

PALMER BARGE LINE SUPERFUND SITE

Port Arthur, Jefferson County, Texas

SITE STATUS SUMMARY

EPA Region 6
EPA ID: TXD068104501
SITE ID: 0605212
U.S. Congressional District: 14

Contact: Rafael Casanova, P.G. (214) 665-7437

Last Updated: May 2013



Background

The Palmer Barge Line Superfund Site (hereinafter "PBL" or "the Site"), a former barge-cleaning operation, encompasses approximately 17 acres and is located approximately 4.5 miles east-northeast of the City of Port Arthur on Old Yacht Club Road on Pleasure Islet. Pleasure Islet is a peninsula located approximately 0.5 miles southwest of the mouth of the Neches River. The Site is bordered by vacant property to the north, by Old Yacht Club Road to the west, by the State Marine of Port Arthur Superfund Site to the south, and Sabine Lake to the east.

Pleasure Islet is a manmade landmass consisting of dredge spoils generated during the construction and maintenance of the Sabine-Neches canal, also called the Intercoastal Waterway. The canal was constructed between 1898 and approximately 1920 in the vicinity of Sabine Lake and the Neches River, between the current Site location and the mainland. Between 1955 and 1957, a portion of the canal along the western side of Pleasure Islet was abandoned, and a new canal was cut along the eastern and southern sides of Pleasure Islet. Pleasure Islet was created when a land bridge was constructed across the abandoned portions of the canal, between the northern tip of Pleasure Island and the mainland. Vehicle access to the Site is limited to a single dirt road starting at the western Site border along Old Yacht Club Road.

The Site, along with the adjacent properties to the north and south, were used as a Municipal Landfill for the City of Port Arthur from 1956 to 1987. Although disposal at the landfill has long since ceased and the landfill contents have been covered with dredged sediments, the contents are still present on the Site in the subsurface soils.

In April 1982, John Palmer, President of Palmer Barge Line Inc. purchased approximately 17 acres from the City of Port Arthur for the purpose of servicing and maintaining barges and marine vessels. The company ceased operations on the property in July 1997.

During operation, the typical activities performed at the Site included cleaning, degassing, maintenance, and inspection of barges and other marine equipment. Cleaning operations included the removal of sludge and other residual material by pressure steaming the vessel holds, engines, and boilers. Engines were degreased and accumulations of sludges were removed. Degassing activities involved the removal of explosive vapors from vessel holds using nitrogen or boiler exhaust. Maintenance and inspection activities included the replacement and/or repair of valves, engines, and line leaks followed by pressure tests. A flare was located on-site to burn excess gases and liquids produced during facility operations. The following photo shows the condition of the Site prior to cleanup under a Record of Decision and Removal Action.

Palmer Barge Site (Photo Taken Circa 2007 Before Cleanup, Looking Northeast Towards Sabine Lake)



Current Status

The EPA issued a Record of Decision (ROD) in September 2005 requiring the cleanup of the Superfund Site. A Unilateral Administrative Order for Remedial Design/Remedial Action was issued to the Potentially Responsible Parties (PRPs) in June 2007, which required the PRPs to clean up the Site. The Remedial Action and cleanup was completed according to the requirements of the ROD and there is no longer a threat to human health and the environment. Institutional controls (*i.e.*, deed restrictions) are in place and have been recorded at the local county offices to ensure that the Site's use remains industrial/commercial.

The EPA proposed to delete the Site from the National Priorities List (NPL). A "Notice of Intent to Delete" and a "Direct Final Notice of Deletion" were published in the Federal Register (FR) on December 7, 2011. The deletion became effective on February 6, 2012. Deletion of the Site from the NPL does not preclude further response actions under Superfund.

The "First Five-Year Review (FYR) Report" for the Site has been completed and is available for review at the Site's information repository listed in the "Community Involvement" section of this "Site Status Summary." The purpose of the FYR is to ensure that the final remedy for the Site remains protective of human health and the environment. The EPA is currently implementing the recommendations in the FYR Report.

Benefits

Removal of contaminated soils and other contaminated media that presented a risk to human health and ecological receptors permanently removed the source of contamination from the Site. The Site can now be developed for industrial/commercial purposes.

National Priorities Listing History

The National Priorities List (NPL) is a list of national priorities among the known or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation to assess the nature and extent of public health and environmental risks associated with a release of hazardous substances.

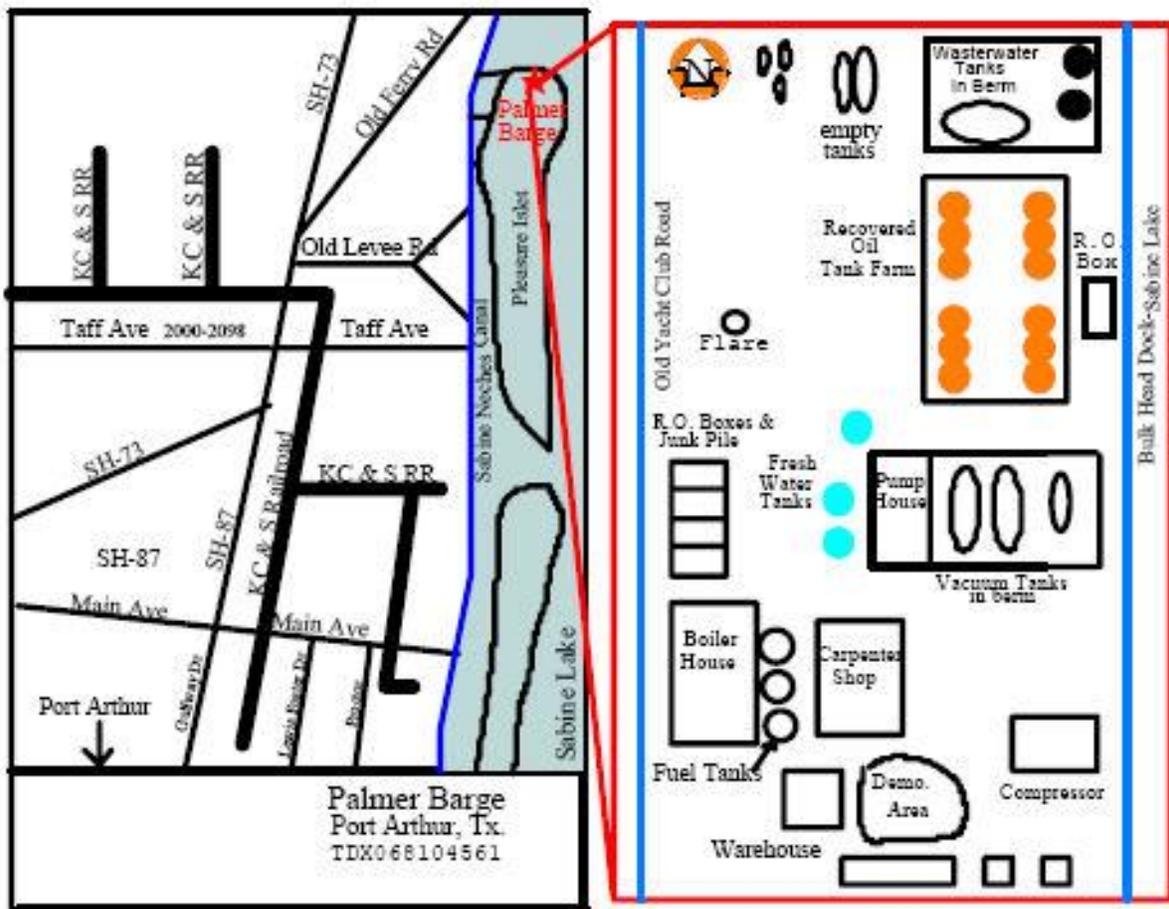
Proposal Date: May 11, 2000
Final Listing Date: July 27, 2000

Population: Approximately 61,000 people reside in the City of Port Arthur.

Setting: The owner is currently using the Site as an industrial property and land use surrounding the Site is also industrial.

Hydrology: The shallow ground water at the Site is not considered a potential drinking water source. The shallow ground water resulted from the adjacent shipping channel dredge materials that were used to build the island where the Site is located.

Site Map



Wastes and Volumes

In August 2000, the EPA Region 6 conducted a Time Critical Removal Action at the Site to remove, transport, and dispose, at an off-site location, all hazardous substances, pollutants, and contaminants located on the Site. The removal action consisted of waste removal, water treatment, oil/water separation, and sludge stabilization. Approximately 250,000 gallons of water were treated on-site; 500 cubic yards of sludge stabilized; and 100,000 gallons of oil/styrene were separated and removed from the Site.

Health Considerations

Chemicals of concern (COCs) identified at the Palmer Barge Site include organic compounds, pesticides, and metals. The COCs that exceeded risk-based levels were addressed in the Selected Remedy for the Site.

Results of the Screening-Level Ecological Risk Assessment indicated that the contaminants of potential concern for ecological receptors identified in the Sabine Lake surface water and sediments do not pose risks of sufficient magnitude to warrant a Remedial Action.

Record of Decision

Based on the results of the Baseline Human Health Risk Assessment and Screening Level Ecological Risk Assessment, the EPA's Selected Remedy for the PBL Superfund Site, identified in the September 30, 2005, Record of Decision (ROD), was "Excavation and Off-Site Disposal." The Selected Remedy consisted of the following components:

- Excavation of approximately 1,204 cubic yards of the upper two feet of soil that exceed human health and ecological risk-based levels at each of the response areas.
- Confirmation sampling for constituents of potential concern at each of the response areas.
- Backfilling of excavated areas with clean soil.
- Off-site disposal of the excavated soils at a permitted disposal facility.
- Implementation of institutional controls to restrict future land use only for industrial purposes. The ICs shall be a restrictive covenant by the property owner recorded in the real property records of Jefferson County, Texas.
- Abandonment of five existing ground water monitoring wells.
- Wastewater AST sludge removal and decontamination and off-site disposal.

On May 7, 2007, the EPA issued a Unilateral Administrative Order (UAO) for Remedial Design and Remedial Action to the PRPs. The UAO became effective on June 6, 2007. The Final Remedial Design/Remedial Action Work Plan was approved by the EPA on August 2, 2007. A total of 181 tons of contaminated soils were excavated and disposed at a permitted disposal facility. Each response area was then backfilled with clean soil. The Record of Decision (ROD) required the collection of confirmation samples, including analyses for the constituents of potential concern, at each of the response areas. Analytical results were used to determine horizontal limits of impacted media in each of the response areas. If constituents were found to contain concentrations in excess of the remediation goals (RG), step-out samples were analyzed for those constituents. Additional step-out samples were collected and analyzed when the step-out samples exceeded the RG. This process continued until sample results for perimeter samples were below the RG, indicating horizontal delineation had been achieved according to

the requirements of the ROD. Additionally, approximately 78,340 pounds of oil were skimmed from the 10,000-barrel AST and recycled for fuel blending, and approximately 854,886 pounds of the remaining sludge material within the AST were incinerated. As required by the 2005 ROD, five permanent ground water monitoring wells were plugged and abandoned.

An institutional control (IC) in the form of Restrictive Covenant by the property owner, to the benefit of the State of Texas and the United States Government, was filed in the appropriate property records at the County Clerk's office in Jefferson County on March 25, 2011. This IC ensures that future site use remains commercial/industrial.

The EPA chose a 1.0×10^{-5} target cleanup goal based on exposure to COCs that exceeded those levels at surface soils. The COCs and the selected soil cleanup goals achieved for the Human Health Risk Areas were:

- Aldrin – 1.1 milligrams/kilogram (mg/kg).
- Benzo(a)pyrene – 2.3 mg/kg.
- Benzo(a)anthracene – 23.0 mg/kg.
- Dieldrin – 1.2 mg/kg.
- Heptachlor Epoxide – 2.1 mg/kg.
- Naphthalene – 210.0 mg/kg.
- Pentachlorophenol – 100.0 mg/kg.
- Lead – 800.0 mg/kg.

The COCs and the selected soil cleanup goals achieved for ecological receptors were:

- 4,4'-DDD – 0.0864 mg/kg.
- 4,4'-DDE – 0.0864 mg/kg.
- 4,4'-DDT – 0.0865 mg/kg.
- Butyl benzyl phthalate – 5.37 mg/kg.
- Lead, total – 497.0 mg/kg.
- Methoxychlor – 0.09 mg/kg.

Community Involvement

The Remedial Investigation and Feasibility Study Report the Proposed Plan for the Site were made available to the public on July 27, 2005. The notice of availability of these documents was published in the Port Arthur News on July 28, 2005. The EPA established an information repository near the Site so that the public could review the administrative record located at the Port Arthur Library in Port Arthur, Texas. A public comment period was held on the Proposed Plan from July 27, 2005, to August 25, 2005. The EPA and the Texas Commission on Environmental Quality conducted a public meeting on August 11, 2005, at the West Grove Education Center in Port Arthur to discuss the Proposed Plan and receive comments from the community.

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