



Current Status

The ground water in-situ bioremediation and conventional pump and treat system were operational from 2/92 to 12/95. Natural Attenuation (NA) of groundwater began January 1996 and has ten-year duration to January 2006. The first Five-Year review (Type 1a) was signed January 1995. The second Five-Year review dated February 2002, secured final EPA signature on 3/12/02. The third Five-Year review dated February 2007, secured final EPA signature on 3/15/07. Current activity includes Ground Water (GW) Screening Technology Evaluation/s and the analysis of a Tier #1 and #2 wetland Remediation System to be followed-up by Supplemental FS document for a GW ROD Amendment.

Comments on the Ground Water Evaluation, Remedial Progress Report, 1st Half, March 2005 report was furnished to EPA on April 1, 2005. Analytical results on the GW remediation were addressed. FLTG has identified the contaminated plume limits, and is pursuing to identify active screening technologies that will achieve timely remediation in the site plume areas.

In February 2006, a Supplemental Groundwater Investigation Report was submitted to EPA, reflecting the steel containment wall alignment and extends MNA duration for remediation of the other site GW plumes. The FLTG and ERM are in preparation and evaluation of Supplemental Feasibility Study (SFS) and applicable site remedial alternatives. Six new COCs namely, TBA, chloroform, naphthalene, acetone 1, 1 - 1DCE and MTBE will be addressed in the SFS. EPA received the 2007 Annual Progress Ground Water Monitoring Report on April 02, 2007. EPA received the 2008 annual Ground Water Monitoring Report on April 22, 2008.

EPA received the Constructed Wetlands Treatability Study on December 22, 2008, and is currently reviewing it. This treatability study summarizes the Tier 1 laboratory screening study and the Tier 2 pilot scale wetland study, to treat Site COCs in ground water to acceptable discharge limits.

Benefits

During 2/80 through 6/83, EPA was involved in three (3) removal actions to stabilize the site. This included maintaining site security, sampling and analysis, migration control, and pumping and containment of 992 cubic yards of contaminated sludge. May 1989 floodwaters inundated the site, creating concerns for drinking water supplies; EPA supplied bottled water during this time. In June 1989 FLTG began construction of a double-interlock, high-tensile strength steel pile wall around the French Lagoons to protect the site from flooding. Construction was completed November 2, 1989. May 1994 floodwaters again surrounded the wall at the site; however, the floodwaters crested three inches from the top of the flood control wall. The wall functioned as designed. The main waste lagoon, OU-1 for soil, at the site was divided into 2 parts for bio-remediation, and both sides of the lagoon were completed in 1993. The remedial action OU-2 for ground water is underway with an ongoing feasibility study and a follow up ROD amendment change is anticipated.

Remediation of the French Limited site will eliminate approximately 300,000 tons of lagoon sludge and soil, 800,000 tons of subsoil associated with the ground water cleanup, 11,000 tons of soil in shallow subsoil excavations around the perimeter, and the creation of 25 acres of new wetlands as per the Natural Resource Consent Decree, which was entered into Federal District Court on 3/10/93.

Site Assessment and Ranking

Site HRS Score: 69.83

NPL LISTING HISTORY:

Proposed Date: 10/81

NPL Update: No. 1 Final Date: 9/08/83

Site Description

The site is located in northeast Harris County, two miles southwest of Crosby, Texas, one mile east of the San Jacinto River, at old US Highway 90 and Gulf Pump Road.

Population: Approximately 10,000 residents in Crosby and nearby communities.

Setting: The nearest residence is within 300 feet of the main pit. The nearest drinking water well is within 1,500 feet of the main pit. The entire site now encompasses approximately 55.00 acres, with one 7-acre waste pit of 10.5 ft. average depth.

Hydrology: The site is located within 100-year floodplain of the San Jacinto River. The Gulf Coastal Plain overlies the Chicot and Evangeline aquifers. The main pit lies within alluvial deposits over the Beaumont Clay formation. A shallow ground water system (20-50 feet deep) is in use by nearby residents.

Wastes And Volumes

The principal pollutants at the French Limited Superfund site include:

- Volatile organic compounds in; ground water (10 ppm); sludges (6%).
- Phenols; ground water (10 ppm), sludges (1%).
- Heavy metals; sludges (2%).
- PCB; sludges (0-320 ppm).

The volumes of these wastes are approximately as follows:

- Sludges; PCB 8,000 cubic yards; non-PCB 68,000 cu. yds.
- Water, 25 million gallons.
- Soil, 70,000 cu. yds.

Site Map



The Remediation Process

Site History:

The site was used for sand mining operations between 1950 and 1965. The site operated from 1966 until 1972 under permit from Texas Water Quality Board for Petrochemical Waste Disposal. Approximately 3.4 million cubic feet of material were received, some burned; remainder placed in pit. The facility's permit was revoked and the operation closed in 1973.

Health Considerations:

- Ground water and surface water are for drinking and irrigation.
- Measurable levels of contamination in the air have been detected.
- Direct contact risk from contaminated sludges and soils.

Other Environmental Risks:

- The nearest drinking water well is 1,500 feet southwest of the waste lagoon.
- The site is in the floodplain of the San Jacinto River.
- Ground water in the upper aquifer is contaminated.
- Supplemental Feasibility Study being prepared completion scheduled in 2008.

Record of Decision

The Record of Decision was signed on March 24, 1988. The Selected remedy included the following:
A Record of Decision (ROD) Amendment is scheduled for completion in 2008

Soil Treatment: U -1

Contaminated soils and sludges treatment onsite with in-situ biodegradation.

<u>Other Remedies Considered</u>	<u>Reason Not Chosen</u>
1. "No Action"	Did not meet remedial objectives
2. Thermal Destruction	Not cost effective
3. Thermal Destruction of sludges	Non-compliance of State and Federal environmental regulations regarding long-term reliability and continued protection of human health and the environment.
4. Slurry Wall/Multi-Layered Cap	Not cost effective; non-compliance of State and Federal environmental regulations regarding long-term reliability and continued protection of human health and the environment.

Water: OU -2 – Groundwater Treatment

Initial groundwater ROD treatment utilized ten year MNA period, in conjunction with a 2006 Bench Scale test which proved MNA to not be functioning timely, so a new Supplemental Feasibility Study (SFS) has been initiated this action also includes addressing containment as a propose remedy in the upcoming Proposed Plan, Public Meeting, ROD Amendment, new RD and RA to execute the new technologies/remedial activities of the ROD Amendment and its to be designed RD and RA documents.

The current identified Ground Water Contaminants of concern (COCs) are as follows:

- (1) Benzene
- (2) Trichloroethylene (TCE)
- (3)Tetrachloroethylene (PCE)
- (4)Vinyl Chloride (VC)
- (5)Chloroform
- (6)Tert-Butyl Alcohol (TBA)
- (7)Naphthalene
- (8)Acetone
- (9)1,2- Dichloroethylene (DCA)

Community Involvement

- Community Involvement Plan: Developed 4/87, revised 4/89
- Open houses and workshops: 5/87, 8/90, 2/91, 8/91 (by PRPs), 5/93, 4/95
- Original Proposed Plan Fact Sheet and Public Meeting: 1/88.
- Original ROD Fact Sheet: 4/88
- Milestone Fact Sheets: 4/87, 7&8/87 (by PRPs), 10/88, 1/89, 8&9/89, 3&4/90, 7&8/90, & 11/90 '93
- Commemorative event conducted with TNRCC, PRPs on 4/95
- Extensive media coverage
- Citizens on-site mailing list: 558
- Constituency Interest: Concerns have lessened; however, the PRPs and EPA continue to conduct periodic open houses to keep citizens informed.

- Site Repository: Crosby Public Library, 135 Hare Road, Crosby, TX 77532

Technical Assistance Grant

- Availability Notice: 4/88, Re-advertised 8/17/90 and 8/31/90
- Letters of Intent Received: (1) French Limited/Sikes Disposal Environmental Relief Committee - 4/25/88 (withdrawn) and (2) Barrett-Crosby Civic League - 8/21/90
- Final Application Received: 8/26/91
- Grant Award: 3/1/92
- Current Status: TAG closed 1998.

Contacts

Remedial Project Manager (EPA):	Charles Fisher, 214-665-2224, Mail Code: 6SF-RA
State Contact: (TCEQ):	Richard Goldsmith 512- 239-2960
Community Involvement (EPA):	Charles Fisher, 214-665-2224, Mail Code: 6SF-RA
Attorney (EPA):	Anne Foster, 214-665-2169, Mail Code: 6RC-S
State Coordinator (EPA):	Kathy Gibson, 214-665-7196, Mail Code: 6SF-VC
Regional Public Liaison (EPA):	Donn R. Walters, 214-665-6484,
EPA Toll-Free Number	1-800-533-3508
Prime Contractor:	French Limited Task Group – Lyondell Chemical Corporation