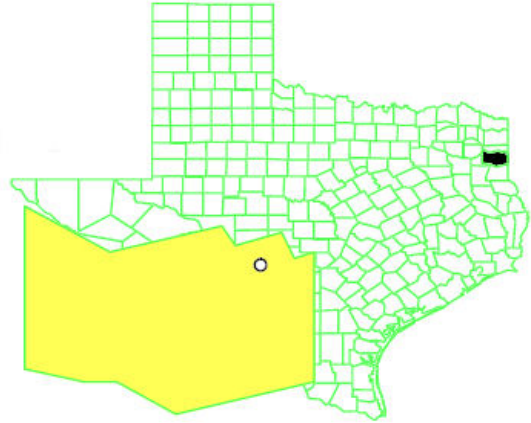


**LONGHORN ARMY AMMUNITION
PLANT
Harrison County, Texas**

EPA Region 6
EPA ID# TX6213820529
Site ID: 0603606

Contact: Stephen Tzhone, (214) 665-8409
State Congressional District: 1
Updated: February 2009



Current Status

The following is the complete list of environmental sites located on LHAAP. All NPL sites are highlighted.

- IRP: Installation Restoration Program
- LTM: Long Term Monitoring
- MMRP: Military Munitions Response Program
- OPS: Operating Properly & Successfully
- RC: Response Complete
- SI: Site Investigation
- RI/FS: Remedial Investigation/Feasibility Study

Site ID (DSERTS)	SITE DESCRIPTION	Current Status
LHAAP-001	Inert Burning Ground	RC
LHAAP-002	Vacuum Truck Overnight Parking Lot	SI
LHAAP-003	Building 722 - Paint Shop	SI
LHAAP-004	Pilot Waste Water Treatment Plant	RI/FS
LHAAP-005	Power House Boiler Pond	RC
LHAAP-006	Building 54F Solvent	SI
LHAAP-007	Building 50G Drum Processing	SI
LHAAP-008	Sewage Treatment Plant	RI/FS
LHAAP-009	Building 31-W Drum Storage	RC
LHAAP-011	Suspected TNT Burial Site at P&Q Avenue	RC
LHAAP-012	Active Landfill	LTM (OPS)
LHAAP-013	Suspected TNT Burial Site Between Active and Old Landfill	RC
LHAAP-014	Area 54W Burial Site	RC
LHAAP-015	Area 49-W Drum Storage	RC
LHAAP-016	Old Landfill	RI/FS
LHAAP-017	No. 2 Flashing Area Burning Ground	RI/FS
LHAAP-018	Burning Ground/Rocket Motor Washout Pond	RI/FS
LHAAP-019	Construction Materials Landfill	Active
LHAAP-023	Building 707 Storage for PCBs	RC
LHAAP-024	Former Unlined Evaporation Pond	RI/FS
LHAAP-027	South Test Area/Bomb Test Area	RC (IRP), EE/CA (MMRP)
LHAAP-029	Former TNT Production Area	RI/FS
LHAAP-032	Former TNT Waste Disposal Plant	RI/FS
LHAAP-034	Building 701 - PCB Storage	RC

LHAAP-035	Process Wastewater Sumps - Various	SI
LHAAP-036	Explosive Waste Pads	SI
LHAAP-037	Quality Assurance Laboratory Building 29-A	RI/FS
LHAAP-045	Magazine Area	RC
LHAAP-046	Plant 2/Pyrotechnic Operation	RI/FS
LHAAP-047	Plant 3/ Produces Hand Signal Assemblies	RI/FS
LHAAP-048	Y-Area	RI/FS
LHAAP-049	Former Acid Plant	RI/FS
LHAAP-050	Former Waste Disposal Facility	RI/FS
LHAAP-051	Photographic Laboratory/Building 60-B	SI
LHAAP-052	Magazine Washout Area	RC
LHAAP-053	Static Test Area	RIFS (IRP), EE/CA MMRP
LHAAP-054	Ground Signal Test Area	RC (IRP), EE/CA MMRP
LHAAP-055	Septic Tanks	SI
LHAAP-056	Vehicle Wash Rack and Oil/Water Separator	
LHAAP-057	Rubble Burial Site	RC
LHAAP-058	Maintenance Complex	RI/FS
LHAAP-059	Storage Building 725	SI
LHAAP-060	Former Storage Building #411 and #714	SI
LHAAP-061	Potable Water Treatment Sediment Ponds	RC
LHAAP-063	Burial Pits	RC
LHAAP-064	Transformer Storage Area	SI
LHAAP-065	Building #209	RC
LHAAP-066	Transformer at Building 401	SI
LHAAP-067	Above Ground Storage Tank	RI/FS
LHAAP-068	Building 51-F	SI
LHAAP-069	Underground Storage Tank	RC
LHAAP-070	Loading Dock Magazine Area	RC
LHAAP-071	Oil Spill at Bldg 813	RC

Benefits

Site cleanup has allowed the transfer of approximately 7,000 of the 8,416 acres to the FWS for use as the Caddo Lake National Wildlife Refuge. The establishment of this refuge ensures the conservation and protection of the migratory and resident waterfowl and neotropical migratory birds associated with these wetlands.

Studies have listed up to 224 species of birds, 22 species of amphibians, 46 species of reptiles, and 93 species of fish in this area. A total of 20 animal species of concern are located or potentially located on the LHAAP and adjacent Caddo Lake. They include seven species of fish, six species of reptiles, six species of birds and four species of mammals. Two species are federally listed under the Endangered Species Act (Louisiana black bear and bald eagle).

The adjacent Caddo Lake is also a primary source for drinking water for several surrounding communities as well as a location for recreational activities (i.e., fishing). Continued remediation will assure that Caddo Lake and sensitive ecosystems will be protected against any potential contamination from the facility.

National Priorities Listing (NPL) History

Proposal Date: 7/14/89
Final Listing Date: 8/30/90

NPL Final Listing was for the complete LHAAP installation. Specific areas on LHAAP were then designated as NPL or non-NPL after completion of the SI for that area.

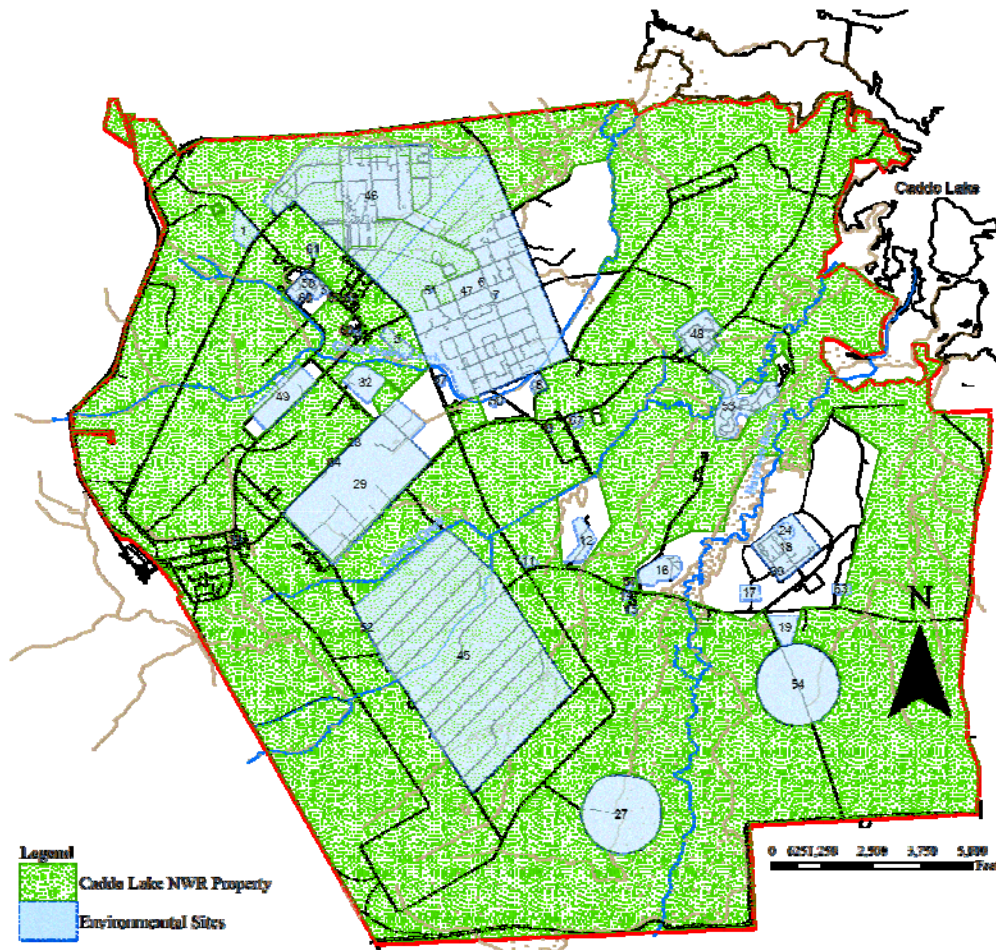
Site Description

Location: The site is located between State Highway 43 and Caddo Lake in Karnack, Harrison County, Texas, which is approximately 14 miles northeast of Marshall, Texas, and approximately 40 miles northwest of Shreveport, Louisiana.

Population: The site is in a rural area with some residences in close proximity. Approximately 1500 people live within a one-mile radius of the site.

History: The facility operated from 1942 to 1997, historically manufacturing TNT, rocket motors and various pyrotechnic items. Site operations included loading, assembling and packing pyrotechnic and signal ammunition, manufacturing solid propellant rocket motors, and rocket demilitarization pursuant to the Intermediate-Range Nuclear Force (INF) treaty between the United States and USSR. The Army declared LHAAP excess to its needs in July 1997 and from 1998 to 2001, all personal assets and specific installed property and buildings were liquidated and/or demolished. In Oct 2002, LHAAP was transferred to the Base Realignment and Closure (BRAC) Division to be managed as excess property and in April 2004, the Army and the FWS entered into a Memorandum of Agreement (MOA) that set forth the transfer process of LHAAP acreage. As of July 2008, approximately 7,000 LHAAP acres have been transferred to the FWS. The FWS manages these acres as the Caddo Lake National Wildlife Refuge within the perimeter fence of the former LHAAP installation.

Site Map



Wastes and Volumes

As part of the interim remedial action in 1997, 30,000 cubic yards of soil were excavated and treated at Burning Ground No. 3 (LHAAP-18) and the Unlined Evaporation Pond (LHAAP-24). In 1997, the groundwater treatment plant (GWTP) for LHAAP-18 & 24 and 5,000 feet of interception collection trenches were constructed.

A dispute resolution decision agreed upon between the EPA, TCEQ and the Army dated December 1999 required compliance with perchlorate discharge criteria from the GWTP within 3 years (December 2002). Perchlorate, designated as an emerging contaminant, was present in groundwater being treated at the GWTP at concentrations ranging from 15,000 to 35,000 micrograms per liter. By the end of March 2001, the treatment process, known as a fluidized bed reactor, had been installed to successfully remove perchlorate from the treated groundwater to concentrations below the discharge criteria (13 micrograms per liter).

During the period of January 2001 through March 2008, the GWTP processed approximately 84 million gallons of water, treating the groundwater for metals, volatile organic compounds and perchlorate.

Health Considerations

The primary hazardous substances that have been documented at Longhorn Army Ammunition Plant are solvents associated with the production operations at the site. These compounds, including methylene chloride and trichloroethene, have been detected in the groundwater at locations within the installation, but have only limited detections in streams flowing into Caddo Lake.

Perchlorate has been found in groundwater, surface water and soil at the installation. The installation's GWTP successfully treats perchlorate to reduce the concentration to concentrations below all action levels (and below the prevalent analytical detection limit).

Sediment samples collected by the Army, from Caddo Lake near the mouths of two branches of Goose Prairie Creek, indicated elevated lead and mercury. The sampling locations are outside the installation boundary. An investigation of contaminants in fish tissues, from three Caddo Lake Sites, one of which is upgradient at Clinton Lake, was funded by USEPA Region 6 and performed by TCEQ Region 5 in 2004. It concluded that mercury was present at elevated levels from all three sites, that dioxin was also present, but highest at Clinton Lake, and that pesticides, polychlorinated biphenyl (PCBs) and perchlorate were not detected in either edible fish fillets or whole fish.

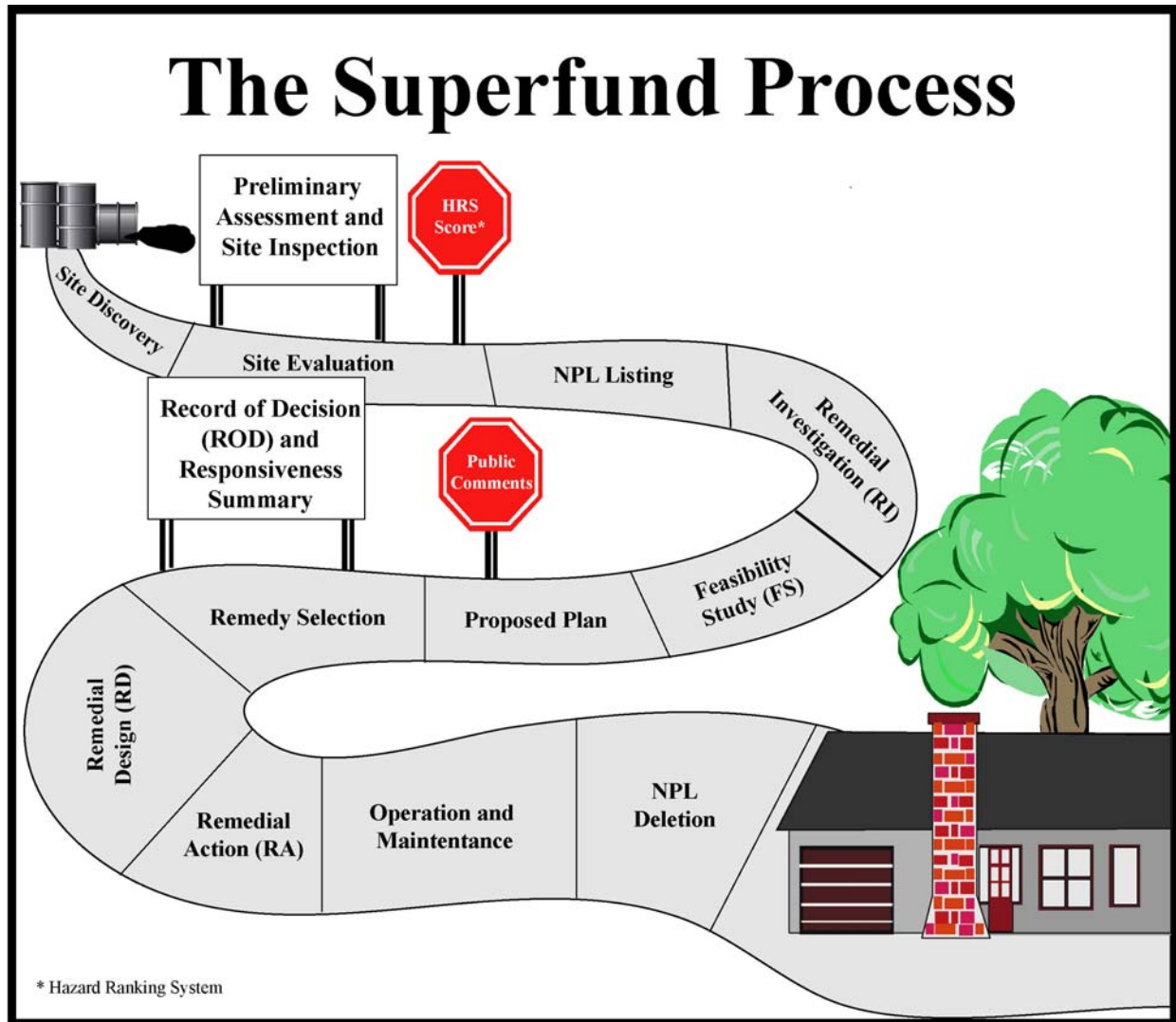
Record of Decision

Records of Decision (RODs) have been issued for the following sites:

- May, 1995, Interim Remedial Action ROD for LHAAP-18/24 was signed, addressing soil and groundwater contamination.
- September, 1995, Interim Remedial ROD for LHAAP-12 & 16 was signed, addressing landfills at the two sites by the installation of multilayered landfill caps
- February, 1996, ROD for No Further Action at LHAAP-13 and 14 was signed.
- January, 1998, ROD for No Further Action at Group 1 Sites (LHAAP-01, 11, 27, and XX (54)) was signed
- May, 2002, Closure of LHAAP-05 approved by TNRCC (former name of TCEQ)
- July, 2006, ROD for LHAAP-12 was signed, addressing groundwater and soil contamination at the site.

Operations and Maintenance

Currently, operations at the site associated with environmental work include operations and maintenance of the GWTP for treatment of groundwater extracted from sites LHAAP-16, 18 and 24. Remediation and monitoring activities are ongoing for more than 10 sites on the installation. The goal for all sites is the installation of remedies, as needed, with eventual transfer of property to the FWS.



Restoration Advisory Board: A Restoration Advisory Board (RAB), comprised of local citizens, was established by the Army in 2004. Quarterly RAB meetings are held to update the community on the status of environmental projects at LHAAP. Public meetings for LHAAP sites with proposed plans for cleanup are also frequently held to coincide with RAB meetings.

Site Contacts

EPA Remedial Project Manager:	Stephen Tzhone	(214) 665-8409
Texas State Project Manager:	Fay Duke	(512) 239-2443
Army Project Manager:	Rose Zeiler	(479) 635-0110
Fish & Wildlife Project Manager:	Paul Bruckwicki	(903) 679-9144

EPA Site Attorney:	George Malone	(214) 665-8030
EPA Regional Public Liaison:	Donn Walters	(214) 665-6483

Site Information Repository:	1445 Ross Avenue Dallas, TX 75202	(214) 665-6444
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EPA Toll Free Region 6 Superfund Information Line: (800) 533-3508

EPA Region 6 Freedom of Information Act Online Request Form:
<http://www.epa.gov/region6/6md/foia/foiaform.htm>

EPA Region 6 Contact Us Online Request Form:
<http://www.epa.gov/region6/r6coment.htm>

