Texas
Longhorn Army Ammunition Plant

Facility and Location

Longhorn Army Ammunition Plant (LHAAP) is located 3.5 miles west of the Louisiana/Texas border in Karnack, 12 miles from Marshall. It includes 451 buildings on 8,493 acres of land. This World War II era facility both produced and destroyed missiles. LHAAP was established to support mobilization requirements for World War II. From 1945 to 1952, it was on standby status. The plant was reactivated in 1952 and operated by Universal Match Corporation. During the Korean War, LHAAP took on an expanded mission that included loading, assembling, and packing rocket motors and pyrotechnic ammunition. Thiokol assumed responsibility along with rocket motor production with the departure of Universal Match Corporation in 1956. Production of rocket motors continued to be the primary mission of LHAAP until 1965 when the production of pyrotechnic and illuminating ammunition was re-established.

Prior to 1994, operations consisted of compounding pyrotechnic and propellant mixtures, performing load assemble and pack activities, accommodating receipt and shipment of containerized cargo, and performing maintenance and/or layaway of standby facilities and equipment as they apply to mobilization planning. The installation was also responsible for static firing and elimination of Pershing I and II rocket motors in compliance with the Intermediate range Nuclear Force Treaty in effect between the U.S. and the former USSR.

The plant became inactive and excess in July 1997. A memorandum of agreement between the Army and the U.S. Fish and Wildlife Service (USFWS) was signed on October 21, 2000, designating an area of approximately 7,200 acres for establishment of a wildlife refuge overlay at LHAAP. Since May 2004, approximately 7,000 acres have been transferred to the USFWS. In accordance with the April 2004 Transfer Memorandum of Agreement between the parties, all of LHAAP is expected to transfer to the refuge.

Media Sampled and Findings

Groundwater — In 2011, 100 of 282 samples detected perchlorate from 0.1 to 75,800 ppb. In 2010, 175 of 188 samples detected perchlorate from 0.1 to 160,000 ppb. In 2009, 100 of 179 samples detected perchlorate from 0.32 to 360,000 ppb. In 2008, six of nine samples detected perchlorate from 4.71 to 77,800 ppb. In 2007, 26 of 92 samples detected perchlorate from 0.95 to 177,000 ppb. Prior to 2007, 3 of 296 samples detected perchlorate with a high of 150,000 ppb.
Groundwater Treatment Plant — In 2008, 8 of 36 samples detected perchlorate from 69.1 to 17,900 ppb. In 2007, 27 of 165 samples detected perchlorate from 1.74 to 23,000 ppb.
Sediment — In 2007, two of seven samples detected perchlorate from 13.4 to 172 ppb.
Soil — In 2011, 13 of 36 samples detected perchlorate from 1.27 to 6,890 ppb. In 2010, 252 of 252 samples detected perchlorate from 0.963 to 151,000 ppb. In 2009, 131 of 151 samples detected perchlorate from 1.24 to 572,000 ppb. In 2007, two of five samples detected

perchlorate from 13.2 to 43.3 ppb. Prior to 2007, 3 of 176 samples detected perchlorate with a high of 45,600 ppb.
Surface Water — In 2011 two of eight samples detected perchlorate at 0.67 and 8.7 ppb. In 2010, 10 of 10 samples detected perchlorate from 0.6 to 1.8 ppb. In 2009, 3 of 21 samples detected perchlorate from 8.9 to 24 ppb. In 2007, 7 of 19 samples detected perchlorate from 1.02 to 122 ppb. Prior to 2007, 3 of 221 samples detected perchlorate with a high of 905 ppb.

Appropriate Actions

Defense Environmental Restoration Program cleanup efforts are ongoing to address groundwater and surface water concentrations above the EPA and DoD Preliminary Remediation Goal of 15 ppb and soil concentrations above the 55,000 ppb residential screening levels recommended by EPA Region IX (but below the 720,000 ppb industrial soil screening levels).

The LHAAP-4 site, a soil removal action is underway and it is in the Risk Investigation/ Feasibility Study (RI/FS) phase. LHAAP-16 has an Interim Remedial Action in place (groundwater is pumped and treated at the GWTP) and will be remediated together with the Harrison Bayou site. The LHAAP-18/24 site, groundwater is currently being extracted, treated for metals, volatile organic compounds, and perchlorate. Prior to June of 2007, the treated water was discharged to the surface water (Harrison Bayou). Since June 2007, the treated water is being re-injected into the groundwater at the site as a part of an optimization project after being treated at the GWTP. The site has an Interim Remedial Action in place and is in the RI/FS stage. Discussions with regulators are ongoing about sampling results from LHAAP-001. LHAAP-17 is undergoing a Record Of Decision for remedy implementation. LHAAP 47 is in the RI/FS phase for groundwater and soil concentrations. LHAAP-50 has completed a Record of Decision for groundwater and soil concentrations and in the beginning stages of remedy implementation.