

LHAAP-50 – Former Sump Water Tank Remedial Action Operations

Site History

The LHAAP-50 site (Former Sump Water Tank) is in the north-central portion of LHAAP and covers an area of approximately 1 acre. LHAAP-50 contained a 47,000-gallon capacity aboveground storage tank which received industrial wastewater from industrial waste production sumps throughout LHAAP from 1955 to 1988. After the solids were filtered, the storage tank contents were discharged upstream of the bridge on Crockett Avenue, south of 51st Street into Goose Prairie Creek.

Site Characteristics

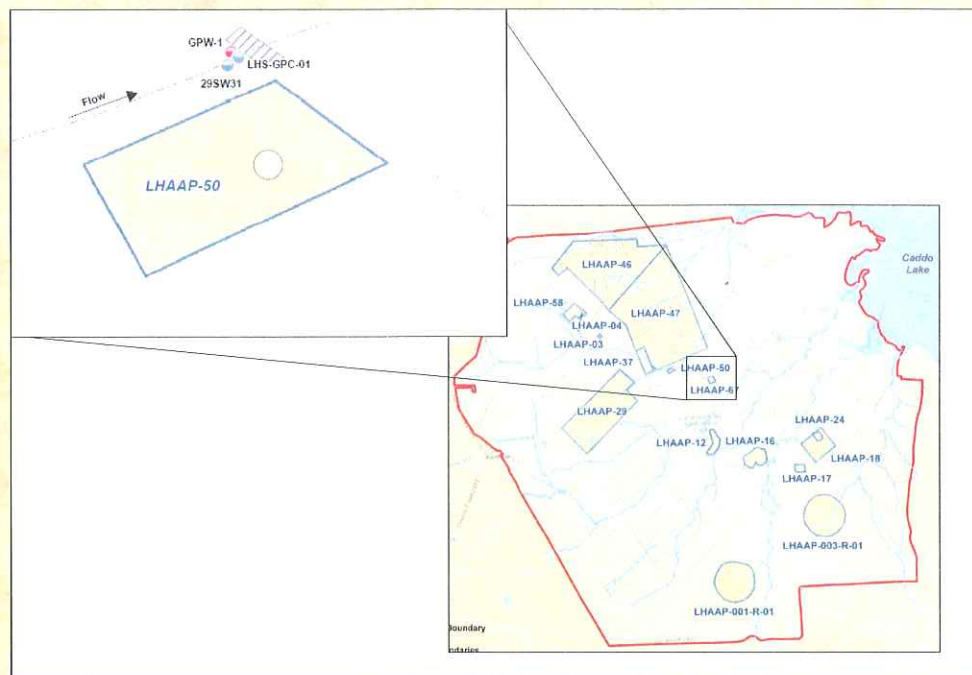
The northeastern half of the LHAAP-50 is an open area of grass and brush that is bounded by South Crockett Avenue to the northeast, a drainage ditch to the west, a railroad spur to the south, and Goose Prairie Creek to the north. Runoff from the northeastern half of the site is generally toward the northeast. Runoff is collected by a drainage ditch to the northeast that runs parallel to South Crockett Avenue and eventually joins Goose Prairie Creek. Runoff from the southwestern portion of the site is collected to the west by a drainage ditch that carries the runoff north into Goose Prairie Creek. Goose Prairie Creek eventually empties into Caddo Lake.

Risk Assessment

A baseline human health risk assessment (BHRA) was conducted for LHAAP-50 that used data from the investigations conducted through 2001 and between 2006 and 2008; and a baseline ecological risk assessment (BERA) was conducted based on investigations conducted from 1993 through 2006 to determine current and future effects of contaminants on human health and the environment. The RA at LHAAP-50 is protective of human health and meets applicable or relevant and appropriate requirements (ARARs). The ecological risk assessment concluded no action is needed at LHAAP-50 for the protection of ecological receptors.

Chemicals of Concern

Between 1992 and 2010, numerous investigations were conducted in a phased approach to determine the nature and extent of contamination at LHAAP-50. COCs at the LHAAP-50 site include dissolved phase perchlorate and volatile organic compounds (VOCs) including tetrachloroethylene (PCE), trichloroethylene (TCE), 1,1-dichloroethylene (1,1-DCE), 1,2-dichloroethane (1,2-DCA), cis-1,2-dichloroethylene (cis-1,2-DCE), and vinyl chloride (VC) in groundwater, and perchlorate in soil. There are no COCs in other environmental media at the LHAAP-50 site.



LHAAP-50 Location and Site Map

LHAAP-50 – Former Sump Water Tank (continued)

Remedial Action Operations

Remedial Action Objectives

The Remedial Action Objectives (RAOs) for LHAAP-50, consistent with the reasonably anticipated future use as a national wildlife refuge, are:

- Protection of human health by preventing human exposure to the contaminated groundwater;
- Protection of human health by preventing further potential degradation of groundwater and surface water from contaminated soil;
- Protection of human health and the environment by preventing contaminated groundwater from migrating into nearby surface water; and,
- Return of groundwater to its potential beneficial uses as drinking water, wherever practicable.

Land Use Control Boundary

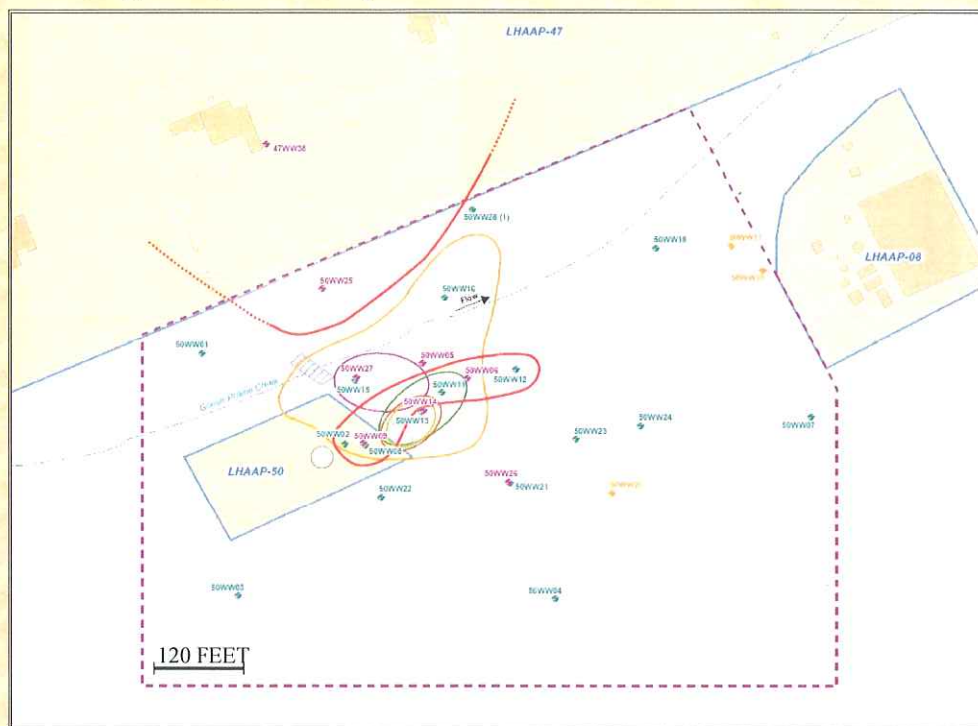
The objectives of the LUC at LHAAP-50 are to prevent human exposure to groundwater contamination presenting an unacceptable risk to human health and ensure that there is no withdrawal or use of groundwater beneath the site for anything other than environmental monitoring and testing. The LUC will remain in effect until the levels of COCs in groundwater and soil allow for unrestricted use and unlimited exposure (UUUE). Army, with TCEQ and EPA concurrence, will establish a LUC area to restrict groundwater use at LHAAP-50, and notification of that LUC to be recorded with the Harrison County Courthouse.

Monitored Natural Attenuation

MNA at the LHAAP-50 site is implemented to monitor COCs and ensure protection of human health and the environment. Performance monitoring to evaluate remedy effectiveness includes groundwater and surface water monitoring. The groundwater monitoring program is designed to evaluate and monitor natural attenuation of COCs in shallow zone groundwater. The surface water monitoring program is designed to monitor potential migration of contaminated groundwater and surface runoff to surface water. Quarterly groundwater samples were last collected from LHAAP-50 in February 2015, and will be collected again in May 2015.

Soil Removal Action

Perchlorate-impacted surface soils were excavated and disposed off-site in 2013 as part of the remedial action. The excavation area was backfilled with clean soil and seeded to restore vegetation.



LHAAP-50 Land Use Control Boundary and COC Plume Footprints