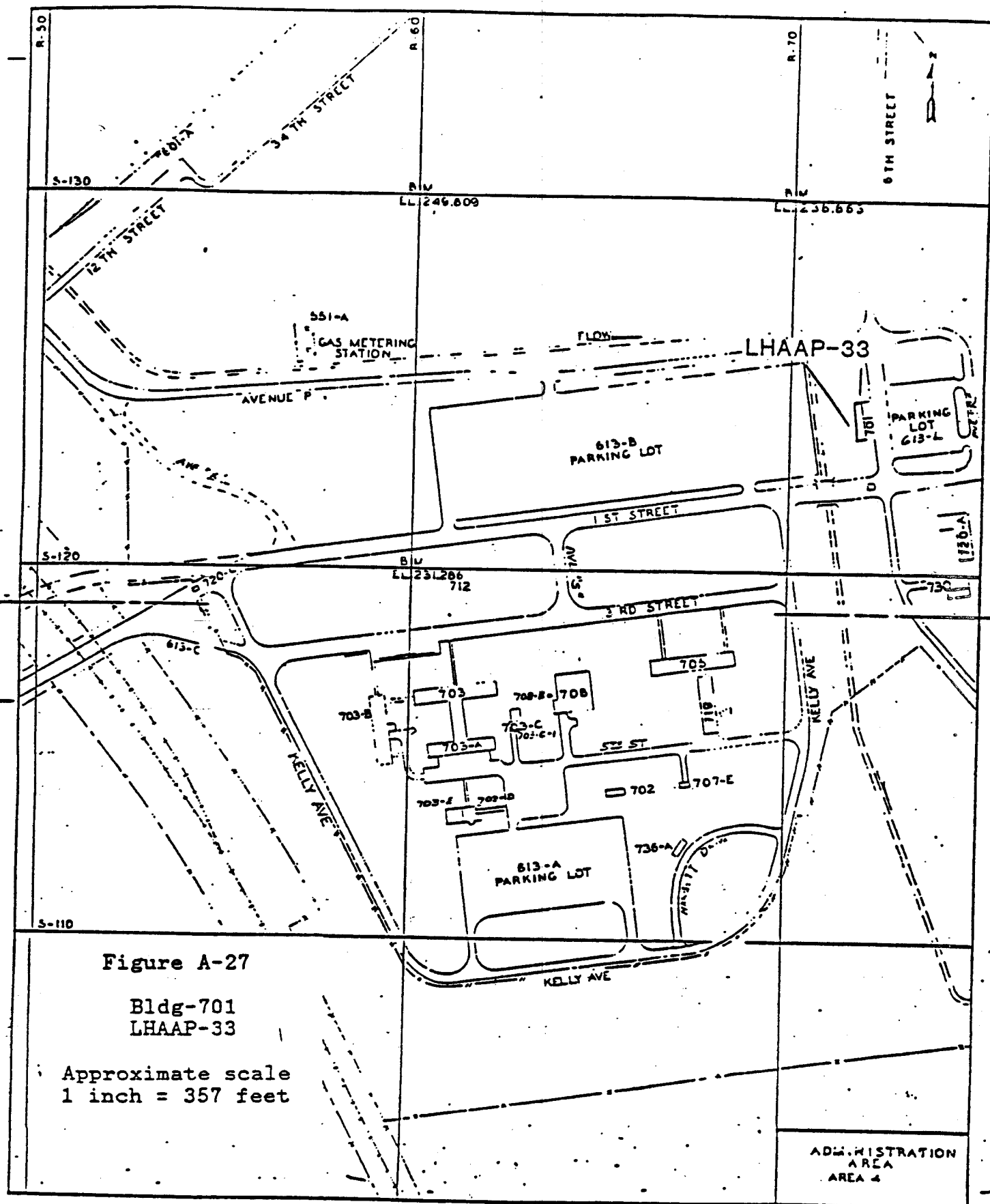
Additional information is needed about this unit, and the area upon which it rested.

001459

209

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, 5) visual evidence of releases, and 6) final disposition of unit.



001461
211

Longhorn Army Ammunition Plant
Karnack, Texas
April 25-28 & May 2-5 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE TSCA UNIT

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: SHARP-33, Bldg 701

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted on the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted on the Preliminary Review,

- C. Visual/Physical Inspection of Unit

1. Conditions of drums

No longer any ~~ammunition~~ drums present

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

This unit was within the confines of a weather-proof building.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

There is no evidence of spillage or leakage attributable to this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would have contributed to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known

D. Other Areas of Concern

E. Summary/General Comments

Because this unit shows no manifestations of past
mismanagement, no further RFA action is
recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
 EPA I.D.#: TX 6213820529
 HAZIT #: TX 05886

Reviewer: Alan Church
 Date: 8 April, 1988
 Amended: 9 June, 1988

Waste Management Unit: LHAAP-34 Industrial Wastewater Sump Network

SWMU: With the exception of four waste oil sumps, the following network of sumps presently or formerly comprised the initial point of collection for the industrial wastewater treatment facility as defined in TWC Wastewater Permit No. 02713 and NPDES Permit No. TX 0000035:

<u>SUMP NAME / NUMBER</u>	<u>CAPACITY</u>	<u>YEARS ACTIVE</u>	<u>DATES OF OPERATION</u>		
			<u>ACTIVATED</u>	<u>DEACTIVATED</u>	<u>CLOSED</u>
Sump at P-1 / 1	1,077 gal.	46	10/15/42		
Sump at P-3 / 2	957 gal.	46	10/15/42		
Sump at P-3 / 3	1,077 gal.	46	10/15/42		
Sump at P-3 / 4	1,346 gal.	34		6/15/76	
Sump at P-3 / 5	1,271 gal.	42			3/15/85
Sump at P-116/6	2,243 gal.	0		8/15/82	
Sump at P-116/7	2,243 gal.	0	Re-activated 10/2/87	8/15/82	
Sump at P-117/8	2,243 gal.	6	8/15/82		
Sump at P-117/9	2,243 gal.	6	8/15/82		
Sump at P-118/10	2,243 gal.	3	8/15/85		
Sump at P-118/11	2,243 gal.	3	8/15/85		
Sump at P-118/12	2,243 gal.	3	8/15/85		
Sump at P-118/13	2,243 gal.	0		8/15/82	
Sump at B-5 /14	1,077 gal.	42			3/15/85
Sump at B-7 /15	1,077 gal.	46	10/15/42		
Sump at B-7 /16	240 gal.	46	10/15/42	Waste Oil (Class I, NH)	
Sump at B-9 /17	718 gal.	42			4/01/85
Sump at B-9 /18	1,077 gal.	42			4/03/85
Sump at B-10 /19	1,077 gal.	46	10/15/42		
Sump at B-11 /20	957 gal.	46	10/15/42		
Sump at B-12 /21	957 gal.	46	10/15/42		
Sump at B-13 /22	928 gal.	46	10/15/42		
Sump at B-14 /23	954 gal.	46	10/15/42		

<u>SUMP NAME / NUMBER</u>	<u>CAPACITY</u>	<u>YEARS ACTIVE</u>	<u>ACTIVATED</u>	<u>DEACTIVATED</u>	<u>CLOSED</u>
Sump at B-15 /24	957 gal.	46	10/15/42		
Sump at B-16 /25	957 gal.	46	10/15/42		
Sump at Shed "C"/26	1,033 gal.	46	10/15/42		
Sump at P-9 /27	1,436 gal.	46	10/15/42		
Sump at P-122/28	118 gal.	6	8/15/82		
Sump at P-123/29	2,243 gal.	6	8/15/82		
Sump at 212-12/30	238 gal.	46	10/15/42		
Sump at 212-12/31	238 gal.	42		4/10/85	
Sump at 212-14/32	162 gal.	46	10/15/42		
Sump at 212/14/33	162 gal.	42		4/10/85	
Sump at 212-16/34	165 gal.	46	10/15/42		
Sump at 212-18/35	106 gal.	46	10/15/42		
Sump at 212-20/36	293 gal.	46			06/87
Sump at 212-29/37	330 gal.	42			6/17/85
Sump at 212-32/38	500 gal.	46	10/15/42		
Sump at 212-33/39	24 gal.	42			6/17/85
Sump at 212-33/40	134 gal.	46	10/15/42		
Sump at 212-35/41	144 gal.	46	10/15/42		
Sump at 212-37/42	144 gal.	46	10/15/42		
Sump at 212-38/43	106 gal.	42			6/17/85
Sump at 25-C /44	2,394 gal.	29			6/17/85
Sump at 25-C /45	2,394 gal.	33	8/15/55		6/17/85
Sump at 25-C /46	200 gal.	29			6/17/85
Sump at 25-D /47	4,050 gal.	33	8/15/55		
Sump at 26-E /48	628 gal.	33	8/15/55		
Sump at 26-E /49	150 gal.	33	8/15/55		
Sump at 26-E /50	538 gal.	33	8/15/55		
Sump at 26-E /51	360 gal.	33	8/15/55		
Sump at 28-G /52	524 gal.	30			8/16/85

001486
216

<u>SUMP NAME / NUMBER</u>	<u>CAPACITY</u>	<u>YEARS ACTIVE</u>	<u>ACTIVATED</u>	<u>DEACTIVATED</u>	<u>CLOSED</u>
Sump at 29-D /53	2,693 gal.	33	8/15/55		
Sump at 31-G /54	673 gal.	33	8/15/55		
Sump at 31-G /55	471 gal.	33	8/15/55		
Sump at 32-H /56	304 gal.	30		8/30/85	
Sump at 33-G /57	3,141 gal.	29			6/17/85
Sump at 36-B /58	297 gal.	30	8/15/55		06/85
Sump at 41-E /59	2,633 gal.	29			6/17/85
Sump at 42-E /60	2,633 gal.	30		8/30/85	
Sump at 42-H /61	3,590 gal.	33	8/15/55		
Sump at 45-E /62	943 gal.	29			6/17/85
Sump at 45-E /63	943 gal.	29			6/17/85
Sump at 45-E /64	1,346 gal.	29			6/17/85
Sump at 45-E /65	1,481 gal.	29			6/17/85
Sump at 45-E /66	1,481 gal.	29			6/17/85
Sump at 45-E /67	943 gal.	29			6/17/85
Sump at 46-A /68	1,211 gal.	29		7/12/84	
Sump at 46-B /69	718 gal.	18		4/15/74	
Sump at 50-G /70	5,330 gal.	33	8/15/55		
Sump at 54-F /71	1,496 gal.	33	8/15/55		
Sump at 54-F /72	1,496 gal.	33	8/15/55		
Sump at 54-G /73	898 gal.	29	Reactivated 8/26/86		6/17/85
Sump at 54-G /74	898 gal.	29	Reactivated 11/3/87		6/17/85
Sump at 54-G /75	224 gal.	29	Reactivated 04/88		6/17/85
Sump at 54-H /76	1,795 gal.	33	8/15/55		
Sump at 54-H /77	1,496 gal.	33	8/15/55		
Sump at 68-C /78	144 gal.	33	8/15/55		
Sump at 68-C /79	144 gal.	33	8/15/55		
Sump at 68-C /80	200 gal.	29			6/17/85
Sump at 68-F /81	8,378 gal.	33	8/15/55	6/17/85	
Sump at 68-F /82	3,770 gal.	33	8/15/55	6/17/85	
Sump at 68-F /83	3,770 gal.	33	8/15/55	6/17/85	

001467
217

<u>SUMP NAME / NUMBER</u>	<u>CAPACITY</u>	<u>YEARS ACTIVE</u>	<u>ACTIVATED</u>	<u>DEACTIVATED</u>	<u>CLOSED</u>
Sump at 68-G /84	200 gal.	29			6/17/85
Sump at 68-G /85	1,048 gal.	29			6/17/85
Sump at 68-G /86	11,310 gal.	33			9/25/87
Sump at 68-G /87	441 gal.	29			6/17/85
Sump at 68-G /88	2,513 gal.	29			6/17/85
Sump at 68-G /89	2,513 gal.	29			6/17/85
Sump at 68-G /90	4,189 gal.	33	8/15/55		
Sump at 75-I /91	1,975 gal.	26		6/15/82	
Sump at 75-I /92	1,436 gal.	26		6/15/82	
Sump at 75-I /93	1,795 gal.	26		6/15/82	
Sump at 16-Y /94	355 gal.	31			8/21/85
Sump at 34-Y /95	405 gal.	34	6/15/54		
Sump at 34-Y /96	212 gal.	31			8/21/85
Sump at 38-Y /97	357 gal.	34	6/15/54		
Sump at 38-Y /98	405 gal.	31			8/21/85
Sump at 38-Y /99	80 gal.	34	6/15/54		
Sump at 45-Y /100	265 gal.	31			8/21/85
Sump at 45-Y /101	583 gal.	34	6/15/54		
Sump at 16-T /102	1,833 gal.	30			9/13/85
Sump at 16-T /103	2,394 gal.	30			9/13/85
Sump at 16-T /104	3,351 gal.	30			9/13/85
Sump at 16-T /105	2,199 gal.	30			9/13/85
Sump at 401 /106	265 gal.	46	10/15/42 (waste oil Class I, NH)		
Sump at 403 /107	297 gal.	43			6/17/85
Sump at 406 /108	393 gal.	43			6/17/85
Sump at 408 /109	617 gal.	43			6/17/85
Sump at 207 /110	748 gal.	43			9/13/85
Sump at 722-P/111	19 gal.	46	10/15/42		
Sump at 722-P/112	89 gal.	46	10/15/42		
Sump at 744 /113	73 gal.	30 (waste oil Class I, NH)		6/15/72	
Sump at 25-X /114	2,345 gal.	30	5/10/55		
Sump at 33-X /115	3,529 gal.	9	9/05/79		
Sump at 37-X /116	5,386 gal.	9	9/05/79		

<u>SUMP NAME / NUMBER</u>	<u>CAPACITY</u>	<u>YEARS ACTIVE</u>	<u>ACTIVATED</u>	<u>DEACTIVATED</u>	<u>CLOSED</u>
Sump at 744-A/117	1,000 gal.	46	10/15/42 (waste oil class I, NH)		
Sump at 813 /118	400 gal.	5	10/10/83		
Sump at 725 /119	500 gal.	5	9/15/83		
Sump at 725 /120	2,600 gal.	5	9/15/83		
Sump at 32-H /121	1,000 gal.	17			06/85
Sump at 401-C/122	1,615 gal.	3	8/20/85		
Sump at 18-Y /123	440 gal.	0	02/88		
Sump at P-124/124	550 gal.	0	02/88		

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from these components. Units which have been closed typically are filled with concrete and have at-grade fill pipes removed or sealed.

Pollutant Dispersal Pathways:

See Attachment I.

Waste Characteristics:

For all components except Sumps Number 16, 106, 113 and 117: Washwater from process areas. Washwater may contain water, oil, dirt, soaps, and chemicals (e.g. methylene chloride, explosive powders, and epoxy resins). Sumps Number 16, 106, 113 and 117 manage waste oil.

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

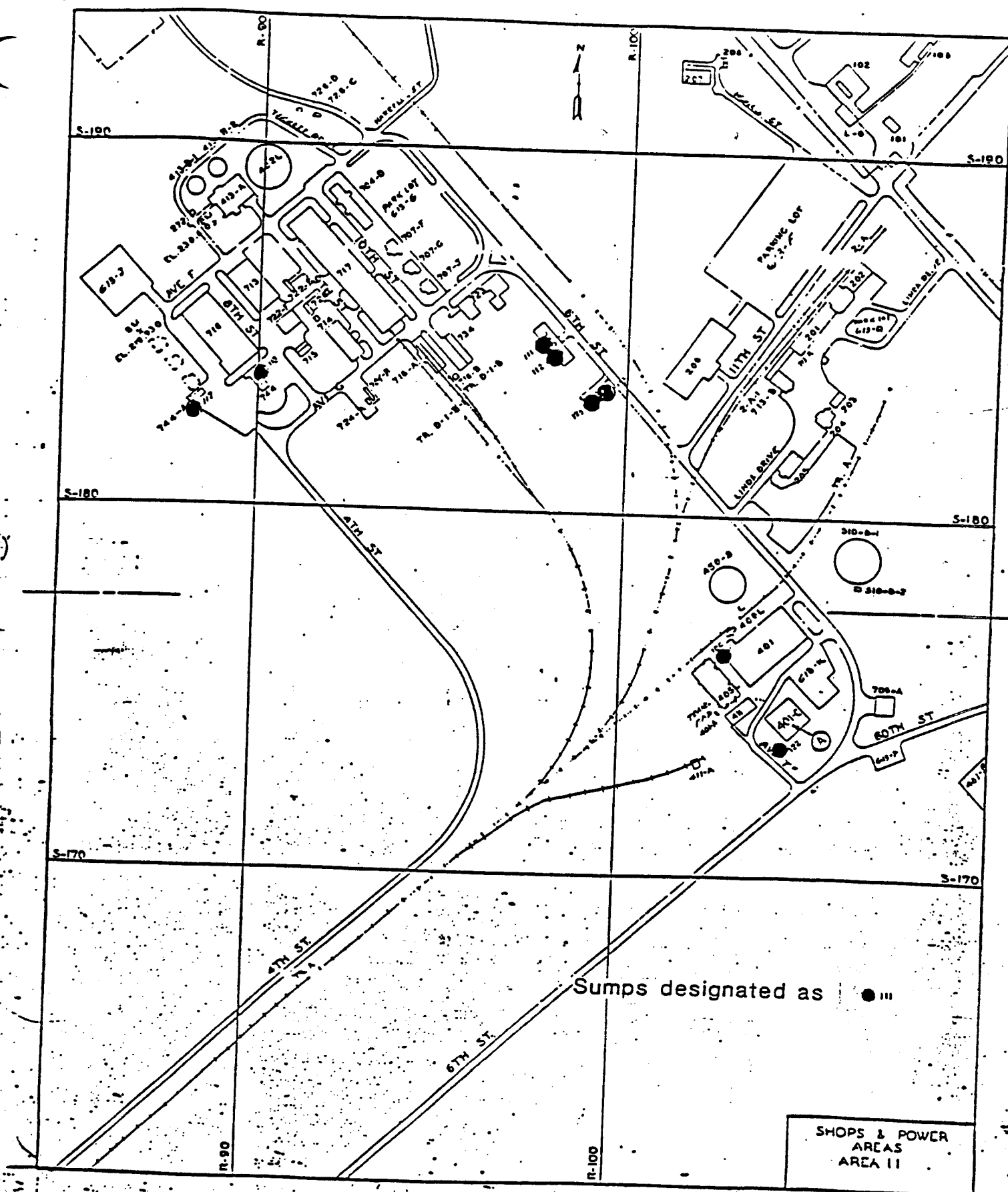
Site Description:

A network of industrial wastewater collection sumps which function as an integral part of the Facility Industrial Wastewater Treatment System. 119 sumps are strategically located to collect industrial wastewater from various processes. The sumps consist of concrete tanks. The sumps are emptied by a vacuum truck when a red-colored float becomes visible or when requested by a building foreman. The waste is transported to the pilot wastewater treatment plant.

Class I, non-hazardous oil is periodically withdrawn from the four waste oil sumps, drummed, and sent to Building 41W for temporary storage.

Some of the sumps have been inactivated by first being cleaned and later backfilled with soil.

31-W



001471
22/

400 AREA
AREA 12

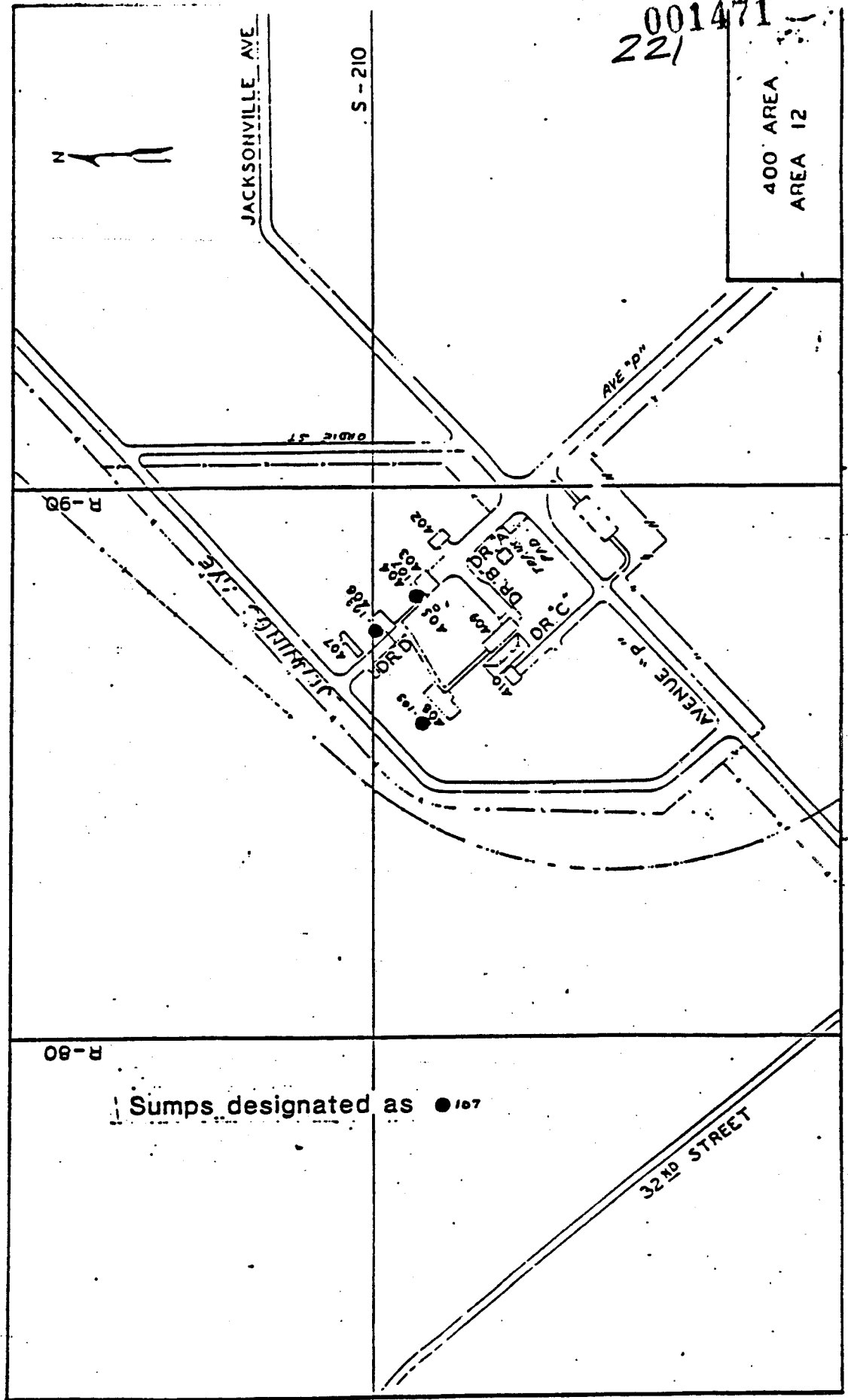
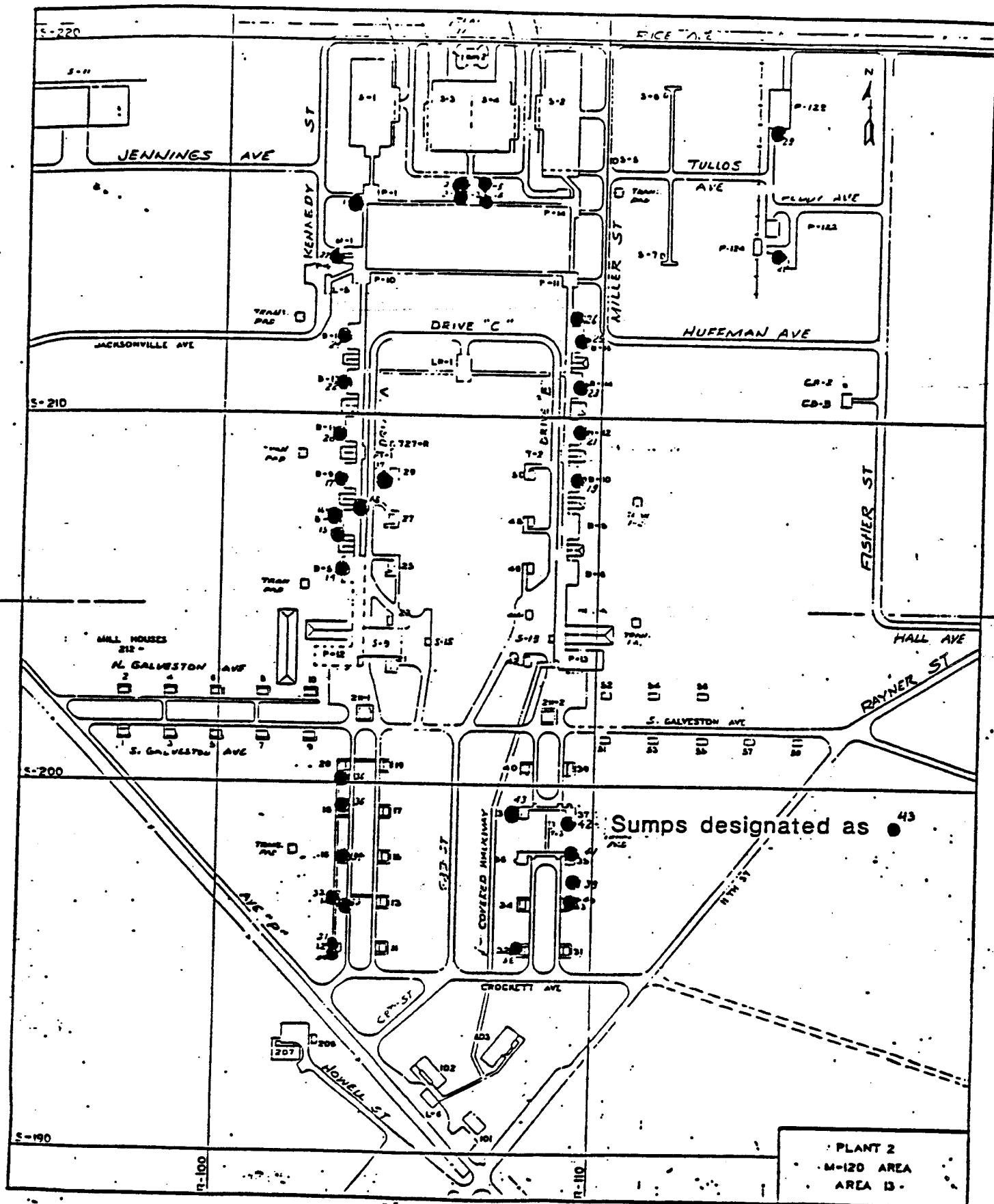
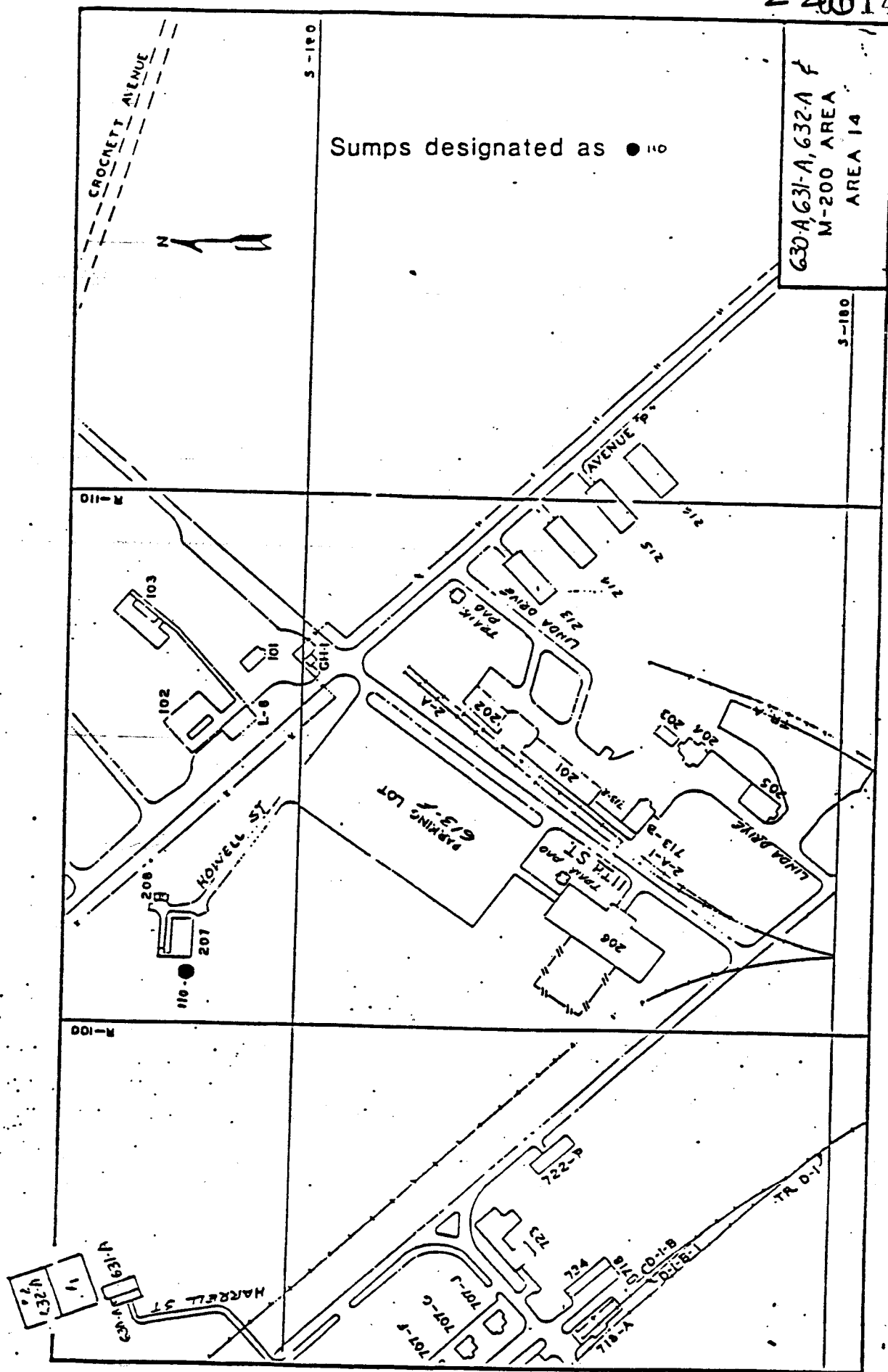


FIGURE A-30





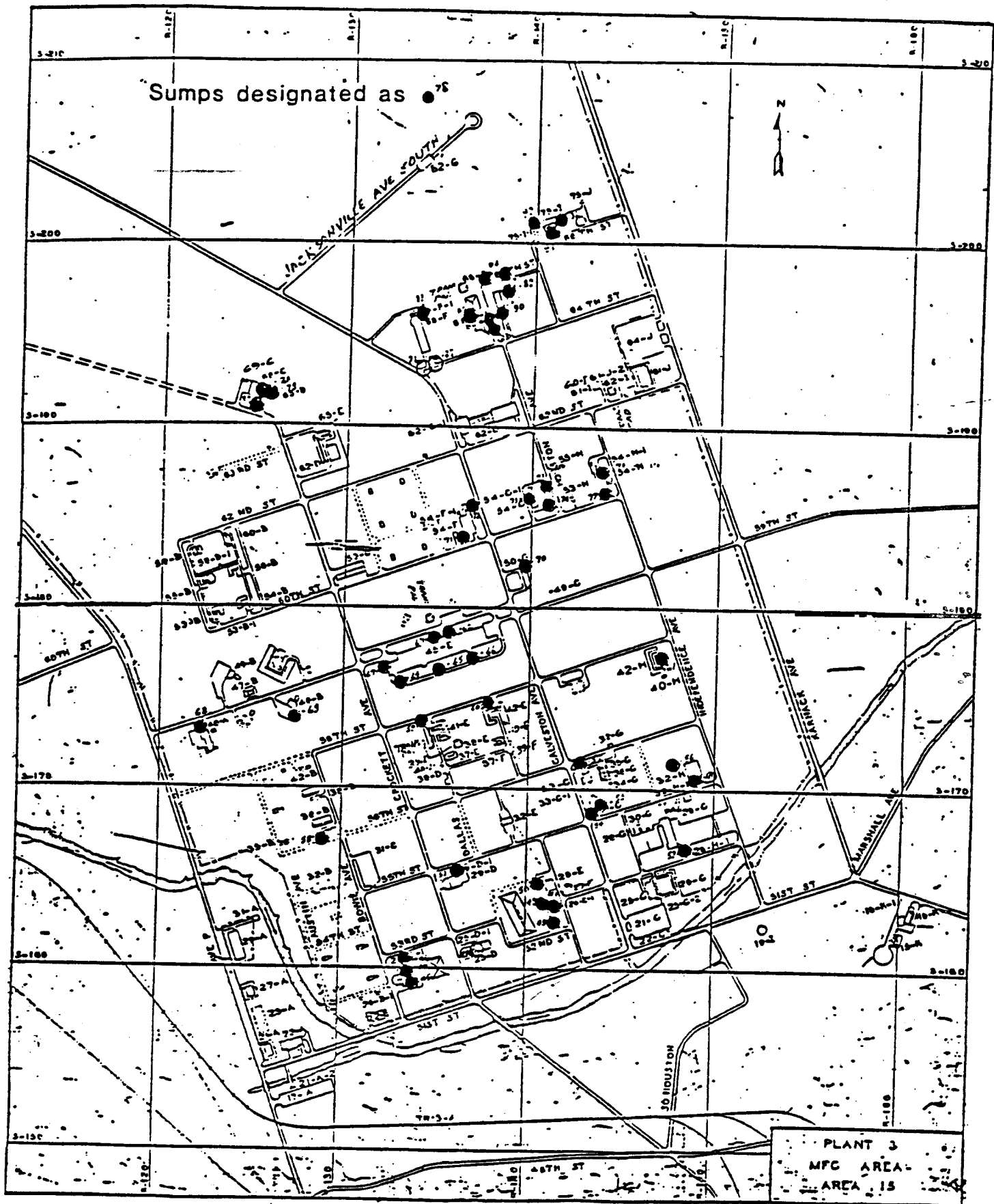


FIGURE A-33

001475
225

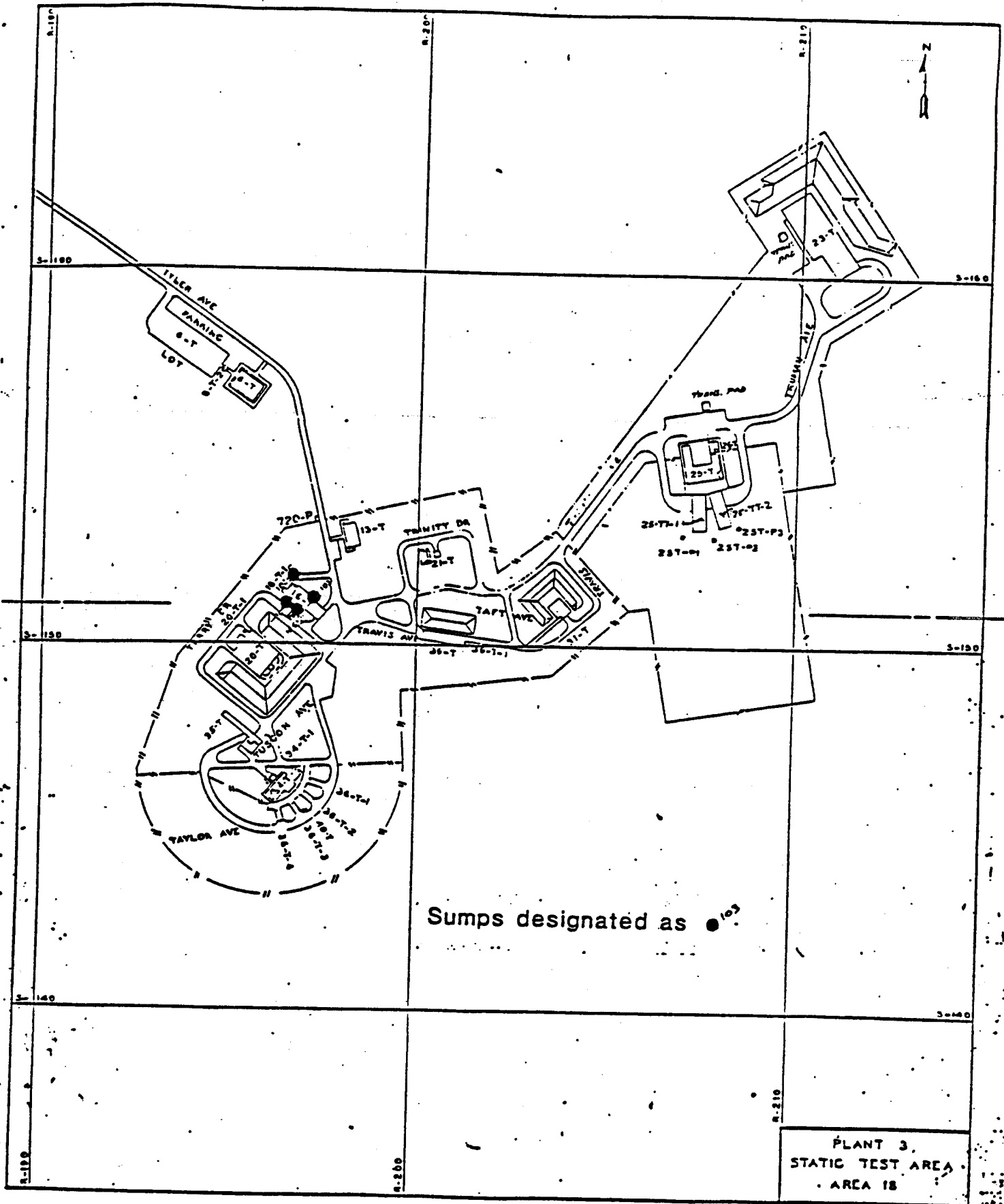


FIGURE A-34

This site map, labeled FIGURE A-34, depicts the Igniter Area of Plant 3. The map is bounded by a grid with labels R-180, R-190, R-200, S-170, and S-180. Key features include:

- Roads:** 51ST ST (vertical on the left), TYLER AVE (diagonal), YOUNG DR (diagonal), and INTL DR (diagonal at the bottom).
- Buildings:** Several rectangular structures are shown, some with labels like 4-Y, 6-Y, 13-Y, 16-Y, 18-Y, 19-Y, 20-Y, 21-Y, 22-Y, 23-Y, 24-Y, 25-Y, 26-Y, 27-Y, 28-Y, 29-Y, 30-Y, 31-Y, 32-Y, 33-Y, 34-Y, 35-Y, 36-Y, 37-Y, 38-Y, 39-Y, 40-Y, 41-Y, 42-Y, 43-Y, 44-Y, 45-Y, 46-Y, 47-Y, 48-Y, 49-Y, 50-Y, 51-Y, 52-Y, 53-Y, 54-Y, 55-Y, 56-Y, 57-Y, 58-Y, 59-Y, 60-Y, 61-Y, 62-Y, 63-Y, 64-Y, 65-Y, 66-Y, 67-Y, 68-Y, 69-Y, 70-Y, 71-Y, 72-Y, 73-Y, 74-Y, 75-Y, 76-Y, 77-Y, 78-Y, 79-Y, 80-Y, 81-Y, 82-Y, 83-Y, 84-Y, 85-Y, 86-Y, 87-Y, 88-Y, 89-Y, 90-Y, 91-Y, 92-Y, 93-Y, 94-Y, 95-Y, 96-Y, 97-Y, 98-Y, 99-Y, 100-Y.
- Sumps:** Indicated by solid black dots. A legend at the bottom left states: "Sumps designated as ●".
- Other Labels:** 352', 120', 105', 16-Y, 18-Y, 19-Y, 20-Y, 21-Y, 22-Y, 23-Y, 24-Y, 25-Y, 26-Y, 27-Y, 28-Y, 29-Y, 30-Y, 31-Y, 32-Y, 33-Y, 34-Y, 35-Y, 36-Y, 37-Y, 38-Y, 39-Y, 40-Y, 41-Y, 42-Y, 43-Y, 44-Y, 45-Y, 46-Y, 47-Y, 48-Y, 49-Y, 50-Y, 51-Y, 52-Y, 53-Y, 54-Y, 55-Y, 56-Y, 57-Y, 58-Y, 59-Y, 60-Y, 61-Y, 62-Y, 63-Y, 64-Y, 65-Y, 66-Y, 67-Y, 68-Y, 69-Y, 70-Y, 71-Y, 72-Y, 73-Y, 74-Y, 75-Y, 76-Y, 77-Y, 78-Y, 79-Y, 80-Y, 81-Y, 82-Y, 83-Y, 84-Y, 85-Y, 86-Y, 87-Y, 88-Y, 89-Y, 90-Y, 91-Y, 92-Y, 93-Y, 94-Y, 95-Y, 96-Y, 97-Y, 98-Y, 99-Y, 100-Y.

Sumps designated as ●

PLANT 3
IGNITER AREA
AREA 19

001478
228

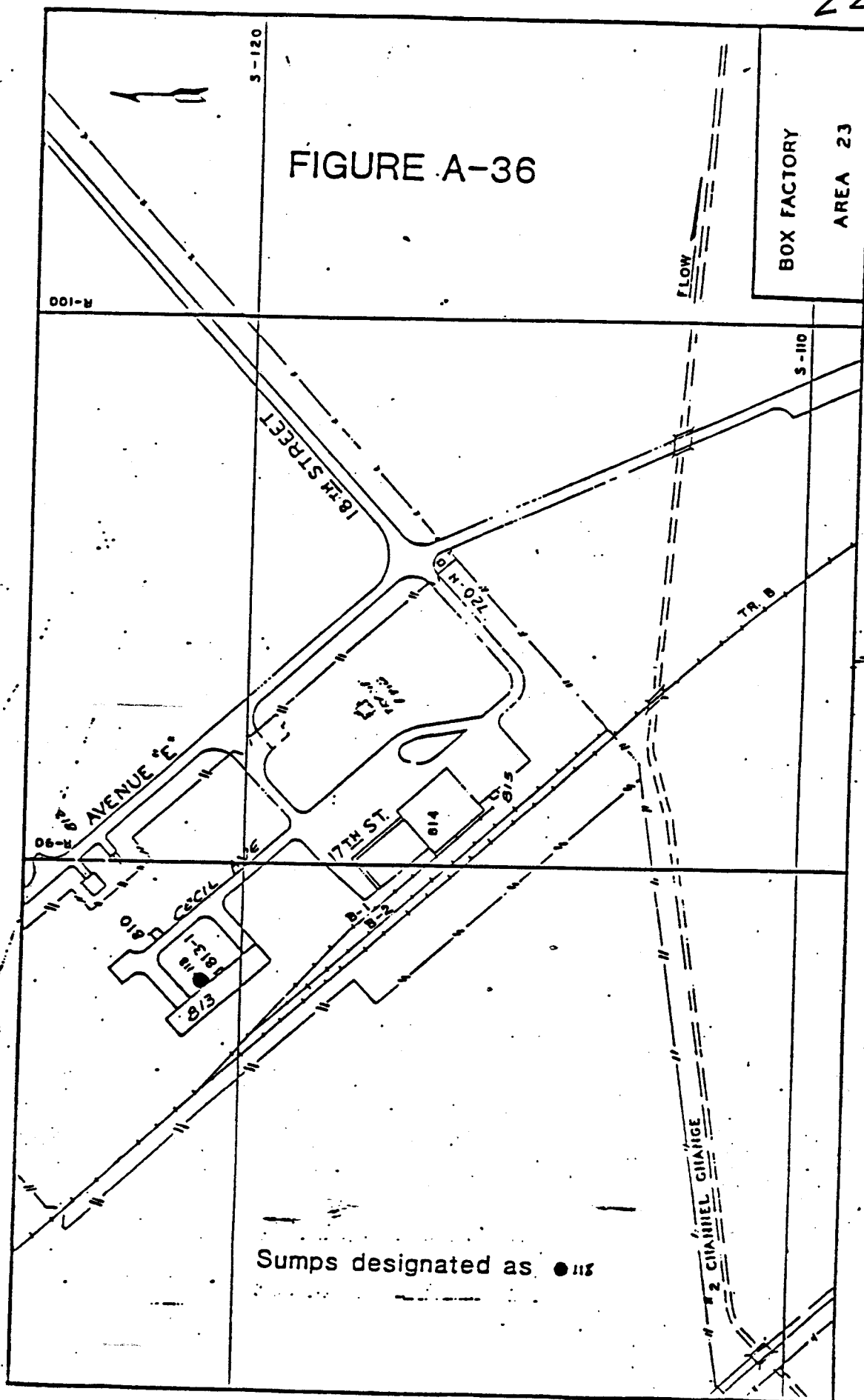
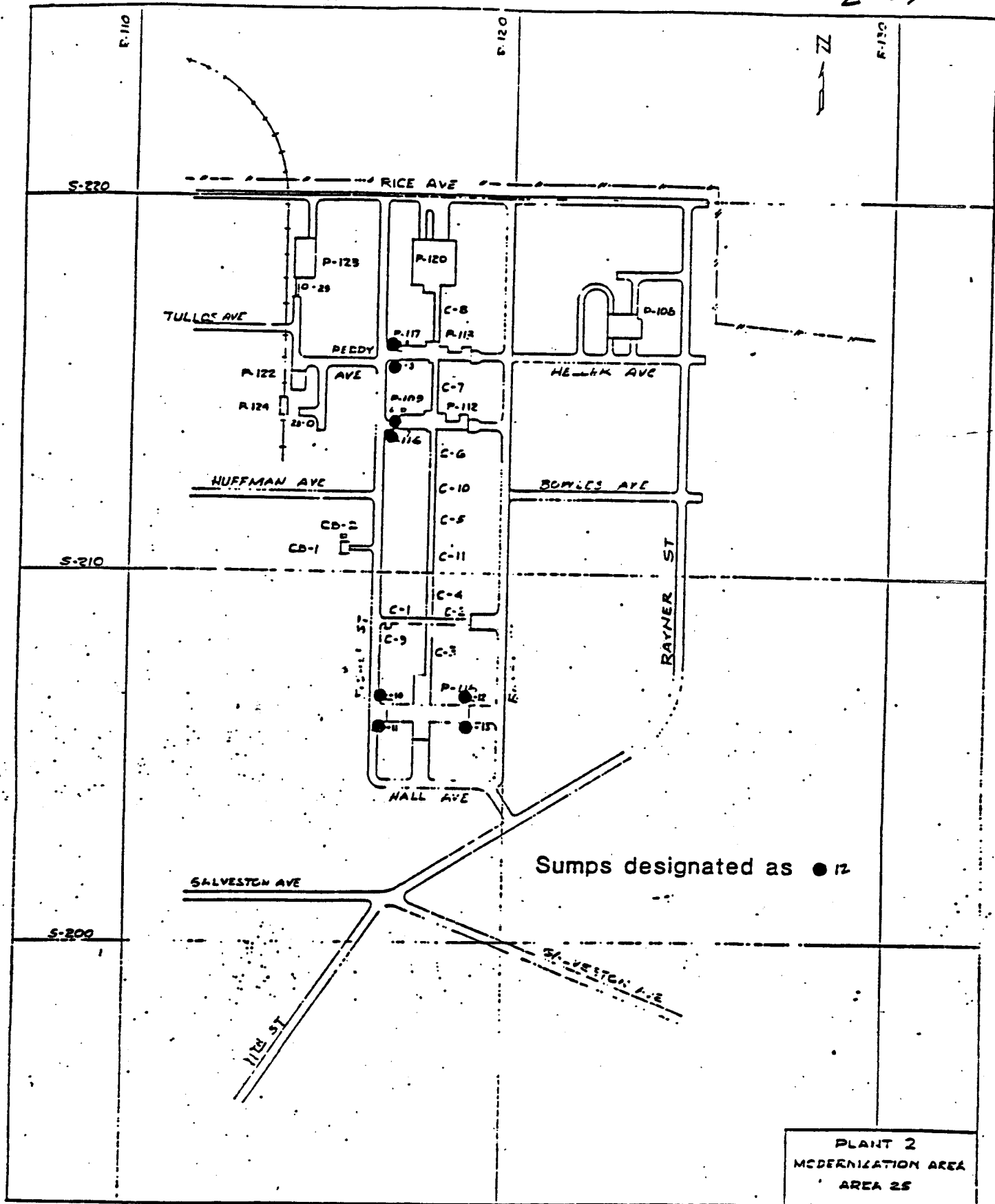


FIGURE A-37

001479

229



Longhorn Army Ammunition Plant 001480

Karnack, Texas

230

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. I

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas

233

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990UNIT IDENTIFICATION: PHAAP-34 Sump No. 2

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADERECTANGULARCONCRETETANKWITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof _____
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001486
Longhorn Army Ammunition Plant

Karnack, Texas

236

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 3

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.2 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001489

Karnack, Texas

239

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 4

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination.

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 192

Karnack, Texas

242

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 5

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas

245

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKSTWC Regis. No. _____
Regis. Facility No. ISW 30990UNIT IDENTIFICATION: LHAAP-34 Sump No. 6

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

001498 248

Karnack, Texas

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 7

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

001501

Karnack, Texas

251

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 8

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE RECTANGULAR CONCRETE TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001504
Longhorn Army Ammunition Plant

Karnack, Texas

254

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. [REDACTED]
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 9

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade [REDACTED] CONCRETE
[REDACTED] RECTANGULAR [REDACTED] TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof _____
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground _____ Under-
ground X Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001507

Karnack, Texas

257

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 10

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade RECTANGULAR CONCRETE TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001510

Karnack, Texas

260

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 11

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 201813

Karnack, Texas

263

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 12

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) fixed roof
closed vessel (vented) open top (floating roof) X
vessel Open top (no roof)

Piping Connections: Above ground X Under-
ground Both

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 13

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 2001519
Karnack, Texas 269

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 14

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof _____
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ NONE _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001522
Longhorn Army Ammunition Plant

Karnack, Texas

272

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 38990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 15

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001525

Karnack, Texas 275

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 16

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED] [REDACTED] [REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review
WASTE OIL CLASS I NON HAZARDOUS

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED] Under-
ground X [REDACTED]

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001528

Karnack, Texas

278

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 38990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 17

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) _____
Open top (no roof) _____

Piping Connections: _____

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g (6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Jorgahan Army Ammunition Plant 001531

Karnack, Texas 281

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 18

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Jonghan Army Ammunition Plant 001534
Karnack, Texas 284

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 19

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Donahoe Army Ammunition Plant 001537
Karnack, Texas 286

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 20

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001539
Karnack, Texas 289

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 21

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001542 292
Longhorn Army Ammunition Plant

Karnack, Texas

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 22

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 295

Karnack, Texas

April 25-28 AND May 2-5, 1988

001545

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. FSW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 23

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas

298

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990UNIT IDENTIFICATION: LHAAP-34 Sump No. 24

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GradeRECTANGULARCONCRETETANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001551
Jonghan Army Ammunition Plant

Karnack, Texas

301

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 25

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas

April 25-28 AND May 2-5, 1988

384
3801554

PART II - UNIT EVALUATION TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 26

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade RECTANGULAR CONCRETE TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001557
Jonghan Army Ammunition Plant

Karnack, Texas 307

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 27

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE RECTANGULAR CONCRETE TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

001560

Karnack, Texas

310

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 28

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground _____ Under-
ground X Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 11863

Karnack, Texas

313

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 50990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 29

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001566

Karnack, Texas

316

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 30

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade Circular Concrete TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof _____
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

318

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas

319

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990UNIT IDENTIFICATION: LHAAP-34 Sump No. 31

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE
TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

(SEE SUMP 30 PHOTO)

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 2001572
Karnack, Texas 322

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 32

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof _____
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 2801575

Karnack, Texas

325

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 33

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof _____
vessel _____ open top (floating roof) _____
Open top (no roof) _____

Piping Connections: Above ground _____ Under-
ground X Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Jonghan Army Ammunition Plant 001578

Karnack, Texas

328

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 34

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof _____
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.2 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001581

Longhorn Army Ammunition Plant

Karnack, Texas

331

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 35

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition ~~BL1784~~

Karnack, TX 334

April 25-28 AND MAY 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 36

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

Unit is gone.

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

[REDACTED] There is no evidence to believe that
the waste managed at this location was other
than that which was reported in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) _____
Open top (no roof) _____

Piping Connections: Above ground _____ Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no visible evidence of past leaks
or spills at ~~the~~ the former resting place
of the removed sump.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

By inspection, it seems unlikely that this
unit would have contributed to any
significant groundwater contamination

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Because there is no evidence (factual or
circumstantial) that suggests past mismanagement,
no further RFA action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas

337

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKSTWC Regis. No. _____
Regis. Facility No. ISW 30990UNIT IDENTIFICATION: LHAAP-34 Sump No. 37

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED]

Formerly at grade

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

338

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001530

Karnack, Texas 340

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 38

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g (6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001593

Karnack, Texas 343

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 39

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

Formerly A BELOW-GRADE CIRCULAR CONCRETE TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

Longhorn Army Ammunition Plant

Karnack, Texas

346

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 40

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas 352

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990UNIT IDENTIFICATION: PHAAP-34 Sump No. 42

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED]

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001601
Karnack, Texas 355
April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 43

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED] [REDACTED]

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001604

Longhorn Army Ammunition Plant

Karnack, Texas 358

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 44

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001607

Longhorn Army Ammunition Plant

Karnack, Texas 361

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 45

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001610

Longhorn Army Ammunition Plant
Karnack, TX 364

April 25-28 AND MAY 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 46

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

Unit is gone.

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

[REDACTED] There is no evidence to believe that
the waste managed at this location was other
than that which was reported in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) _____
Open top (no roof) _____

Piping Connections: Above ground _____ Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no visible evidence of past leaks
or spills at ~~the~~ the former resting place
of the removed sump.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

By inspection, it seems unlikely that this
unit would have contributed to any
significant groundwater contamination

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Because there is no evidence (factual or
circumstantial) that suggests past mismanagement,
no further RFA action is recommended.

001613
Longhorn Army Ammunition Plant

Karnack, Texas 367

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 47

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Jorgman Army Ammunition Plant

Karnack, Texas 370

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ESW 30990UNIT IDENTIFICATION: LHAAP-34 Sump No. 48

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant (D) 1619

Karnack, Texas 373

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 49

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE RECTANGULAR CONCRETE TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

374

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001632

Karnack, Texas 376

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 50

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

377

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

378

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001625

Karnack, Texas

379

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 51

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground _____ Under-
ground X Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001628

Karnack, Texas 382

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 52

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

384

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001631
Longhorn Army Ammunition Plant

Karnack, Texas 385

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 53

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

387

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Jonghan Army Ammunition Plant 001033

Karnack, Texas 388

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 54

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE [REDACTED] CONCRETE
[REDACTED] RECTANGULAR [REDACTED] TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED]
[REDACTED] AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

390

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001636

Karnack, Texas

391

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 55

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

393

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas 394

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKSTWC Regis. No. _____
Regis. Facility No. ISW 30990UNIT IDENTIFICATION: LHAAP-34 Sump No. 56

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof _____
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground _____ Under-
ground _____ Both X

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 642

Karnack, Texas 397

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 57

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.2 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant
Karnack, TX 400

April 25-28 AND MAY 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 58

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

Unit is gone.

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

There is no evidence to believe that
the waste managed at this location was other
than that which was reported in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) _____
Open top (no roof) _____

Piping Connections: _____

Pipe connections were at grade

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no visible evidence of past leaks
or spills at ~~the~~ the former resting place
of the removed sump.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

By inspection, it seems unlikely that this
unit would have contributed to any
significant groundwater contamination

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Because there is no evidence (factual or
circumstantial) that suggest past mismanagement,
no further RFA action is recommended.

001648

Jonghan Army Ammunition Plant

Karnack, Texas 403

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 59

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof _____
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

404

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

405

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001651

Karnack, Texas 406

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 38990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 60

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) . Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001654
Longhorn Army Ammunition Plant

Karnack, Texas 409

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 61

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas 412

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990UNIT IDENTIFICATION: LHAAP-34 Sump No. 62

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE [REDACTED] CONCRETE TANK
[REDACTED] RECTANGULAR [REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED]

[REDACTED] NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Jorgensen Army Ammunition Plant

Karnack, Texas 415

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 63

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001663

Karnack, Texas 4/8

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 64

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE [REDACTED] CONCRETE
[REDACTED] RECTANGULAR [REDACTED] TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED]

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 1001066

Karnack, Texas 421

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 65

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001669

Longhorn Army Ammunition Plant

Karnack, Texas 424

April 25-28 AND May 2-5, 1985

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 66

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade RECTANGULAR CONCRETE TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

426

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 801672

Karnack, Texas 427

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 67

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof _____
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

428

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001075
Longhorn Army Ammunition Plant

Karnack, Texas 750

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 68

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof _____
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

432

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant. 001678

Karnack, Texas 433

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 69

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade

RECTANGULAR

CONCRETE

TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

434

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

435

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001681

Longhorn Army Ammunition Plant

Karnack, Texas

436

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 70

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.2 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001684

Karnack, Texas 439

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 71

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade Circular Concrete
AN Above-Grade Rectangular Steel TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) _____
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

440

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition 7041887

Karnack, Texas 442

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. FSW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 72

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof _____
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001890

Karnack, Texas 445

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 73

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

446

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

*None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 701895

Karnack, Texas 451

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 75

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CONCRETE
 RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X (TO BE)
Open top (no roof) _____

Piping Connections: Above ground X Under- (TO BE)
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

452

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

453

E. Summary/General Comments:

Under Title 40 CFR Part 264.1.g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001698

Karnack, Texas 454
April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 76

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

455

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination.

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

456

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas 457

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 77

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination.

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

459

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001704

Karnack, Texas 460

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 78

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade Circular Concrete Tank
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

461

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

462

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

081707

Jorgman Army Ammunition Plant

Karnack, Texas 463

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No: ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 79

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE
TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

464

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

465

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 004710

Karnack, Texas 466

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. FSW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 80

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

467

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

468

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 004713

Karnack, Texas 469

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 81

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

470

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

471

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Karnack, Texas 472

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 82

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A BELOW-GRADE CIRCULAR CONCRETE
AN ABOVE-GRADE RECTANGULAR STEEL TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

473

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001719

Karnack, Texas 475

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 83

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

476

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

477

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001722

Karnack, Texas 478

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 84

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

479

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination.

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

480

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001725

Karnack, Texas 481

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 85

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

001726

482

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas 484

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 87

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE [REDACTED] CONCRETE
[REDACTED] RECTANGULAR [REDACTED] TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED]

At Grade

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

485

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001731

Longhorn Army Ammunition Plant
Karnack, Texas 487
April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 87

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

489

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Jonghan Army Ammunition Plant 001734

Karnack, Texas 490

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 88

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade Circular Concrete
AN Above-Grade Rectangular Steel TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

492

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001737

Karnack, Texas 493

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 89

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

494

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001740
Longhorn Army Ammunition Plant

Karnack, Texas 496

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 90

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE TANK
RECTANGULAR

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) _____
Open top (no roof) X

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001743
Longhorn Army Ammunition Plant

Karnack, Texas 499

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 91

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

500

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

501

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas 502

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKSTWC Regis. No. _____
Regis. Facility No. ISW 30990UNIT IDENTIFICATION: PHAAP-34 Sump No. 92

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE [REDACTED] CONCRETE
[REDACTED] RECTANGULAR [REDACTED] TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED]

[REDACTED] AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001749
Jorgensen Army Ammunition Plant

Karnack, Texas

505

April 25-28 and May 2-5, 1985

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 93

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g (6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001752
Jonghan Army Ammunition Plant

Karnack, Texas

508

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 94

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) _____
Open top (no roof) _____

Piping Connections: [REDACTED]

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Jonghan Army Ammunition Plant

Karnack, Texas

511

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 95

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CONCRETE
 RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.2 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001758

Karnack, Texas 514

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 96

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED]

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001761

Karnack, Texas 517

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 97

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof _____
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

519

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001764

Longhorn Army Ammunition Plant

Karnack, Texas 520

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 98

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED]

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001767

Longhorn Army Ammunition Plant

Karnack, Texas

523

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 99

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground _____ Under-
ground X Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001770
Karnack, Texas 526

April 25-28 AND May 2-5, 1985

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 100

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground _____ Under-
ground _____ Both _____ NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Jongham Army Ammunition Plant

Karnack, Texas 529

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 101

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED]

At Grade

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001776
Longhorn Army Ammunition Plant

Karnack, Texas 532

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 102

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001779

Longhorn Army Ammunition Plant

Karnack, Texas 535

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 103

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001782

Longhorn Army Ammunition Plant

Karnack, Texas 538

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 104

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____
_____ AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

539

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g (6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001785

Longhorn Army Ammunition Plant

Karnack, Texas 541

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKSTWC Regis. No. _____
Regis. Facility No. ISW 30990UNIT IDENTIFICATION: LHAAP-34 Sump No. 105

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GradeCONCRETERECTANGULARTANKWITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) _____
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001788
Fonghan Army Ammunition Plant

Karnack, Texas 544

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 106

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

[REDACTED] CIRCULAR [REDACTED]
AN ABOVE-GRADE [REDACTED] STEEL TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

546

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001791
Longhorn Army Ammunition Plant

Karnack, Texas 547

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 107

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED]

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

549

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

001794

Karnack, Texas 550

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 108

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) _____
Open top (no roof) _____

Piping Connections: _____

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination.

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known.

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas 556

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990UNIT IDENTIFICATION: LHAAP-34 Sump No. 110

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel X open top (floating roof) _____
Open top (no roof) _____

Piping Connections: _____

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001802

Karnack, Texas 559

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 111

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

[REDACTED]

Air Conditioning Condensate (i.e. condensed
atmospheric moisture)

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground _____ Under-
ground X Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

560

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

561

E. Summary/General Comments:

Under Title 40 CFR Part 264.2 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001805

April 25-28 and May 2-5, 1988

TWC Regis. No. _____
Regis. Facility No. ISW 30990

A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

As Depicted in the Preliminary Review

1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground ~~X~~ Under-ground Both

2) Evidence of leakage/spillage (exteriors, piping, surrounding areas, "repairs"):

There was no manifestation of any leakage or spillage attributable to this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 00P8084

Karnack, Texas

565

April 25-28 AND May 2-5, 1985

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 113

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED]

NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

Longhorn Army Ammunition Plant

Karnack, Texas 568

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 114

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

570

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001813
Longhorn Army Ammunition Plant

Karnack, Texas

571

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 115

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE [REDACTED] CONCRETE
[REDACTED] RECTANGULAR [REDACTED] TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: [REDACTED]

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas 574

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 116

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: _____

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001819
Longhorn Army Ammunition Plant

Karnack, Texas 577

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 117

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CIRCULAR CONCRETE TANK
[REDACTED]

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) _____
Open top (no roof) X

Piping Connections: [REDACTED]

AT GRADE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g (6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

Karnack, Texas 583

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No.

Regis. Facility No. ISW 30990UNIT IDENTIFICATION: LHAAP-34 Sump No. 119

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

CONCRETE
AN ABOVE-GRADE RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel X open top (floating roof) _____
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001827

Longhorn Army Ammunition Plant

Karnack, Texas 586

April 25-28 and May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 120

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GRADE CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel X open top (floating roof) _____
Open top (no roof) _____

Piping Connections: Above ground _____ Under-
ground X Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

587

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant

001830

Karnack, Texas 589

April 25-28 and May 2-5, 1988

PA - II - UNIT EVALUATION
TANKSTWC Regis. No.
Regis. Facility No. ISW 30990UNIT IDENTIFICATION: LHAAP-34 Sump No. 121

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-GradeRECTANGULARCONCRETETANKWITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) closed vessel (vented) fixed roof
vessel open top (floating roof)
Open top (no roof)

Piping Connections: NONE

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

Longhorn Army Ammunition Plant 001832

Karnack, Texas 592

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-34 Sump No. 122

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

A Below-Grade CONCRETE
RECTANGULAR TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel _____ open top (floating roof) X
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001835
Longhorn Army Ammunition Plant

Karnack, Texas 595

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 123

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

[REDACTED] CIRCULAR [REDACTED]
AN ABOVE-GRADE [REDACTED] STEEL TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

[REDACTED] Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel X open top (floating roof) _____
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

001838
Jinghan Army Ammunition Plant

Karnack, Texas 598

April 25-28 AND May 2-5, 1988

PART II - UNIT EVALUATION
TANKS

TWC Regis. No. _____
Regis. Facility No. JSW 30990

UNIT IDENTIFICATION: LHAAP-34 Sump No. 124

- A. Verification of physical construction and operation
(Dimensions, years of service, materials of construction,
underground, partially underground, elevated, on-ground)

[REDACTED] CIRCULAR [REDACTED]
AN ABOVE-GRADE [REDACTED] STEEL TANK

WITH CAPACITY AND AGE AS DEPICTED IN
THE PRELIMINARY REVIEW

- B. Characterization of waste materials (Facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit:

- 1) Description: Closed vessel (pressure) _____
closed vessel (vented) _____ fixed roof
vessel X open top (floating roof) _____
Open top (no roof) _____

Piping Connections: Above ground X Under-
ground _____ Both _____

- 2) Evidence of leakage/spillage (exteriors, piping,
surrounding areas, "repairs"):

There was no manifestation of any
leakage or spillage attributable to
this unit.

- 3) Evidence of actual or potential ground water contamination (impermeable surfaces, spill containment features, inventory loss, etc.):

Upon inspection and examination it appears unlikely that this unit contributed to any significant groundwater, surface water, or soils contamination -

- 4) Air quality concerns (TACB complaints, odors, visible vapor releases, sampling records...):

None known

D. Other areas of concern:

E. Summary/General Comments:

Under Title 40 CFR Part 264.1 g(6),
this unit is exempt from permitting requirements.

Because this is a well-managed unit, and
considering that there is no evidence of
past mismanagement, no further RFA
action is recommended.

PRELIMINARY REVIEW UNIT CHECKLIST

FACILITY: Longhorn Army Ammunition Plant
EPA I.D.#: TX 6213820529
HAZIT #: TX 05886

Reviewer: Alan Church
Date: 8 April, 1988
Amended: 9 June, 1988

Waste Management Unit:

SWMU: LHAAP-35, Explosive Waste Storage Pads.

Evidence of Release:

There is no evidence of release of hazardous waste or hazardous constituents to the environment from this unit.

Pollutant Dispersal Pathways:

See Attachment I.

Waste Characteristics:

Explosive-contaminated waste materials from process areas (e.g., rags, cartons, sweepings).

Target Populations of Concern:

See Attachment II.

Documents Reviewed:

Correspondence File, inspection reports, Parts A and B of the Permit Application, and Groundwater Contamination Survey No. 38-26-0851-87 Evaluation of Solid Waste Management Units, Longhorn Army Ammunition Plant, Marshall, Texas 18-22 May, 1987.

Site Description:

- (1) Type of Unit: storage maximum capacity is 55 gallons.
- (2) Design Features: Galvanized metal roof set over concrete 4 x 8-foot pad with 6-inch curb. Pad is drained by concrete trough into sump. There is a total of twenty pads on site.
- (3) Operating Practices: Explosive waste is desensitized with diesel fuel and placed in 5-gallon, galvanized, lidded, metal garbage pails with plastic bag liners. Full garbage pails are set on a metal rack approximately 1.5 feet above the ground.
- (4) Period of Operation: 1985 until present.

Summary:

Additional information is needed about this unit, and the area which it occupies.

Recommended Actions:

A Visual Site Inspection is recommended to determine 1) operating parameters, 2) construction characteristics, 3) wastes managed, 4) secondary containment, and 5) visual evidence of releases.

0018484

Longhorn Army Ammunition Plant
Karnack, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION: LHAAP-35 PAD X-1

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

as depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

Explosive-Contaminated Waste as depicted in the
Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ Containers

all in excellent shape

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

A roof shelter contains from direct precipitation

Containers are elevated above grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

001845

Longhorn Army Ammunition Plant
Karneck, Texas 607

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION: LHAAP-35 X-2

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of drums containers

Excellent

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)
Sheltered from direct precipitation by a metal
roof
Containers are elevated above grade.
3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)
No evidence of spillage or leakage that would suggest
mismanagement of this unit.
4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)
Upon inspection, it seems unlikely that this
unit would contribute to any significant
groundwater contamination.
5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)
None known.

D. Other Areas of Concern

E. Summary/General Comments.

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)
A roof protects waste containers from direct rainfall
Waste containers are elevated above grade
3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)
No evidence of spillage or leakage that would suggest
mismanagement of this unit.
4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)
Upon inspection, it seems unlikely that this
unit would contribute to any significant
groundwater contamination.
5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)
None known.

D. Other Areas of Concern

E. Summary/General Comments.

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

001850
613

Longhorn Army Ammunition Plant
Karneck, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION: LHAAP-35 PAD X-4

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

as depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of drums containers

all in excellent condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

A metal roof shelters the drums from direct rainfall

Containers elevated above grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

001852
616

Longhorn Army Ammunition Plant
Karneck, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION: LHAAP-35 X-5

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted in the Preliminary Review.

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

all in excellent condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

A roof ~~on~~ protects containers from direct precipitation

Containers are elevated above grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C.1, this unit is exempt from permitting and certain interim status requirements.

Because this is a well-managed unit, no further RFA action is recommended.

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

A roof shelter contains from direct precipitation

Containers are elevated above grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C.
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

001858625

Longhorn Army Ammunition Plant
Karneck, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. TSW 30990

UNIT IDENTIFICATION:

LHAAP-35

X-8

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

An 8' x 8' concrete Pad, no curb,
no roof; operating practices as depicted in the
Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

None Present

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

This unit is unsheltered from direct precipitation.
However, this unit is sloped to drain well.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest
mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this
unit would contribute to any significant
groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

001861
Longhorn Army Ammunition Plant
Karneck, Texas 628
APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. TSW 30990

UNIT IDENTIFICATION: LHAAP-35 X-9

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As Depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As Depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of drums containers

all in excellent condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

A roof shelters the containers from direct precipitation

The containers are elevated above grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

001863

Longhorn Army Ammunition Plant
Karnack, Texas 631

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION: LHAAP-35

X-10

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

All in excellent condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

A metal roof protects containers from direct precipitation

Containers are elevated above grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

Longhorn Army Ammunition Plant
Karneck, Texas 634
APRIL 25 → 28 & MAY 2 → 5, 1988

001866

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION: LHAAP-35

X-11

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

All in excellent condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

A roof shelters the containers from direct precipitation

Containers are elevated above grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

001869 637

Longhorn Army Ammunition Plant
Karneck, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION: LHAAP-35

X-12

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

as depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of drums containers

all in excellent condition.

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

A roof shelters the drums from direct precipitation

~~Drums~~ Containers are elevated above grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

001872640

Longhorn Army Ammunition Plant
Karneck, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION: LHAAP-35

X 13

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

all ~~drums~~ in excellent condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

A roof protects containers from direct rainfall

Containers are elevated above grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

643
Longhorn Army Ammunition Plant 001875
Karnack, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

CONTAINER STORAGE

TWC Regis. No. _____

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION:

LHAAP-35

PAD X-14

Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted in the Preliminary Review

Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted in the Preliminary Review

Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

All in excellent condition

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C.1, this unit is exempt from permitting and certain interim status requirements.

Because this is a well-managed unit, no further RFA action is recommended.

001877

646

Longhorn Army Ammunition Plant
Karnack, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990UNIT IDENTIFICATION: LHAAP-35X-15

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

All containers in excellent condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

A roof shelters the containers from direct precipitation

Containers are elevated above grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C.
I, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

001880 649
Longhorn Army Ammunition Plant
Karnack, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. ISW 30990

UNIT IDENTIFICATION: PHAAP-35

X-16

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

as depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

All containers in excellent condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

A metal roof shelter containers from direct rainfall

Containers are elevated above grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C
I, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

001883

Longhorn Army Ammunition Plant
Karneck, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988 652

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION:

LHAAP-35X-17

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

as depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

all containers in excellent condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

Unit has a roof to shelter containers from direct precipitation.

Containers elevated above grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

001886

Longhorn Army Ammunition Plant
Karnack, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988 655

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. TSW 30990

UNIT IDENTIFICATION: LHAAP-35

X-18

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of drums containers

all containers in excellent condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

A metal roof shelters containers from direct precipitation.

Containers are elevated above grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

657

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C.1, this unit is exempt from permitting and certain interim status requirements.

Because this is a well-managed unit, no further RFA action is recommended.

658889

Longhorn Army Ammunition Plant
Karneck, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION: LHAAP-35

X-19

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

all containers in excellent condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

A metal roof shelters containers from direct precipitation -

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C.1, this unit is exempt from permitting and certain interim status requirements.

Because this is a well-managed unit, no further RFA action is recommended.

001892

Longhorn Army Ammunition Plant
Karnack, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988 661

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. TSW 30990

UNIT IDENTIFICATION: LHAAP-35 WASTE PAD X-20

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

As depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

As depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of drums container

Containers all in excellent condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

A roof shelters the containers from direct rainfall.

Containers are elevated above grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

NONE KNOWN.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C.1, this unit is exempt from permitting and certain interim status requirements.

Because this is a well-managed unit, no further RFA action is recommended.

001895

Longhorn Army Ammunition Plant
Karneck, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988 664

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION:

LHAAP - 35

WASTE PAD @ P116

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

An unsheltered metal rack which elevates 5-gallon
galvanized pails above bare grade; operating
practices as depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

Explosive-contaminated waste as depicted in
the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

Containers have lids - Containers in
excellent condition

665

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

No shelter from direct precipitation

Containers are elevated above bare grade

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

666

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

001898

Longhorn Army Ammunition Plant
Karnack, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988 667

PART II - UNIT EVALUATION

CONTAINER STORAGE

TWC Regis. No. _____

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION: LHAAP-35 WASTE PAD AT BLDG. 25 I

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

4' x 8' ± Concrete Pad ; operating practices as
depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

Containers have lids. Containers are in
excellent condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

There are no rainfall controls of any description.

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

001901 670
Longhorn Army Ammunition Plant
Karnack, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. TSW 30990

UNIT IDENTIFICATION: LHAAP-35 WASTE PAD @ BLDG 54 G

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

A 4' x 12' ± concrete slab with no other appurtenances;
operating practices are as depicted in the Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

AS DEPICTED IN THE PRELIMINARY REVIEW

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

Containers are in excellent condition - Containers have
1/ds

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

There are no rainfall controls of any description

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C
1, this unit is exempt from permitting and certain
interim status requirements.

Because this is a well-managed unit, no further
RFA action is recommended.

001904

Longhorn Army Ammunition Plant
Karneck, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988

673

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990UNIT IDENTIFICATION: LHAAP-35 WASTE Pad @ Bldg 54 F

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

A 50 Ft², Pie shaped concrete pad with no curb,
rack, or roof. Operating practices are as depicted in
the Preliminary Review -

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

Waste materials as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Condition of ~~drums~~ containers

Containers have lids, and are in excellent
condition

675

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C.1, this unit is exempt from permitting and certain interim status requirements.

Because this is a well-managed unit, no further RFA action is recommended.

001906

Longhorn Army Ammunition Plant
Karneck, Texas

APRIL 25 → 28 & MAY 2 → 5, 1988 676

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. JSW 30990

UNIT IDENTIFICATION: LHAAP-35 WASTE PAD @ 26 E

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg.
concrete pads, dikes, indoor)

A 4' x 8' CONCRETE PAD WITHOUT METAL RACK, concrete
curbing, or metal roof. Operating practices are
as depicted in the Preliminary Review-

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

Waste containers in good condition

2. Rainfall controls (run-on/runoff controls, stormwater collection and disposal, analyses)

No rainfall control of any description at this unit

3. Evidence of spillage/leakage (visual and olfactory evidence, dead vegetation, etc.)

No evidence of spillage or leakage that would suggest mismanagement of this unit.

4. Evidence of actual or potential groundwater contamination (samples from monitor wells, knowledge of shallow water tables, operating practices)

Upon inspection, it seems unlikely that this unit would contribute to any significant groundwater contamination.

5. Air quality concerns (TACB complaints, odors, particulate dispersal, sampling records)

None known.

D. Other Areas of Concern

E. Summary/General Comments

Under Title 40 CFR Part 262, Subpart C Paragraph C.1, this unit is exempt from permitting and certain interim status requirements.

Because this is a well-managed unit, no further RFA action is recommended.

001909

Longhorn Army Ammunition Plant
Karneck, Texas

APRIL 25-28 & MAY 2-5, 1988

679

PART II - UNIT EVALUATION

TWC Regis. No. _____

CONTAINER STORAGE

Regis. Facility No. ISW 30990UNIT IDENTIFICATION: LHAAP-35 WASTE PAD @ P-3

- A. Verification of Physical Construction and Operation
(dimensions, years of service, containment features eg:
concrete pads, dikes, indoor)

[REDACTED] A 6' x 12' concrete

Slab having no roof or concrete curbing -

Operating Practices are as depicted in the

Preliminary Review

- B. Characterization of Waste Materials (facility records, sample
results, process description, constituents of concern,
documentation)

as depicted in the Preliminary Review

- C. Visual/Physical Inspection of Unit

1. Conditions of ~~drums~~ containers

Drums and containers in excellent condition