

**SELECTED REMEDY: Land Use Controls and Limited Groundwater Monitoring****Site History**

LHAAP-001-R, the South Test Area/Bomb Test Area, is located in the southern portion of LHAAP and covers an area of approximately 79 acres. LHAAP-001-R was constructed in 1954 and used for testing photoflash bombs produced at the facility until about 1956. During the late 1950s, illuminating signal devices were also demilitarized within pits excavated in the vicinity of the test pad. During the early 1960s, leaking production items may have been demilitarized by detonation. Leaking white phosphorus (WP) munitions were supposedly disposed of although no primary source documentation concerning this effort was located. A 1984 LHAAP Contamination Survey stated the area had been relatively inactive since the early 1960s and no disposal or testing activities were carried out in this area. LHAAP-001-R is co-located with Installation Restoration Program site LHAAP-27. LHAAP-001-R was identified as a munitions and explosives of concern (MEC) area of concern based on the visual confirmation of MEC. In 2008, a MEC removal action was conducted and LUCs were developed. A total of 384 MEC/material potentially presenting explosive hazard (MPPEH) items and 14 inert items were located and destroyed and a total of 22,139 pounds of munitions debris and 1,876 pounds of cultural debris were removed during the course of clearance. In addition, LUCs were developed that included restrictions against intrusive activities including digging; signage at the perimeter of the site; and an education program for future refuge visitors, staff, and volunteers. After resolution of a dispute between Army and EPA in March 2016, the 2011 Draft Final ROD was revised and the final ROD was finalized in September with a selected remedy of implementation of LUCs and limited groundwater monitoring for perchlorate, in addition to the completed removal action.

**Site Characteristics**

The topography slopes gently to the east and surface water runoff from the hillside flows generally to the southeast and into Harrison Bayou. Groundwater at the site was encountered between 7 and 9 ft below ground surface. Groundwater is topographically controlled with a general flow direction to the east toward the floodplain of Harrison Bayou. Sampling conducted by the USEPA and Army in 2009 resulted in a detection of perchlorate in one well at a concentration above the Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Residential Protective Concentration Level (PCL) of 17 ug/L.

**Remedial Action Objective (RAO)**

- Protection of human health and safety from explosive hazards that may have remained at the site after the MEC removal action and confirmation that perchlorate is present in groundwater at levels below the chemical specific criterion

**Description of the Selected Remedy:****Implementation of LUCs:**

- to prohibit the development and use of the property for residential housing, elementary and secondary schools, and child care facilities and playgrounds, and to prohibit intrusive activities such as digging or any other activity which could result in explosive safety risks.
- to prohibit residential land use will remain in place until it is demonstrated that the MEC no longer presents a threat to public/human safety.
- to restrict land use to nonresidential will remain in place until it is demonstrated that the MEC no longer presents a threat to public/human safety.
- to prohibit intrusive subsurface activities, including digging, will remain in place until it is demonstrated that the MEC no longer present an explosive hazard

**Limited groundwater monitoring:**

Limited groundwater monitoring for perchlorate will confirm perchlorate level in groundwater is below the TRRP Tier 1 Groundwater Residential PCL which is the state remedial standard utilized in the absence of a federal drinking water standard.

**Five Year Reviews** will be conducted because explosive hazards may remain at the sites that do not allow for unlimited use and unrestricted exposure.

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