



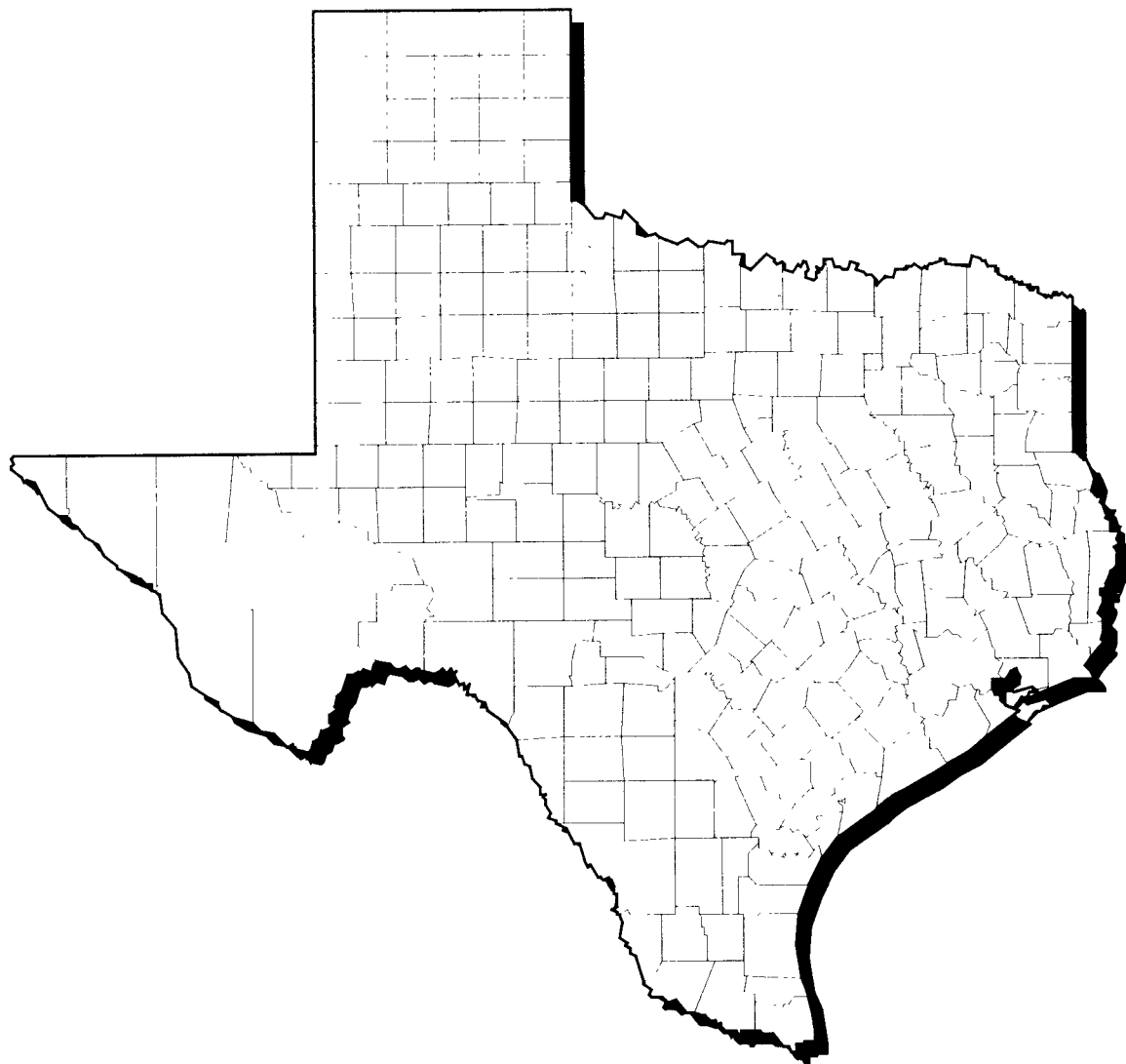
United States
Environmental Protection
Agency

Solid Waste And
Emergency Response
(5201 G)

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PB95-962945
9200.5-742C
May 1995

SUPERFUND:

**Progress at
National
Priority
List Sites**



TEXAS 1995 UPDATE



Printed on Recycled Paper

How to Use the NPL Book

The site fact sheets presented in this book are comprehensive summaries that cover a broad range of information. The fact sheets describe hazardous waste sites on the NPL and their locations, as well as the conditions leading to their listing ("Site Description"). The summaries list the types of contaminants that have been discovered and related threats to public and ecological health ("Threats and Contaminants"). "Cleanup Approach" presents an overview of the cleanup activities completed, underway, or planned. The fact sheets conclude with a brief synopsis of how much progress has been made in protecting public health and the environment. The

summaries also pinpoint other actions, such as legal efforts to involve polluters responsible for site contamination and community concerns.

The fact sheets are arranged in alphabetical order by site name. Because site cleanup is a dynamic and gradual process, all site information is accurate as of the date shown on the bottom of each page. Progress is always being made at NPL sites, and the EPA periodically will update the site fact sheets to reflect recent actions. The following two pages show a generic fact sheet and briefly describe the information under each section.

How Can You Use This State Book?

You can use this book to keep informed about the sites that concern you, particularly ones close to home. The EPA is committed to involving the public in the decision making process associated with hazardous waste cleanup. The Agency solicits input from area residents in communities affected by Superfund sites. Citizens are likely to be affected not only by hazardous site conditions, but also by the remedies that combat them. Site cleanups take many forms and can affect communities in different ways. Local traffic may be rerouted, residents may be relocated, temporary water supplies may be necessary.

Definitive information on a site can help citizens sift through alternatives and make decisions. To make good choices, you must know what the threats are and how the EPA

intends to clean up the site. You must understand the cleanup alternatives being proposed for site cleanup and how residents may be affected by each one. You also need to have some idea of how your community intends to use the site in the future, and you need to know what the community can realistically expect once the cleanup is complete.

The EPA wants to develop cleanup methods that meet community needs, but the Agency only can take local concerns into account if it understands what they are. Information must travel both ways in order for cleanups to be effective and satisfactory. Please take this opportunity to learn more, become involved, and assure that hazardous waste cleanup at "your" site considers your community's concerns.

Provides the dates when the site was Proposed, made Final, and Deleted from the NPL.

Identifies the Federal, State, and/or potentially responsible parties taking responsibility for cleanup actions at the site.

Summarizes the actions to reduce the threats to nearby residents and the surrounding environment and the progress towards cleaning up the site.

Lists the location of the primary site repository. The site repository may include community relations plans, public meeting announcements and minutes, fact sheets, press releases, and other site-related documents.

A

SITE DESCRIPTION

This section describes the location and history of the site. It includes descriptions of the most recent activities and past actions at the site that have contributed to the contamination. Population estimates, land usages, and nearby resources give readers background on the local setting surrounding the site.

B

THREATS AND CONTAMINANTS

The major chemical categories of site contamination are noted, as well as which environmental resources are affected. Icons representing each of the affected resources (may include air, groundwater, surface water, soil, and contamination to environmentally sensitive areas) are included in the margins of this section. Potential threats to residents and the surrounding environments arising from the site contamination also are described.

C

CLEANUP APPROACH

This section contains a brief overview of how the site is being cleaned up.

D

RESPONSE ACTION STATUS

Specific actions that have been accomplished or will be undertaken to clean up the site are described here. Cleanup activities at NPL sites are divided into separate phases, depending on the complexity and required actions at the site. Two major types of cleanup activities often are described: initial, immediate, or emergency actions to quickly remove or reduce imminent threats to the community and surrounding areas; and long-term remedial phases directed at final cleanup at the site. Each stage of the cleanup strategy is presented in this section of the summary. Icons representing the stage of the cleanup process (initial actions, site investigations, EPA selection of the cleanup remedy, engineering design phase, cleanup activities underway, and completed cleanup) are located in the margin next to each activity description.

E

SITE FACTS

Additional information on activities and events at the site are included in this section. Often details on legal or administrative actions taken by the EPA to achieve site cleanup or other facts pertaining to community involvement with the site cleanup process are reported here.

Guide to the NPL Book Icons

The “icons,” or symbols, accompanying the text allow the reader to see at a glance which environmental resources are affected and the status of cleanup activities at the site.

Icons in the Threats and Contaminants Section



Contaminated *Groundwater* resources in the vicinity or underlying the site. (Groundwater is often used as a drinking water source.)



Contaminated *Surface Water and Sediments* on or near the site. (These include lakes, ponds, streams, and rivers.)



Contaminated *Air* in the vicinity of the site. (Air pollution usually is periodic and involves contaminated dust particles or hazardous gas emissions.)



Contaminated *Soil and Sludges* on or near the site. (This contamination category may include bulk or other surface hazardous wastes found on the site.)



Threatened or contaminated *Environmentally Sensitive Areas* in the vicinity of the site. (Examples include wetlands and coastal areas or critical habitats.)

Icons in the Response Action Status Section



Initial, Immediate, or Emergency Actions have been taken or are underway to eliminate immediate threats at the site.



Site Studies at the site to determine the nature and extent of contamination are planned or underway.



Remedy Selected indicates that site investigations have been concluded, and the EPA has selected a final cleanup remedy for the site or part of the site.



Remedy Design means that engineers are preparing specifications and drawings for the selected cleanup technologies.



Cleanup Ongoing indicates that the selected cleanup remedies for the contaminated site, or part of the site, currently are underway.



Cleanup Complete shows that all cleanup goals have been achieved for the contaminated site or part of the site.

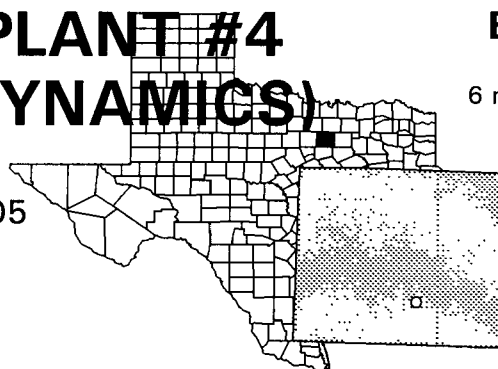
EPA ID	Site Name
Number	
TX7572024605	AIR FORCE PLANT #4 (GENERAL DYNAMICS)
TXD008123168	ALCOA (POINT COMFORT)/LAVACA BAY
TXD980864649	BAILEY WASTE DISPOSAL
TXD980340889	BIO-ECOLOGY SYSTEMS, INC.
TXD980625453	BRIO REFINING, INC.
TXD990707010	CRYSTAL CHEMICAL CO.
TXD980864763	CRYSTAL CITY AIRPORT
TXD089793046	DIXIE OIL PROCESSORS, INC.
TXD980514814	FRENCH, LTD.
TXD980748453	GENEVA INDUSTRIES/FUHRMANN ENERGY
TXD980745582	HARRIS (FARLEY STREET)
TXD980514996	HIGHLANDS ACID PIT
TXD980623904	KOPPERS CO INC (TEXARKANA PLANT)
TX7213821831	LONE STAR ARMY AMMUNITION PLANT
TX6213820529	LONGHORN ARMY AMMUNITION PLANT
TXD980629851	MOTCO, INC.
TXD980873343	NORTH CAVALCADE STREET
TXD980867279	ODESSA CHROMIUM #1
TXD980697114	ODESSA CHROMIUM #2 (ANDREWS HIGHWAY)
TX4890110527	PANTEX PLANT (USDOE)
TXD980699656	PESSES CHEMICAL CO.
TXD980873350	PETRO-CHEMICAL SYSTEMS, (TURTLE BAYOU)
TXD079348397	RSR CORP.
TXD062132147	SHERIDAN DISPOSAL SERVICES
TXD980513956	SIKES DISPOSAL PITS
TXD980873327	SOL LYNN/INDUSTRIAL TRANSFORMERS
TXD980810386	SOUTH CAVALCADE STREET
TXD055337281	STEWCO, INC.
TXD008056152	TEXARKANA WOOD PRESERVING CO.
TXD055143705	TRIANGLE CHEMICAL CO.
TXD980745574	UNITED CREOSOTING CO.

AIR FORCE PLANT #4 (GENERAL DYNAMICS) TEXAS

EPA ID# TX7572024605

EPA REGION 6

Tarrant County
6 miles west of Fort Worth



Site Description

This 700-acre Air Force Plant #4 (General Dynamics) site has been used for the production and testing of military aircraft and associated equipment since 1941. The site is owned by the U.S. Air Force, but is operated by Lockheed, formerly General Dynamics. In previous years, the plant produced approximately 6,000 tons of spent process chemicals each year. As a result of waste minimization techniques, the off-site disposal of waste now is less than 2,500 tons per year. Twenty-one hot spots responsible for the chemical contamination have been found around the site, including landfills, chrome pits, fire department training areas, and fuel saturation areas. The site is bordered by Carswell Air Force Base, Lake Worth, and the community of White Settlement, a suburb of Fort Worth with a population of approximately 13,400 people. The base and the town both draw drinking water from seven nearby municipal wells; the closest are located 850 and 1,500 feet from the site.

Site Responsibility: This site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84
Final Date: 08/30/90

Threats and Contaminants



The groundwater is polluted with halogenated and aromatic organic chemicals, volatile organic compounds (VOCs) including vinyl chloride and trichloroethylene (TCE), and heavy metals including chromium, lead, and arsenic. VOCs, chromium, and alpha and beta radiation have been found in the soil. Surface water is contaminated with VOCs and chromium. Aquifers supplying the drinking water wells are heavily contaminated with VOCs. Contamination generally is restricted to the site, although pollution of the upper aquifer has the potential to impact surrounding wells. Possible paths of exposure include ingestion or direct contact with contaminated drinking water, and possible health threats due to emission of radionuclides.

Cleanup Approach

The site is being addressed in two stages: immediate actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Immediate Actions: In 1982, the Air Force and the potentially responsible parties notified the EPA that hazardous substances were found in the stormwater outfall that drains into an adjacent creek. In 1983, the Air Force removed about 21,000 cubic yards of soil contaminated with heavy metals from closed waste pits and disposed of it in an EPA-approved facility. Polluted water from a stormwater outfall continues to be collected, stored, and disposed of in an EPA-approved facility.



Entire Site: The Air Force is continuing to conduct investigations to determine the extent and nature of contamination of groundwater and surface waters and to select remedies for cleanup of the site. The investigation is planned for completion in the summer of 1995 and a remedy is expected by early 1996.

Site Facts: The Air Force Plant #4 site is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities. An Interagency Agreement between the EPA, the Air Force, and the Texas Water Commission was signed in August 1990, addressing cleanup of the entire site.

Environmental Progress



The removal of contaminated soil and water by the Air Force has reduced the possibility of exposure to hazardous materials at this site, making the Air Force Plant #4 (General Dynamics) site safer while it awaits further cleanup actions.

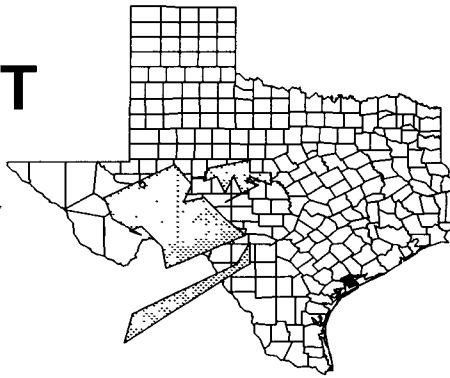
Site Repository



Fort Worth Public Library, Central Branch, 300 Taylor Street, Fort Worth, TX 76102

ALCOA (POINT COMFORT)/ LAVACA BAY TEXAS

EPA ID# TXD008123168



EPA REGION 6

Calhoun County
Port Comfort

Site Description

The ALCOA/Lavaca Bay site is located on the shore of Lavaca Bay along the Gulf of Mexico. The site consists of portions of the Aluminum Company of America (ALCOA) Point Comfort plant, a section of Lavaca Bay surrounding the Alcoa plant, and an associated man-made dredge spoil island located approximately 1,200 feet west of the Alcoa plant. The dredge spoil island is composed of a 91-acre gypsum lagoon and a dredge spoil area (covering approximately 50 acres) that includes five lagoons. The ALCOA facility, covering about 3,500 acres, was established as an aluminum smelter in 1948, but has since been shut down and dismantled. Bauxite refining for aluminum began in 1958, and continues today. In 1965, ALCOA opened a chlor-alkali production plant that produced chlorine gas and sodium hydroxide through an electrolytic process involving mercury. During the plant's operation, wastewater containing mercury was discharged into Lavaca Bay through outfalls located on the off-shore gypsum disposal lagoon. Dredge spoils, also contaminated with mercury, were disposed of in several areas on the site. The EPA sampled the Lavaca Bay sediments in late 1992 and found them to be highly contaminated with mercury. Lavaca Bay is an estuary of the Matagorda Bay system and is used for both commercial and recreational fishing; it is also one of Texas' most productive fisheries. In April 1988, the Texas Department of Health (TDH) issued a public warning prohibiting the harvesting of fish and crabs from portions of Lavaca Bay near the site. The city of Port Lavaca, with a population of 10,000, is located 4 miles south and west of the site.

Site Responsibility: The site is being addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 06/23/93

Final Date: 02/23/94

Threats and Contaminants



The surface water and sediments in Lavaca Bay are contaminated with mercury. Groundwater and soils are contaminated with mercury. Ingesting or coming into direct contact with surface water, sediments, soils, or groundwater could be hazardous. The bay is a habitat for a number of endangered birds and aquatic wildlife and is used for recreational activities, including fishing, boating, and swimming. A public warning has been issued prohibiting the harvesting of fish and crabs from portions of the bay.

Cleanup Approach

The site is being addressed in a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Entire Site: In early 1994, the EPA began an investigation into the nature and extent of contamination at the site. This investigation, scheduled for completion in early 1997, will lead to the selection of remedies for final cleanup of the site.

Site Facts: In 1970, the Texas Water Quality Board, in response to information received from the U.S. Food and Drug Administration and the Texas Department of Health, issued an Emergency Order against ALCOA finding them responsible for the mercury discharged to the off-shore gypsum lagoon, resulting in the contamination of Lavaca Bay. ALCOA proceeded to restrict the discharge of mercury to safe levels. On March 31, 1994, the EPA and ALCOA signed an Administrative Order on Consent (AOC) requiring ALCOA to investigate the site and propose cleanup measures.

Environmental Progress



After investigating the site, the EPA determined that no immediate actions are necessary to protect human health and the environment while investigations are underway.

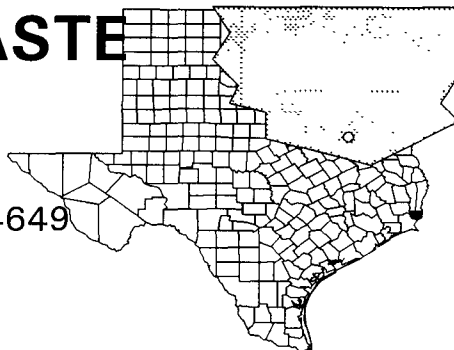
Site Repository



Calhoun County Public Library, 200 West Mahan, Port Lavaca, TX 77979

BAILEY WASTE DISPOSAL TEXAS

EPA ID# TXD980864649



EPA REGION 6

Orange County
3 miles southwest of Bridge City

Other Names:
Gulf States Utility
Bailey's Sabine Lake Bridge

Site Description

The Bailey Waste Disposal site is a closed industrial waste facility. The site is part of a saltwater marshland near the confluence of the Neches River and Sabine Lake and lies within the 100-year flood plain. Although the size of the site is officially 280 acres, waste has been documented on only 10 acres. Two rectangular ponds were constructed during the 1950s, when Bailey's was a fish camp; one of them subsequently was used for waste disposal in the 1950s and while the fish camp was still in operation. Four separate areas of contamination have been identified near this pond: a waste channel containing at least 44,000 cubic yards of industrial waste and debris; an area containing 32,000 cubic yards of municipal and industrial waste; a drum disposal area, where corroded drums hold about 880 cubic yards of industrial waste; and a series of waste pits holding 1,900 cubic yards of tar-like wastes. The site was closed in 1971. About 7,600 people within 3 miles of the site use wells for drinking water, the nearest residence being within 2 miles of the site.

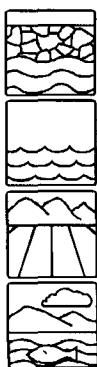
Site Responsibility: This site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

Threats and Contaminants



Groundwater pollutants include organic chemicals such as chloroform, and benzene, as well as heavy metals including lead and arsenic. Volatile organic chemicals (VOCs), aromatic and chlorinated hydrocarbons, organics including polycyclic aromatic hydrocarbons (PAHs), and heavy metals have been found in sediments. Contaminants in the soil include VOCs and heavy metals such as copper, lead, and arsenic. Heavy metals including arsenic and selenium have been found in the surface water. Potential risks include contact with or accidental ingestion of soils and inhaling dust from the site. Continued restriction of access to the site should lessen these risks. Area drinking water wells are located in deeper aquifers where contamination has not been found. The site is located in the flood plain of the Neches River and is subject to periodic flooding. Fish, shellfish, and livestock grazing the marsh also are at risk; tissues of aquatic creatures have been found to be contaminated. People also may be at risk by eating contaminated fish and crabs.

Cleanup Approach

The site is being addressed in two stages: immediate actions and a long-term remedial phase focusing on the entire site.

Response Action Status



Immediate Actions: In 1984, the potentially responsible parties fenced the site and posted EPA warning signs. Because the site is relatively inaccessible, the fencing is sufficient to control access.



Entire Site: A site study was conducted by the Texas Water Commission to identify the extent of contamination and to suggest options for cleanup. The selected remedy is to remove affected sediments from the marsh and drainage channel, as well as wastes from the drum disposal area and one of the waste pits, and relocate all materials to the waste channel. This channel and the area to the east of one of the ponds will be stabilized by solidifying contaminants to prevent their movement off the site. The cleanup design was completed in early 1992 and site cleanup began during the summer of 1992. Cleanup activities are expected to be completed in 1996.

Site Facts: In April 1990, the EPA and the potentially responsible parties signed a Consent Decree for design and implementation of the site cleanup.

Environmental Progress



Fencing the area and posting warning signs have limited access to the site, thereby reducing the potential of exposure to hazardous substances at the Bailey Waste Disposal while planned cleanup activities are underway.

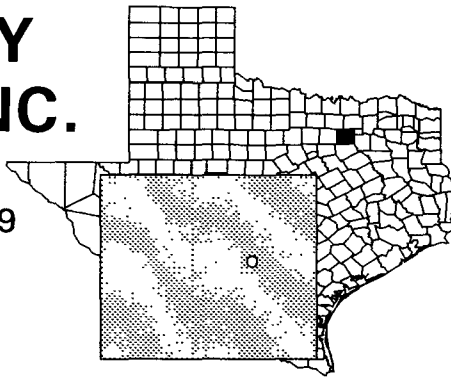
Site Repository



City of Orange Public Library, 220 North Fifth Street, West Orange, TX 77630

BIO-ECOLOGY SYSTEMS, INC. TEXAS

EPA ID# TXD980340889



EPA REGION 6

Dallas County
Grand Prairie

Other Names:
Bioecology

Site Description

The Bio-Ecology Systems, Inc. site consists of approximately 11 acres in an industrial area. It was licensed as a solid waste management facility by the State of Texas in 1972. Operators burned or treated industrial wastes with chemical or biological processes before landfilling them. About 40,000 cubic yards of wastes and contaminated soils exist at Bio-Ecology. It is surrounded by private property and is bordered by the tributaries of Old Mountain Creek. The site lies within the flood plain of the creek and is 1 mile northeast of Mountain Creek Lake. The site was operated until 1978, when, after numerous permit violations and court orders to improve operations, the site owners went bankrupt. The site contains tanks with mixed oils, solvents, and ketones and buried chromium, cyanide, and heavy metal sludges. Approximately 12,500 people live within 3 miles of the site. The City of Grand Prairie draws its domestic drinking water from wells within a 3-mile radius of the site. There is a residential area about 1/2 mile from the site and a school about 2 miles to the northwest.

Site Responsibility: The site was addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 10/23/81

Final Date: 09/08/83

Threats and Contaminants



Shallow groundwater was contaminated with low concentrations of lead, nickel, and volatile organic compounds (VOCs) such as trichloroethane. High concentrations of lead, chromium, and volatile organics have been found in soils both on and off site. Surface water runoff from the area, which has been flooded at least twice, flows directly into Old Mountain Creek; however, specific pollutants were not detected. Slight groundwater contamination has been detected to a depth of 50 feet. Area residents could be exposed to contaminants by coming in direct contact with on- and off-site contaminated soils, sediments, and standing surface water, drinking contaminated surface water or groundwater, or inhaling evaporated and airborne chemicals.

Cleanup Approach

Response Action Status



Immediate Actions: Workers removed 15 storage tanks and surface contamination in 1985. The area was fenced and signs were posted to restrict access.



Entire Site: Investigators recommended that the site be reconstructed as a safe landfill for its own contaminants. The remedies selected included: raising the level of the site above the flood plain; building an on-site disposal cell with a synthetic liner and a collection system for seeping liquids; constructing an environmentally safe cover and liner and liquid collection and removal system; stabilizing the waste and placing it in the on-site cell; fencing and posting the site; and installing a groundwater monitoring system. No groundwater cleanup was planned because monitoring over the last several years has not shown any significant contamination. All cleanup activities were completed in early 1993. Over 85,000 yards of waste were solidified and placed in the landfill. The EPA completed a five-year review of the site in the fall of 1993, and verified that these actions remain protective of human health and the environment. Groundwater monitoring will continue for about 30 years.

Environmental Progress



All construction at the site is complete. The immediate removal of contaminated tanks, the construction of a fence, the security measures, and subsequent long-term cleanup actions have achieved the cleanup goals established for this site. Monitoring activities will be continued to ensure the effectiveness of the site cleanup until final deletion of the Bio-Ecology Systems, Inc. site from the NPL.

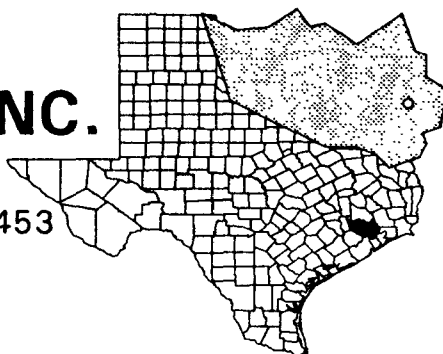
Site Repository



Texas Water Commission, 1700 Congress Avenue, Austin, TX 78704

BRIO REFINING, INC. TEXAS

EPA ID# TXD980625453



EPA REGION 6

Harris County
2 miles north of Friendswood

Other Names:
JOC Oil Aromatics, Inc.
Lowe Chemical Company

Site Description

The Brio Refining, Inc. site occupies about 58 acres: the 49 acres north of Dixie Farm Road were used for storage, and the 9 acres south of the road were used for processing activities. Operations began at the site in 1957, and until 1969, the major work done there was regeneration of copper catalysts and recovery of petrochemicals from styrene tars and vinyl chloride still bottoms. About 23 unlined pits were dug during this time and used to store both raw and process materials. Recycle and recovery operations continued until 1978 when the plant was converted to a crude oil topping unit for jet fuel production. Throughout the 1970s, the pits were closed by mixing the stored material with soil and clay and covering the resulting waste with soil, and by 1980, all pits were closed. Studies have shown that 500,000 to 700,000 cubic yards of soil on site are contaminated and that high levels of volatile organic compounds (VOCs) exist in groundwater under the site. The adjacent area is heavily populated, with approximately 5,700 people living near the site. The South Bend subdivision is located adjacent to the site. Residences, businesses, a hospital, and a school are located within 1/2 mile of the site. A municipal drinking water well is located within 1/2 mile of the site, but draws water from an uncontaminated aquifer. Cattle grazing and oil and gas exploration activities also occur nearby.

Site Responsibility: The site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 10/05/84
Final Date: 03/31/89

Threats and Contaminants



VOCs have been found in the groundwater. The soil is contaminated with heavy metals, VOCs, styrene tars, chlorinated solvent residues, metallic catalysts, and fuel oil residues. Surface water in Mud Gully near Pit B and runoff from Pit Q have been shown to be contaminated with VOCs and petrochemicals. VOCs and other organics have been periodically released into the air. Workers or others on site may be exposed by inhaling airborne contaminants or by coming in contact with contaminated soil. If contaminants seep into the deeper aquifer, which is not imminent, drinking water could become contaminated.

Cleanup Approach

The site is being addressed in two stages: initial actions and a long-term remedial phase concentrating on cleanup of the entire site.

Response Action Status



Initial Actions: The EPA removed approximately 100,000 gallons of highly contaminated sludge and soils from the site. A fence also was installed at the site in 1985 to restrict access.



Entire Site: Remedies selected for the Brio Refining, Inc. site include: excavating affected materials and soils; incinerating these materials; consolidating and disposing of surface debris and rubble; widening bottle-necked Mud Gully as it passes through the Brio site; decommissioning the wastewater treatment system; removing the contents of all storage tanks for proper disposal and dismantling the structures; dismantling the process facility; recovering and treating shallow groundwater; grading, planting, tending, and landscaping the site; installing a stormwater drainage system; monitoring air, surface water, and groundwater; and restricting future use of the land. Design of the cleanup remedies began in 1989 and was completed in 1993. A portion of the cleanup began in 1989, which included dismantling the process facility as well as associated vessels and tanks. In addition, over two million gallons of groundwater have been treated and 20,000 gallons of dense non-aqueous phased liquids (DNAPLs) have been removed from the site. Cleanup of the remaining contamination is planned for completion in 1998.

Site Facts: In 1982, Brio Refining, Inc. filed for bankruptcy. Some of the parties potentially responsible for the wastes organized into the Brio Task Force and discussed cleanup remedies with the EPA. In 1985, a Consent Order was signed by the Task Force to accept responsibility for performing site investigations. An Administrative Order on Consent was signed in 1989 in which the Task Force agreed to dismantle the process facility. Task force members signed a Consent Decree in April 1991 requiring them to design and implement remaining cleanup activities. A buyout of the South Bend subdivision by the developer is underway as part of the settlement from a class-action lawsuit by the citizens.

Environmental Progress



The installation of a fence, the dismantling of the process equipment, treatment of the groundwater, and removal of DNAPLs have reduced the potential for exposure to hazardous wastes at the Brio Refining, Inc. site, making it safer while final cleanup activities continue.

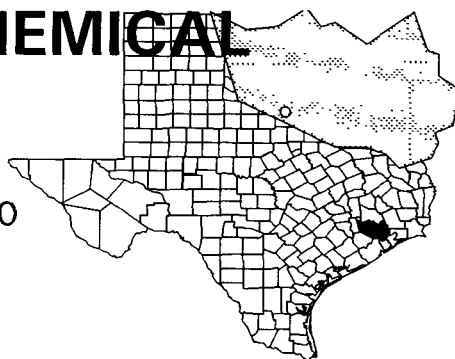
Site Repository



San Jacinto Junior College, South Campus, 13735, Beamer Road, Houston, TX 77089

CRYSTAL CHEMICAL COMPANY TEXAS

EPA ID# TXD990707010



EPA REGION 6

Harris County
Rogerdale Road in Houston

Site Description

The Crystal Chemical Company began producing arsenic-based pesticides at this 5-acre site in 1968. During plant operations, containers of raw and finished materials were stored on the ground, where they spilled and leaked into the soil. Arsenic contamination spread outside the process areas in 1976, when rain caused three waste ponds to overflow. Prompted by the State, the company built a dike around the plant and undertook other cleanup actions. The Crystal Chemical Company declared bankruptcy in 1981. The site lies within a residential and light industrial area that is within a 100-year flood plain. Approximately 20,000 people live within a 1-mile radius of the abandoned plant. Twenty drinking water wells also are situated within 1 mile. The nearest drinking water well is 300 feet away; the nearest residence is ½ mile from the site.

Site Responsibility: This site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 07/23/82
Final Date: 09/08/83

Threats and Contaminants



The groundwater, soil, and surface water are contaminated with arsenic. Shallow groundwater is discharging into a nearby flood control ditch and is migrating north and south beyond the site boundary. Possible hazards include coming in direct contact with, inhaling, or ingesting contaminated soils, dusts, or surface water. Groups likely to be exposed include on-site workers, children playing near the area, or maintenance workers cleaning up and dredging the site.

Cleanup Approach

This site is being addressed in two stages: emergency actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Emergency Actions: Between 1981 and 1983, the EPA dewatered the site, filled in the contaminated ponds, temporarily capped most of the plant site with 6 inches of clay, and added topsoil and seed. Hurricane damage to the site resulted in a restart of the work. Restart actions included repairing the fence, removing contaminated liquids from two buildings, capping the building floor, and installing gravel berms. Four hundred cubic yards of soils and about 2 million gallons of contaminated water were removed. Repairs to the clay cap and fence were made in 1983 and 1988. Additional contaminated soils and deteriorated drums were removed, and the erosion control ditch was repaired in 1991.



Entire Site: A cleanup remedy for the site was selected in 1990. The original cleanup remedy included in-situ vitrification of the contaminated soil. This technology was withdrawn from the commercial market by the vendor, requiring an amendment to the remedy in 1992. The amended remedy includes excavation of all arsenic-contaminated soil from the off-site areas, consolidating these excavation soils on site, and constructing a multi-layer cap over the entire site to contain wastes. The groundwater remedy consists of pumping and treating the groundwater with chemical precipitation, filtration, and ion exchange. Treated water will be discharged either to a publicly-owned treatment works (POTW), the flood control ditch, or re-injected into the subsurface. In addition, the EPA will study the deep aquifer under the site. The design of the cleanup began in 1992. Actual site cleanup is expected to begin in 1995.

Site Facts: In 1983, the EPA filed with the bankruptcy court to recover Federal funds expended at the site. The potentially responsible parties agreed, through a Consent Decree signed in 1987, to do a supplemental feasibility study. In May 1991, the EPA issued an Administrative Order to potentially responsible parties requiring them to excavate contaminated soils. In 1992, a Consent Decree was entered regarding settlement with potentially responsible parties for costs incurred by the United States. The design for the groundwater remedy is being conducted by one of the potentially responsible parties through an Administrative Order on Consent.

Environmental Progress



The emergency actions to remove or cap contaminated soils and liquid wastes, as well as repair and upkeep activities, have reduced the potential for exposure and slowed the migration of contaminated groundwater at the Crystal Chemical Company site, making it safer while cleanup activities are being designed.

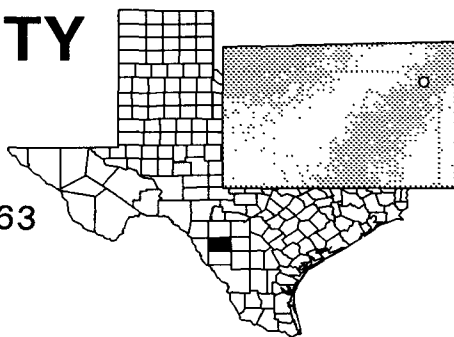
Site Repository



Jungman Public Library, 5830 Westheimer Road, Houston, TX 77057

CRYSTAL CITY AIRPORT TEXAS

EPA ID# TXD980864763



EPA REGION 6

Zavala County
Northeast Crystal City

Other Names:
Frank's Cropdusting Services

Site Description

The 120-acre Crystal City Airport site has served as a municipal airport since 1949 and is owned by the city. Several aerial pesticide applicator businesses were based at the airport until 1982; all are now out of business. City officials were concerned about the possible health threat posed by spilled agricultural chemicals and contacted the Texas Water Commission. The Commission took soil samples in 1983; analysis disclosed high pesticide levels. The airport was closed to the public in 1987, when cleanup investigations and activities began. The airport was reopened in July 1990, after the construction of cleanup remedies was completed. The approximate population of Crystal City is 8,000. The nearest home and drinking water well are located 300 feet away from the site. A municipal water supply well and two schools are located within ¼ mile of the site.

Site Responsibility: This site was addressed through a combination of Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 10/05/84

Final Date: 06/10/86

Threats and Contaminants



The soil was contaminated with various pesticides, specifically DDT and toxaphene, and heavy metals including arsenic. Direct contact with or accidental ingestion of the soil were the primary contamination exposure pathways for area residents.

Cleanup Approach

Response Action Status



Emergency Actions: In 1983, the EPA repaired a dike and pumped most of the discharged sludges back into an on-site pit. In 1984, the EPA consolidated 40 cubic yards of waste and 50 to 70 drums in two on-site disposal cells. In 1984, the EPA disposed of 19 drums off site and secured the site with a fence. In 1988, the EPA repaired the fence and posted warning signs.



Entire Site: The selected remedy for the site focused on control of the sources of contamination. Workers consolidated the contaminated soil, drums, and other materials on site and covered the materials with an EPA-approved cap consisting of several layers. This cap was designed to protect against potential migration of contaminants by rainfall and erosion. Over 10,000 cubic yards of contaminated material were consolidated and capped. Liquids used in the decontamination process were removed and injected into a deep well off site. The State fenced the area and will monitor the site for 30 years, reviewing the remedy's effectiveness every 5 years. The cleanup design has assured that the site can continue to be used as an airport. In 1988, the decontamination of the building walls and the reconstruction of floors after the excavation were completed. State-led cleanup activities began in 1988 and were completed in 1990.

Environmental Progress



All cleanup goals have been met. The emergency repairs and completion of the actions called for in the cleanup remedy have eliminated the threat to nearby residents and the environment. The State of Texas will continue to monitor the Crystal City Airport site for 30 years, with a review of the remedy's effectiveness every 5 years. The EPA is currently in the process of deleting the site from the NPL.

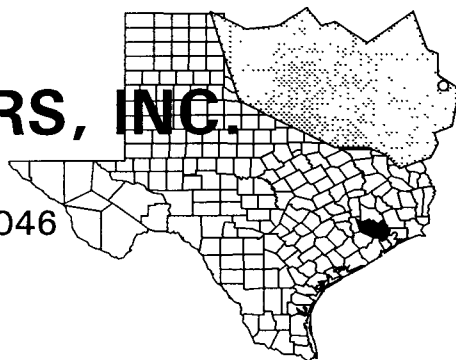
Site Repository



Crystal City Public Library, 101 East Dimmit Road, Crystal City, TX 78839

DIXIE OIL PROCESSORS, INC. TEXAS

EPA ID# TXD089793046



EPA REGION 6

Harris County
20 miles southeast of
Houston near Friendswood

Site Description

Dixie Oil Processors, Inc. (DOP) is situated on 27 acres and borders Dixie Farm Road. From 1969 to 1978, Intercoastal Chemical Company operated a copper recovery and hydrocarbon washing facility on the parcel north of Dixie Farm Road. In 1978, DOP, the most recent owner, began oil recovery operations on the parcel south of Dixie Farm Road, converting liquid organic wastes such as phenolic tars and glycol cutter stock to creosotes, fuel oil extenders, and other petroleum products. Additional wastes and contaminated soils remain on site; DOP stores wastes on site before disposing of, or recycling them. Accumulated copper sediment and, allegedly, 500 barrels of a tarry copper catalyst are buried in at least six closed lagoons. The leaking lagoons have affected shallow groundwater quality to a limited degree. In 1984, DOP found lead, benzene, toluene, and copper in on-site wells. Approximately 5,000 people live within 1 mile of the site. About 140 people obtain drinking water from shallow public and private wells within 3 miles of the site. The nearest residence is adjacent to the site, and the nearest drinking well is within ½ mile of the site. A subdivision is located north of the site, a children's ball field borders it to the southwest, and the Brio Refining Superfund site is located to the east of the site.

Site Responsibility: This site was addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 10/04/89

Threats and Contaminants



The groundwater and soil were contaminated with volatile organic compounds (VOCs) and heavy metals including copper and lead. Spills from the copper recovery operation in the past have entered nearby Mud Gully and Clear Creek. Possible threats included accidental ingestion and direct contact with contaminated soil, inhalation of contaminated dust, and accidental ingestion of shallow groundwater on the site.

Cleanup Approach

Response Action Status



Emergency Actions: In 1984, DOP disposed of more than 6,000 cubic yards of soils contaminated with phenolic tars in an approved hazardous waste facility. In late 1989, potentially responsible parties dismantled and removed the process facility and drums of waste from the site.



Entire Site: The following remedies were selected for the DOP site in 1988: fencing and implementing deed restrictions to prevent site access; excavating and removing contaminated off-site soils; consolidating and disposing of debris and rubble; widening a flood control ditch; removing and disposing of additional tank contents and drums; and decommissioning, disposing of, and recycling tanks. Parties potentially responsible for site contamination began cleanup activities in early 1992 and completed them in early 1993. In addition, the site was landscaped and revegetated. All construction of cleanup remedies is complete at the site. Site monitoring is now underway and includes air sampling, and sampling and monitoring of Mud Gully sediments and groundwater to determine the effectiveness of the listed remedies. Monitoring activities are expected to continue until 1998.

Site Facts: The potentially responsible parties signed an amended Administrative Order in 1986, agreeing to conduct a study to determine the extent and nature of contamination at the site and have agreed to finance all cleanup activities. In July of 1991, a Unilateral Administrative Order was issued by the EPA to the potentially responsible parties requiring them to conduct the design of the selected remedy and cleanup activities.

Environmental Progress



All cleanup has been completed. The emergency removal of more than 6,000 cubic yards of contaminated soils and the completion of the additional cleanup activities have eliminated the potential of exposure to hazardous substances, making the Dixie Oil Processors, Inc. site safe to nearby residents and the environment. The site is being monitored to ensure the effectiveness of the implemented remedies.

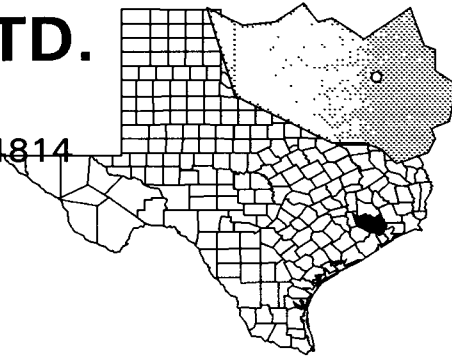
Site Repository



San Jacinto College, South Campus, 13735 Beamer Road, Houston, TX 77089

FRENCH, LTD. TEXAS

EPA ID# TXD980514814



EPA REGION 6

Harris County

2 miles southwest of Crosby and
1 mile east of the San Jacinto River

Site Description

The 22 1/2-acre French, Ltd. site was used for sand mining operations between 1950 and 1965. From 1966 to 1972, the site operated under a permit from the Texas Water Quality Board for petrochemical waste disposal. A 15-acre waste pit on site received 100,000 barrels of industrial waste each year during that time, and then was abandoned. Approximately 3 1/2 million cubic feet of industrial wastes, heavy metals, phenols, polychlorinated biphenyls (PCBs), and acids were disposed of in a 7-acre lagoon. The facility's permit was revoked and the operation closed in 1973. The site is located on the 100-year flood plain of the San Jacinto River and has been flooded on several occasions, washing contaminated water and sludges off site.

PCB-contaminated leachate migrated into a nearby wetlands area and tributary to the river. The soil is permeable sand, and drainage ditches discharge to the river. The area is rural, with the nearest residence being 300 feet from the main pit. The nearest drinking well is 1,500 feet away, and the nearest town, Crosby, is 2 miles away from the site.

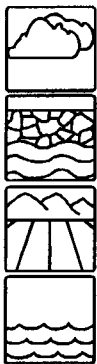
Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 10/23/81

Final Date: 09/08/83

Threats and Contaminants



The air is contaminated with volatile organic compounds (VOCs), phenols, heavy metals, and PCBs. The groundwater, sludges, surface water, and soil are contaminated with similar substances, in addition to oil, grease, acids, and solvents. The surface water and the shallow groundwater are used by nearby residents, thereby posing potential risks. Air near the site may be hazardous to breathe as a result of vapors and airborne contaminants close to the site.

Cleanup Approach

Response Action Status



Immediate Actions: The EPA consolidated waste from the area and constructed a dike around the lagoon in 1980. In 1982, the EPA repaired the dike, which had been breached during a flood, and pumped 992 cubic yards of contaminated sludges discharged during the flood back into the pit. The floating portion of the sludges was removed and disposed of in an approved landfill in 1983 by the EPA, and the area was capped. In 1985, the potentially responsible parties fenced the area and, in 1989, they removed contaminated sediments from the ditch. In May 1989, flood waters inundated the site, creating concern about drinking water supplies; the EPA provided bottled water during this time. In May 1994, flood waters crested 3 inches from the top of the flood control wall; the wall functioned as designed. The contaminant plume has affected one residential well near the site. The potentially responsible parties placed two residents on bottled water as soon as vinyl chloride was detected in the well. The potentially responsible parties then installed a deep drinking water well for the residences and plugged the old well.



Floodwall and Lagoon: The remedy selected for the floodwall and lagoon involves biological treatment of the sludges and contaminated soils in the on-site lagoon, with aeration of the lagoon waste to enhance degradation. The potentially responsible parties are stabilizing residues and disposing of them on the site. Surface water from the lagoon is being treated to meet the State's surface water quality standards for the San Jacinto River. Residues generated from the treatment process are being stabilized to prevent leaching and then used to backfill the lagoon. The remaining lagoon volume has been backfilled with clean soil and the surface graded to promote drainage away from the site. Cleanup activities at the site included the creation of 25 acres of new wetlands. The potentially responsible parties began the design for cleanup remedies in late 1988. Construction of flood protection dikes was initiated immediately to prevent further flooding of the site. Construction of the remaining remedies and treatment of sludges started in mid-1989 and was completed in late 1994. Treatment is expected to continue through 1996.



Groundwater: Concurrent with cleanup of the lagoon, the potentially responsible parties have begun recovering and treating contaminated groundwater. Groundwater recovery and treatment will continue until monitoring shows that contamination has been reduced to the appropriate level. Monitoring of the upper and lower aquifers will continue for a period of 30 years. Construction of the groundwater treatment system began in mid-1989; the system has been operational since early 1992.

Site Facts: In 1982, the EPA signed a Cooperative Agreement with the State to perform a site investigation. The EPA and a task group of potentially responsible parties have signed a Consent Decree outlining the responsibilities for addressing contamination.

Environmental Progress



Construction of all cleanup remedies is completed. The removal of contaminated sludges and sediments, capping, and the installation of a fence around the site have reduced threats to nearby residents and the public while soil treatment and groundwater cleanup activities continue to reduce contamination at the French, Ltd. site.

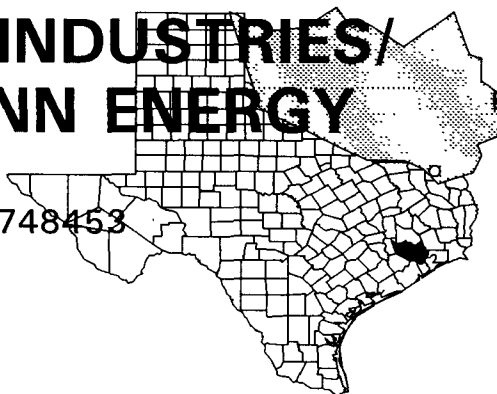
Site Repository



Crosby Public Library, 135 Hare Road, Crosby, TX 77532

GENEVA INDUSTRIES/ FUHRMANN ENERGY TEXAS

EPA ID# TXD980748453



EPA REGION 6

Harris County
Houston, 2 miles east of Hobby Airport

Site Description

Geneva Industries/Fuhrmann Energy is a 13-acre abandoned petrochemical manufacturing and reprocessing plant that was used for petroleum exploration prior to 1967. It is located two miles east of Hobby Airport in a residential and light industrial area. From 1967 to 1984, the facility produced polychlorinated biphenyls (PCBs) under two owners. The current owner salvaged equipment from the site until 1985. The site includes several closed lagoons, a landfill, and a land farm area. This area of Houston, adjacent to the city of South Houston, is heavily populated. Approximately 35,000 people live within 1 mile of the site, and the nearest residence is less than 50 feet away. The nearest drinking water well is about 1/4 mile to the southwest of the site.

Site Responsibility: This site is being addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 09/08/83

Final Date: 09/21/84

Threats and Contaminants



The soil, site ponds, shallow and intermediate groundwater, and waste piles on site are contaminated. High levels of PCBs are concentrated in the soil. The groundwater, soil, surface water, and sludges are contaminated with petrochemical compounds, PCBs, and volatile organic chemicals (VOCs) including trichloroethylene. Polynuclear aromatic (PNA) compounds also are found in the soil and shallow groundwater. People who come into contact with the soil or accidentally ingest contaminated surface or groundwater are at risk.

Cleanup Approach

Response Action Status



Immediate Actions: In 1983 and 1984, to control the source of contamination, the EPA installed a partial security fence, stabilized a deteriorated chlorine tank car, and drilled and sampled an old oil well. Abandoned on-site wells were plugged. Six leaking tanks were emptied of PCB-contaminated liquids and sludge and were dismantled. The EPA removed highly contaminated off-site soils, while 3,862 tons of highly contaminated on-site soils were capped. The EPA closed three lagoons and removed the drummed waste on the surface.



Source Control: The Texas Water Commission (TWC), under a Cooperative Agreement with the EPA, removed and disposed of surface structures in the off-site hazardous landfill, excavated 62,400 tons of PCB-contaminated soils and buried drums on site, and then disposed of them at an EPA-approved facility. A multi-layer surface cap was built over the site and slurry wall, and tied into the clay below the site to prevent contaminants from moving off site.



Groundwater Treatment: TCE-contaminated groundwater is being pumped and treated by carbon adsorption, with the treated water discharged into the adjacent flood control channel. Construction of the groundwater treatment facility was completed in 1993; the system is expected to operate for a number of years and treat more than 20 million gallons of contaminated water before cleanup goals are met.

Site Facts: All cleanup activities have been conducted by the State under a Cooperative Agreement between the TWC and the EPA.

Environmental Progress



The construction of all cleanup remedies is completed. The cleanup actions performed by the EPA and the TWC have eliminated the potential for exposure to surface contamination while long-term groundwater cleanup activities continue at the Geneva Industries/Fuhrmann Energy site.

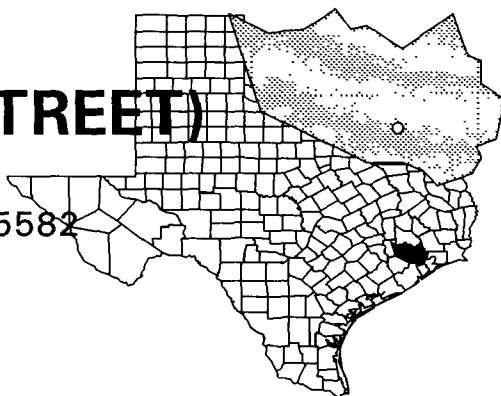
Site Repository



M.D. Anderson Library, University of Houston, Main Campus, 4800 Calhoun Boulevard, Houston, TX 77204

HARRIS (FARLEY STREET) TEXAS

EPA ID# TXD980745582



EPA REGION 6

Harris County
Southeast Houston

Site Description

The Harris (Farley Street) site in Houston is an abandoned landfill that was leased in 1958 to act as a disposal facility for chemical wastes. One thousand tons of tars and sludges were disposed of by local chemical industries. Black, tarry wastes were dumped into two open pits and accumulated wastes periodically were burned, leaving a charred residue. The property was sold in 1975, and the new owner subsequently gave the land to his daughter, who then constructed a house on top of the abandoned disposal area. The buried waste was discovered during the construction of a swimming pool in 1981. In 1982, the house was destroyed by fire. A well is located on the site. The nearest residence is located within a mile of the site.

Site Responsibility: This site was addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 07/01/82

Final Date: 09/01/83

Deleted Date: 04/18/88

Threats and Contaminants



The soil was contaminated with volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs). While the soil at the site was contaminated, no contamination of the groundwater was found. There are no known human exposure risks at this site. The wastes that were present on site were contained within high plasticity clays, and the migration of contamination was minimal.

Cleanup Approach

Response Action Status



Entire Site: From 1986 to 1988, the potentially responsible party, Dow Chemical, excavated non-contaminated soils from the trenches and stockpiled them, excavated contaminated wastes and disposed of them in a federally approved landfill, and sampled the excavated area. Because the action completely removed the contamination source, no groundwater monitoring was conducted afterwards, and no operation or institutional controls were found to be necessary. The property has been turned over to a disposal company and will become part of a Class IV landfill (a non-hazardous materials landfill), which now borders the site on two sides. A sandpit that lies to the south of the site also is scheduled to become a landfill, once the sand has been removed. The Harris (Farley Street) site was deleted from the NPL in 1988. The EPA, in conjunction with the State, determined that the site is fully protective of public health and the environment.

Site Facts: In 1985, an EPA Enforcement Decision Document instructed Dow Chemical to remove all hazardous substances and dispose of them in an off-site, privately owned landfill that meets Federal requirements.

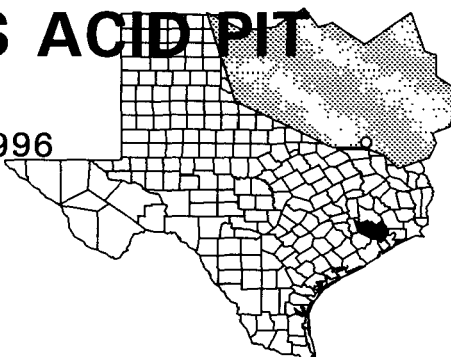
Environmental Progress



With the complete removal of all contaminants, final cleanup goals have been achieved at the Harris (Farley Street) site. The EPA has determined that the site no longer poses threats from chemical contamination and deleted the site from the NPL in 1988.

HIGHLANDS ACID PIT TEXAS

EPA ID# TXD980514996



EPA REGION 6

Harris County
15 miles east of Houston,
1 mile from Highlands

Site Description

The 6-acre Highlands Acid Pit is located on a peninsula in the San Jacinto River. In the 1950s, industrial waste sludges, possibly from refinery operations, were deposited in on-site pits. In 1961, Hurricane Carla flooded the site. The flooding is thought to have caused fish kills in Clear Lake. The site is located in a 10-year river flood plain basin and is quite prone to flooding. Approximately 5,000 people live in the surrounding area. The nearest resident lives about ½ mile from the site. Twelve drinking water wells also exist within a 1-mile radius of the site. The land use in the area primarily is residential and recreational. The San Jacinto River is used for boating and swimming activities, as well as for commercial and recreational fishing.

Site Responsibility: This site was addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 07/23/82
Final Date: 09/08/83

Threats and Contaminants



Groundwater and surface water were contaminated with heavy metals, sulfate, and volatile organic compounds (VOCs) such as toluene and benzene. The upper sand aquifer showed heavy contamination, but no private or public wells currently withdraw water from it. Waste sludge had mixed with soil and leached contaminants, resulting in groundwater contamination. Soils were contaminated with various organic and inorganic compounds. Some residual contamination of groundwater is thought to exist, but appears to be diminishing naturally over time. Use of the river for swimming or fishing may have posed a threat by direct contact or by accidental ingestion of water. Workers or others on site could have been exposed to chemicals by inhaling, ingesting, or coming in direct contact with contaminated materials.

Cleanup Approach

Response Action Status



Initial Actions: In 1984, a fence was built around the pit by EPA emergency response personnel to prevent further illegal dumping and to protect monitoring wells from vandalism. The fences were vandalized and repaired in 1985. Warning signs were installed around the perimeter of the fence.



Source Control: The remedy selected for control of the source of contamination was: extensive excavation and disposal off site of highly contaminated soil; backfilling, grading, seeding, and fencing of the site; and installation of monitoring wells. Approximately 33,000 tons of excavated materials were disposed of at a hazardous waste disposal site. This cleanup was completed in early 1992. Some residual contamination is thought to remain at and below the ground surface beyond the excavation zone, and these residues will be a continuing but diminishing source of contamination to the groundwater. Periodic sampling will be conducted to confirm the effectiveness of the cleanup.



Groundwater: The State also conducted evaluations to determine if the site required corrective groundwater measures. Monitoring of the groundwater has indicated that no further action is needed. Because the source control cleanup has been completed, no further health threats are anticipated. The Texas Water Commission will continue to monitor groundwater to ensure the effectiveness of the cleanup remedies at the Highlands Acid Pit.

Environmental Progress



All construction at the site is complete. The removal of more than 33,000 tons of industrial sludge from the site has eliminated the primary threat at the Highlands Acid Pit site. Monitoring of the groundwater will continue to ensure that no further health threats exist at the Highlands Acid Pit site.

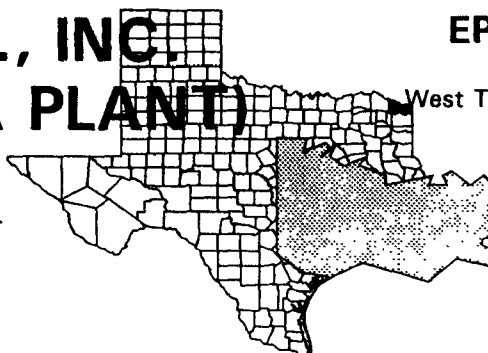
Site Repository



Houston Central Library, Government Documents Area, 500 McKinney Street,
Houston, TX 77002

KOPPERS CO., INC. (TEXARKANA PLANT) TEXAS

EPA ID# TXD980623904



EPA REGION 6

Bowie County

West Third Street in Texarkana

Site Description

The Koppers Co., Inc. (Texarkana Plant) site, located 1 mile west of the downtown area, was a 62-acre wood treatment facility operated by a succession of owners between 1903 and 1961. Koppers Company closed the facility and sold the land in 1961, and all the old facilities were demolished in 1962. Carver Terrace built 79 homes on 34 acres of the site in 1964, and the remaining 28 acres became a sand and gravel mining operation between the late 1970s and 1984. The Texas Department of Water Resources (TDWR) ordered the owner of the mining operations to cease production in the fall of 1984. The site is located within a 100-year flood plain. Approximately 25,000 people live within 4 miles of the site; the site is located in an area characterized by an 85 percent minority population. Wagner Creek flows along the southwest edge of the site.

Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

Threats and Contaminants



The air, groundwater, and soil are contaminated with pentachlorophenol (PCP), arsenic, zinc, polycyclic aromatic hydrocarbons (PAHs), and creosote. Creosote seeps to Wagner Creek have been documented. Potential exposure risks include direct contact with and accidental ingestion of contaminated soils and groundwater, and inhalation of contaminated dust.

Cleanup Approach

This site is being addressed in four stages: initial actions and three long-term remedial phases focusing on soil treatment, buyout and relocation activities, and groundwater treatment.

Response Action Status



Initial Actions: In mid-1985, the Koppers Company placed clean dirt and sod in the yards of 24 residences to prevent exposure to the contaminated soils while the site was being studied. The southern portion of the site was fenced.



Soil Treatment: In 1988, the EPA selected a remedy to treat contaminated soil. Soil treatment entails excavating contaminated soils from yards in the Carver Terrace subdivision and moving them to the Kennedy Sand and Gravel Company property, where they will be treated by mechanical soil washing. The yards will be backfilled with clean soil from off site and resodded and landscaped, where necessary. The wash solution will be treated in the groundwater treatment system and the decontaminated soil will be disposed of on the Kennedy property. The design of the cleanup remedy is currently underway.



Buyout and Relocation: In early 1992, the EPA amended the original remedy to include the buyout and relocation of the Carver Terrace subdivision and the demolition, removal, and the reclassification of the property to "non-residential use." Relocation was completed in 1993 and demolition and disposal of debris was completed in 1994.



Groundwater Treatment: To clean the groundwater under the Kennedy property, workers will pump groundwater up to a treatment unit constructed on the site, pass it through an oil and water separator and a carbon filter, and pump the treated water back into the aquifer. The design of this remedy is currently underway.

Site Facts: In 1990, Congressman Chapman attached an amendment to EPA's Budget Bill allocating \$5 million to buy out the Carver terrace Community. This bill was signed into law in October 1991. In May 1992, the EPA issued Special Notice Letters to the parties potentially responsible for the contamination to discuss the design and implementation of the selected remedies.

Environmental Progress



The initial actions including the installation of a fence and the placement of barriers in some yards to prevent exposure to contaminated soil have reduced the immediate threats to affected residents, making the Koppers Co., Inc. (Texarkana) site safer while the design of final cleanup actions proceeds. The relocation of residents and demolition activities have been completed.

Site Repository



Texarkana City Hall, 320 Texas Boulevard, Texarkana, TX 75501

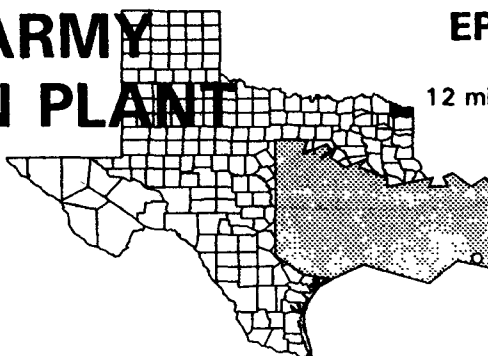
LONE STAR ARMY AMMUNITION PLANT TEXAS

EPA ID# TX7213821831

EPA REGION 6

Bowie County

12 miles west of Texarkana



Site Description

The Lone Star Army Ammunition Plant has operated as a munitions plant since 1942. During World War II, explosives were disposed of by detonation above and below ground in an area covering about 19 acres. Heavy metals have been detected in monitoring wells south of the disposal site along the border of the facility. The groundwater is shallow and drains to East Fork Elliot Creek, which is located 800 feet away from the Old Demolition Grounds. The creek drains into Wright Patman Lake, a major recreational area. This rural area has a school and a trailer park near the site boundary. Approximately 76 people live within 2 miles of the site and depend on several municipal and private wells for their water. Approximately 1,200 people use private drinking water wells located within 3 miles of the site. The nearest town, Hooks, has a population of 2,500.

Site Responsibility: This site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 07/22/87

Threats and Contaminants



The groundwater is contaminated with heavy metals including lead, chromium, and mercury. On-site soil is contaminated with explosives and heavy metals. Off-site surface water is reported to contain low levels of heavy metal contamination. The potential environmental risk is the spread of contaminated groundwater, contaminated surface water, and contaminated soil to off-site locations. There is little public health concern, due to restricted access to the site.

Cleanup Approach

The site is being addressed in three stages: initial actions and two long-term remedial phases focusing on source control and groundwater cleanup.

Response Action Status



Initial Actions: A fence has been constructed to protect people from direct contact with site contaminants.



Source Control: The U.S. Army currently is conducting an investigation into the nature and extent of the heavy metal and explosive contamination at the site. The investigation will define the contaminants of concern and will recommend alternatives for the final cleanup. The investigation is planned to be completed in late 1996.



Groundwater: The EPA began an additional investigation into the groundwater contamination in 1990. The investigation will define the nature and extent of groundwater contamination and is expected to be completed in late 1996.

Site Facts: The Lone Star Army Ammunition plant is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities. The Army, the EPA, and the Texas Water Commission entered into a Federal Facilities Agreement in 1990. The agreement addresses cleanup of the Old Demolition Grounds.

Environmental Progress



After adding the Lone Star Army Ammunition Plant site to the NPL, the EPA assessed site conditions and determined that no other immediate actions currently are necessary to protect public health and the environment. Fencing of the site has reduced the potential for exposure, making the site safer while it awaits further cleanup action by the Army.

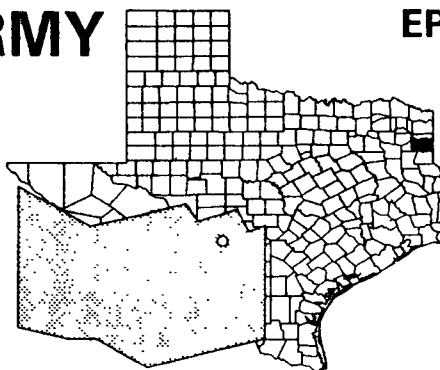
Site Repository



Texarkana Public Library

LONGHORN ARMY AMMUNITION PLANT TEXAS

EPA ID# TX6213820529



EPA REGION 6

Harrison County
Karnack

Site Description

The Longhorn Ammunition Plant site is situated on approximately 8,500 acres in Karnack, about 14 miles northeast of Marshall. Since 1942, its mission has been to load, assemble, and pack solid propellant rocket motors and pyrotechnic and illuminating ammunition. The plant produced trinitrotoluene (TNT) flake and acid for ammunition production during World War II. Wastes have been disposed of in ponds and landfills. Contamination has been confirmed in several areas: the active burning ground/rocket motor washout pond area, the TNT production area, the flashing area, and the old landfill. A total of 14 areas have been identified as possibly being contaminated or having the potential for off-site migration. Fifty groundwater monitoring wells have been installed to determine the extent of contamination. An estimated 1,500 people reside within 1 mile of the site. The nearest drinking water well is located approximately 500 feet from the plant. All surface and storm water from the plant drains into adjacent Caddo Lake through four natural drainage systems. The entire site lies within the 100-year flood plain. A creek used for recreation potentially has been polluted. Freshwater wetlands are located nearby.

Site Responsibility: This site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 07/14/89

Final Date: 08/30/90

Threats and Contaminants



Surface water, groundwater, and soil at areas of the site are contaminated with heavy metals, volatile organic compounds (VOCs), munitions-related wastes, petroleum, oil, and lubricants. Explosives such as TNT also have contaminated the sediments and soil at the site. These materials predominantly were deposited at site areas during World War II operations at the base. Public water supply wells are located near the site, and no alternate water supply is available in the event that the wells become contaminated. The creek used for recreational purposes may be receiving wastes from the site, and freshwater wetlands located nearby may be threatened.

Cleanup Approach

The site is being addressed in two stages: initial actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Initial Actions: In 1984, the Army constructed a cap over the rocket motor wash-out pond area to limit the further migration of contamination.



Entire Site: In late 1991, the Army began a comprehensive investigation into the contamination at 14 areas on the site including the groundwater, the landfills, and the TNT production area. Fifty groundwater monitoring wells have been installed to measure the extent of groundwater contamination. Initial studies have confirmed two sources of VOC groundwater contamination beneath the active burning ground. The studies have concluded that the contaminant plume has neither moved significantly in 30 years, nor migrated off the post. The investigation will further define water and soil contamination and will identify the appropriate cleanup activities for different areas of the site. Decisions about final site cleanup of the various areas are expected to begin in 1995.

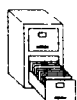
Site Facts: The Longhorn Army Ammunition Plant is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military or other DOD facilities.

Environmental Progress



With the construction of a cap to limit contaminants from migrating off the post and the installation of a fence, the Longhorn Army Ammunition Plant site currently does not present an immediate threat to the public or the environment. Once the Army has completed its studies and has determined the cleanup alternatives, the final remedies will be selected, and the cleanup activities will begin.

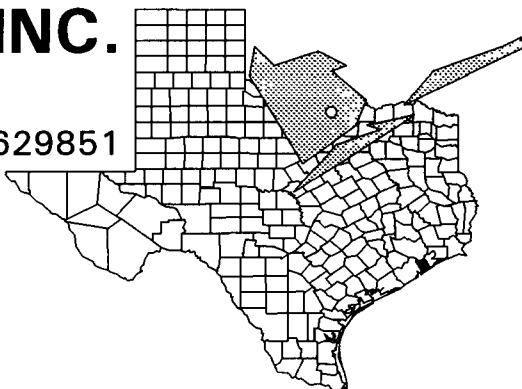
Site Repository



City of Marshall Public Library

MOTCO, INC. TEXAS

EPA ID# TXD980629851



EPA REGION 6

Galveston County
Near the junction of Hwy. 3
and I-45

Site Description

The Motco, Inc. site occupies approximately 11 acres of land southeast of La Marque. Since 1958, a number of waste recycling and storage operations have been conducted at the site. At various times during its history, wastes have been disposed of in a number of storage tanks and in seven unlined waste pits or lagoons. The on-site lagoons cover a total of about 4½ acres and are 15 to 20 feet deep. The wastes include tars, oils, copper, mercury, and lead. Waste recycling and dumping ended in 1968 when the area was struck by Hurricane Carla. In 1974, the Motco Corporation acquired ownership of the property and established an operation to remove and market styrene tars left behind from a previous owner and reclaimed the site for use as a commercial property. The business failed and Motco abandoned the site in 1974. Two years later, the State canceled the site's permit and ordered Motco to secure the site and submit plans to close the site because of repeated releases of contaminants into the environment and a failure to comply with permit requirements. Soon thereafter, Motco declared bankruptcy. Approximately 3,000 people live within a 1-mile radius of the site. The site is bounded by an abandoned trailer park and the Houston Lighting and Power transmission line right-of-way. Two residential communities, the Omega Bay Subdivision and the Bayou Vista Subdivision, are located on the opposite side of I-45 from the site. Two commercial establishments are located about 1/8 mile southeast of the site. The nearest drinking water well is located 2,200 feet from the site.

Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82
Final Date: 09/08/83

Threats and Contaminants



The groundwater and soil are contaminated with volatile organic compounds (VOCs). Sediments are contaminated with heavy metals including lead, copper, chromium, and silver. The sludge is contaminated with styrene tars, VOCs, and heavy metals. The site is located within the 100-year floodplain. People who trespass on the site may be at risk through direct contact or accidentally ingesting contaminated groundwater, soil, sediments, or sludges.

Cleanup Approach

The site is being addressed in three stages: initial actions and two long-term remedial phases focusing on controlling the sources of contamination and limiting the migration of groundwater contaminants.

Response Action Status



Initial Actions: Between 1980 and 1986, the EPA conducted various initial actions at the site including removing nine tanks, excavating and removing contaminated soil, capping exposed materials, erecting a fence, drawing the pond level down to prevent the overflow of contaminants, and repairing the dike.



Source Control: The remedies selected by the EPA to control the source of the contamination at the site include off-site incineration of contaminated liquid from the waste pits and the sludges and tars. The contaminated materials are in the process of being destroyed. Cleanup activities are expected to be completed in 1996.



Groundwater Migration Control: The EPA has selected cleanup remedies to treat the migration of contaminants off site. These remedies and technologies include removing contaminated groundwater by pumping and on-site treatment; recovering and incinerating dense, non-aqueous phase liquids (DNAPLs); and excavating, consolidating, and capping slightly contaminated subsurface soils. The potentially responsible parties completed the technical specifications and design for the cleanup in 1992. The cleanup activities began in late 1993, with construction of the remedies expected to be completed in 1996.

Site Facts: The EPA issued an Administrative Order on Consent to the parties potentially responsible for contamination at the site. Under the terms of the agreement, those parties conducted an investigation into the nature and extent of the contamination and recommended cleanup options. The EPA also issued a Unilateral Administrative Order in 1990 to seven potentially responsible parties requiring them to conduct the engineering design of the groundwater migration control remedy. In 1992, the EPA issued a Unilateral Administrative Order for implementation of groundwater cleanup.

Environmental Progress



The removal of contaminated tanks and soil, the installation of the fence limiting access to the site, and repair of the dike have reduced the potential of exposure to hazardous materials at the Motco, Inc. site, making the site safer while cleanup activities continue.

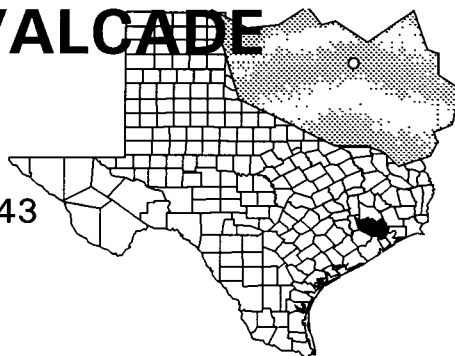
Site Repository



College of the Mainland Library, 1200 Amburn Road, Texas City, TX 77591

NORTH CAVALCADE STREET TEXAS

EPA ID# TXD980873343



EPA REGION 6

Harris County
Houston

Site Description

The North Cavalcade Street site occupies 23 acres in northeastern Houston and is associated with the South Cavalcade Street site, which also is listed on the NPL. The site served as a wood preserving operation from 1946 to 1961. The operation initially used creosoting techniques and added pentachlorophenol (PCP) treatment in 1955. Operations ceased in 1961, and the property was sold in 1964, subdivided, and resold. Two large warehouses currently occupy about 30 percent of the site. The wood preserving facility left two waste ponds behind, one containing process wastes and the other creosote and used industrial lubricants. As of 1988, the plume of contamination in a shallow aquifer covered 4 acres. Areas surrounding the site are mixed residential, commercial, and industrial properties. Approximately 50,000 people live in the area; the nearest residence is located 200 feet to the west. A city well exists about a mile away from the site. One of the drainage ditches that moves stormwater off site flows into Hunting Bayou, classified by Texas water quality standards as a limited aquatic habitat.

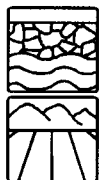
Site Responsibility: This site is being addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 10/05/84

Final Date: 06/10/86

Threats and Contaminants



Shallow groundwater and on-site soils are contaminated with polynuclear aromatic hydrocarbons (PNAs). Groundwater also is contaminated with benzyene. Direct contact with and accidental ingestion of contaminated groundwater soils and sediments from the site pose a long-term threat to area workers or any future residents.

Cleanup Approach

The site is being addressed in two long-term remedial phases consisting of cleanup of the groundwater and soil.

Response Action Status



Groundwater: The remedy selected for cleaning up the groundwater includes extraction of 5½ million gallons of contaminated groundwater and treatment by carbon adsorption. The State of Texas has assumed responsibility for the site cleanup and currently is conducting groundwater cleanup activities. Cleanup activities are expected to be completed in mid-1996.



Soil: Contaminated soil was excavated and temporarily stockpiled for treatment. The remedy selected for treating the soil consists of biological degradation of 10,000 to 12,000 cubic yards of contaminated soil. A key part of the design of soil cleanup technologies is the operation of a bioremediation pilot study on 500 cubic yards of soil to help finalize the remedy design. Soil cleanup began in the fall of 1993 and is expected to take approximately four years to complete.

Environmental Progress



The EPA assessed conditions at the North Cavalcade Street site and determined that the site currently poses no immediate threat to public health or the environment while cleanup activities are underway.

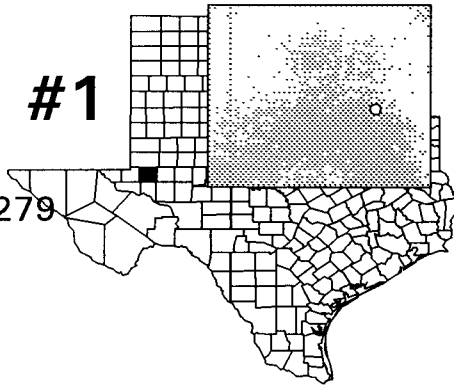
Site Repository



Houston Central Library, Government Documents Area, 500 McKinney Street,
Houston, TX 77002

ODESSA CHROMIUM #1 TEXAS

EPA ID# TXD980867279



EPA REGION 6

Ector County
Odessa

Site Description

The Odessa Chromium #1 site consists of a series of chromium-contaminated wells within 300 acres of residential, commercial, and industrial properties located near 44th Street and Brazos Avenue, just outside the northwestern city limits. This site is associated with Odessa Chromium #2, also listed on the NPL. Several chrome plating operations existed at the Brazos location between the late 1960s and 1970s. Operators at the now-abandoned Brazos property dumped plating wastewaters and heavy metal contaminants directly onto the ground and allowed storage tanks and drums to overflow frequently. The estimated areal extent of the groundwater contamination is more than 20 acres. Nearly every nearby residence or establishment is served by one or more water wells tapping the Trinity Aquifer, the only source of potable groundwater. The EPA has identified that an abandoned well on the site provided a potential pathway to the aquifer. This source area is within a 10-acre industrial area. The nearest residence and drinking water well are on the site. About 3,500 people live outside the city limits within a mile of the site. About 200 water wells are within 1/2 mile of the site, and a municipal water well lies within 1,250 feet of the site.

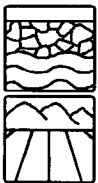
Site Responsibility: This site is being addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

Threats and Contaminants



The major groundwater and soil pollutant is hexavalent chromium from wastewater dumping. More than a 20-acre portion of the area's sole source aquifer is contaminated. Based on a risk assessment, the contaminant levels in the soil do not present a risk, either through direct contact or ingestion; however, ingestion of contaminated groundwater may pose a health risk. Also, people were threatened by exposure to contaminated drinking water before the city water system was extended. Groundwater contamination was documented in 16 of 200 existing wells sampled. Five of 14 monitoring wells contained detectable levels of chromium.

Cleanup Approach

Response Action Status



Alternate Drinking Water Supply: Based on the selected remedy, the State extended the city water system and constructed a water distribution system to the affected area. All affected residents have been provided with an alternate drinking water supply while the long-term remedy to address groundwater is underway.



Groundwater Cleanup: The long-term remedy was selected in 1988 and calls for pumping contaminated water from the Trinity Aquifer and treating it electrochemically to meet cleanup standards. The cleaned water then is being reinjected into the aquifer. Injection and recovery wells have been drilled in conjunction with the groundwater cleanup. In addition, the facility at Brazos Avenue has been demolished and disposed of. The Texas Water Commission designed the treatment processes. The pump and treat process is in the operations and maintenance phase and is scheduled for completion in 1998. The site will be monitored for at least 30 years.

Site Facts: Under a Cooperative Agreement with the EPA, the State conducted studies to determine the type and extent of contamination and cleanup alternatives.

Environmental Progress



Construction of all cleanup remedies is complete. The provision of an alternate water supply has eliminated the potential for exposure to contaminants at the Odessa Chromium #1 site while operation and maintenance of the groundwater cleanup treatment facility proceeds.

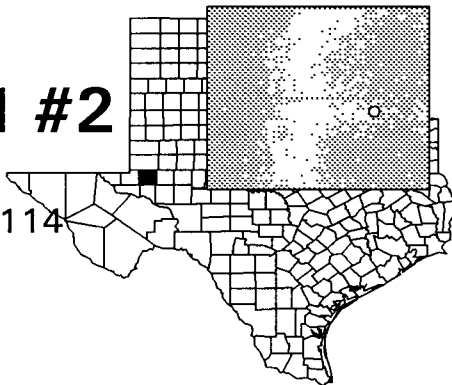
Site Repository



Ector County Library, 321 West Fifth Street, Odessa, TX 79761

ODESSA CHROMIUM #2 TEXAS

EPA ID# TXD980697114



EPA REGION 6

Ector County
Andrews Hwy.

Other Names:
Andrews Highway

Site Description

The 200-acre Odessa Chromium #2 site, located in a mixed residential, commercial, and industrial area, consists of a series of chromium-contaminated wells. This site is associated with Odessa Chromium #1, also listed on the NPL. Two properties on the site are suspected of originating the contamination. One property housed both a chromium-containing cooling water additive facility and a radiator shop between 1960 and the early 1970s. A leaking subsurface tank was the likely cause of contamination at this site. The other suspect property is Wooley Tool and Manufacturing, which used chromates in its cooling water system from 1960 until 1976. A faulty backflushing in this system is suspected as a source of chromium contamination. Until about 1970, the plant also disposed of chromate-contaminated wastewater in an unlined pit. Nearly every residence or commercial facility in the surrounding area is served by one or more drinking water wells tapping the Trinity Aquifer, which offers the only source of potable groundwater. About 3,500 people live within a mile of the site. Residences and drinking water wells are located on the site. There are approximately 400 private wells within 1/2 mile, and several municipal wells are located within a 1/2-mile radius.

Site Responsibility: This site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

Threats and Contaminants



The groundwater is contaminated with chromium. The soil is contaminated with heavy metals including chromium, zinc, copper, nickel, and lead. A risk assessment conducted at the site indicates that contaminant levels in the soil do not pose a health threat. Ingestion of contaminated drinking water is a possible health threat. More than 40 acres of the Trinity Aquifer, the only source of drinking water in the area, are contaminated with hexavalent chromium. Fourteen of 318 wells sampled show a chromium level at or above the drinking water standard. Four of eight monitoring wells within an upper perched aquifer and three of 12 monitoring wells within the Trinity Aquifer also contain elevated chromium levels. The affected wells lie outside the city water supply service area.

Cleanup Approach

Response Action Status



Alternate Drinking Water Supply: Based on the selected remedy, state authorities extended the municipal water supply to affected areas and built a water distribution system. Residents have been supplied with an alternate water source while the long-term remedy to address groundwater is underway.



South Plume: The remedy includes pumping chromium-contaminated groundwater from the Trinity Aquifer and a perched water-bearing zone, treating it electrochemically to meet cleanup standards and reinjecting the cleaned water back into the aquifer. The Texas Water Commission began the process in 1990 and is expected to be completed in 1998. The site will be monitored for at least 30 years.



North Plume: The potentially responsible parties completed the design of the groundwater treatment system to address the north plume in late 1993. The treatment system, which calls for treatment through ion exchange with resin recycling, is currently in operation.

Site Facts: The EPA signed a Consent Decree with the potentially responsible parties in June 1990 to conduct design and cleanup activities of the north plume at the site.

Environmental Progress



Construction of all cleanup remedies has been completed. The provisions of an alternate water supply has eliminated the potential for exposure to contaminants at the Odessa Chromium #2 site while operation and maintenance of the groundwater treatment facility proceeds.

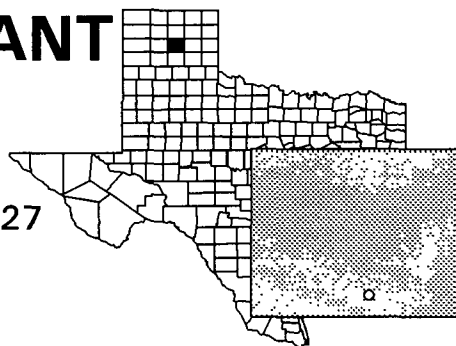
Site Repository



Ector County Library, 321 West Fifth Street, Odessa, TX 79761

PANTEX PLANT (USDOE) TEXAS

EPA ID# TX4890110527



EPA REGION 6

Carson County
17 miles Northeast of Amarillo

Site Description

The Pantex Plant site, located in a primarily agricultural area, covers approximately 10,000 acres and consists of facility operations, a buffer zone of a 1,077-acre portion of Pantex Lake owned by the U.S. Department of Energy (DOE), and approximately 3,170 acres of land leased by the DOE from the Texas Technological University. The Pantex Plant is owned by DOE and operated under contract by Mason and Hangar-Siles Mason Co. At its origin in 1942, the plant was used as an Army Ordnance Corps facility. Operations were switched to nuclear weapons production in 1950. Current operations include the fabrication, assembly, testing, and disassembly of nuclear weapons, with disposal into 141 separate solid waste management units. Other past and present disposal practices, including burning of chemical wastes in unlined pits, burial of wastes in unlined landfills, and discharging of plant wastewaters into on-site surface waters, also contributed to site contamination. More than 150 potential sources of contamination were identified at the site, 15 of which are being evaluated initially. In 1988, a DOE contractor detected volatile organic compounds (VOCs), including trichloroethylene (TCE) and dichloroethane in wastewaters that were discharged to unlined ditches and surface impoundments on the site. Investigators also found heavy metals, such as arsenic, lead, silver, and mercury in these ditches and impoundments. While accessing the soil underlying a chemical burn pit used for evaporation and percolation of solvents contaminated with high explosives, investigators found more VOCs. In addition, uranium was found in soil underlying several firing grounds. On-site playas have received surface water run-off resulting from plant operations. Some of these playas are used as surface impoundments, while others are considered fresh water wetlands. Surface water from Playa 4 is used by the Texas Tech Agricultural Research Station to irrigate crops and water livestock. The Ogallala Aquifer lies at a depth of 390 to 420 feet beneath the site. The Ogallala Aquifer serves as the primary source of domestic and municipal water supply. An estimated 36 percent of the 160,000 people of Amarillo draw their drinking water from a well field within 4 miles of the site. In addition, 20 domestic wells have been identified within 1 mile of the site. Intense pumping of groundwater by the city has caused the flow of groundwater beneath the site to change its direction toward the municipal well field, thus threatening it further.

Site Responsibility: This site is being addressed through Federal actions.

<p>NPL Listing History Proposed Date: 07/29/91 Final Date: 05/31/94</p>
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Threats and Contaminants



Site investigators determined that wastewaters containing VOCs, including TCE, toluene, acetone, and dichloroethane, as well as heavy metals, such as lead, arsenic, and mercury, were discharged to unlined ditches and surface impoundments on site. Soil is contaminated with VOCs. Groundwater is contaminated with VOCs, explosives, and heavy metals. Some of the on-site playas are fresh water wetlands. Touching or ingesting contaminated soil, groundwater, or surface water could pose a health risk.

Cleanup Approach

The site is being addressed by a number of long-term remedial phases focusing on the cleanup of the entire site.

Response Action Status



Entire Site: The EPA and DOE are conducting a number of investigations into the nature and extent of contamination at the burning ground landfill, surface impoundments, firing areas, and the old sewage treatment plant. The EPA will evaluate the results of these investigations as a basis for choosing appropriate cleanup remedies.

Site Facts: Under the Comprehensive Environmental Assessment and Response Program, DOE has begun characterizing the most severe environmental problems and has developed an Environmental Restoration and Waste Management 5-Year Plan. In addition, Pantex is conducting corrective action investigative work under their Resource Conservation and Recovery Act (RCRA) permit issued in April 1991. A citizen's advisory board has been formed and will be providing advice to DOE.

Environmental Progress



The EPA and DOE have assessed conditions at the Pantex Plant (DOE) and determined that the site poses no immediate threat to public health or the environment while further studies leading to remedy selection are underway.

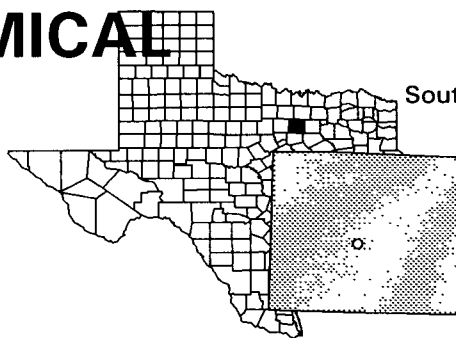
Site Repository



EPA Region 6 Library, 1445 Ross Avenue, Dallas, TX 75202

PESSER CHEMICAL COMPANY TEXAS

EPA ID# TXD980699656



EPA REGION 6

Tarrant County
South Main Street in Fort Worth

Site Description

The abandoned Pesses Chemical Company metals recycling facility is located on approximately 4 acres of light industrial property. The facility opened in 1978 to recover cadmium and nickel from batteries and sludges. This process, for which the operators had no permits, produced high-level cadmium emissions. Even after permits were obtained, cadmium levels were measured well above permit limits. The company declared bankruptcy in 1981, and the facility closed; however, material is still received and stored at the facility. Operators left 2000 55-gallon drums of process material behind in an unprotected storage area. Most drums were opened, deteriorating, or leaking. Operators had also dumped and spilled recycling residues onto the ground. When a grass fire started in 1983, a responding firefighter was overcome by noxious cadmium fumes. Although the owners initially agreed to remove the drums, they never completed this action, and in 1983, the EPA took over responsibility for the site and removed 3,400 yards of contaminated topsoil, drums, waste, and debris. Approximately 19,500 people work or live within a mile of the site. The nearest residence is 1/2 mile northeast of the site, and the nearest drinking water well is about 1 1/2 mile to the south. A drug rehabilitation center with outdoor facilities adjoins the site to the northeast. A hospital and five schools are within a mile of the site.

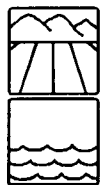
Site Responsibility: This site was addressed through
Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

Threats and Contaminants



The soil was contaminated with heavy metals including cadmium, lead, copper, and nickel. Sludges were contaminated with cadmium and nickel. The surface water was contaminated with various heavy metals. The most serious potential threat was contamination of surrounding areas from airborne dust and surface water runoff. The risk of grass fires also existed prior to site cleanup.

Cleanup Approach

Response Action Status



Emergency Actions: The EPA removed 3,400 cubic yards of contaminated topsoil, drums, wastes, and debris from the site in 1983. In addition, workers installed a 2- to 6-inch cap of clean fill material over the southern fenced portion of the site and seeded it with grass. In 1988, the potentially responsible parties built a fence around the northern portion of the site. In 1990, the fence was repaired after it had been vandalized.



Entire Site: Workers excavated contaminated off-site soil and wastes and combined their cleanup with that of on-site soils. These combined soils have been treated in place by means of a stabilization technique suitable for shallow soils. The fenced portion of the site around the south warehouse and office building was capped with concrete; a cap also was placed on the south field. Workers cleaned the metal warehouse and miscellaneous equipment. The decontaminated metal equipment was sent off site to be melted down and reused. The liquid and solid wastes created during this decontamination process were treated separately. Solids were stabilized with the soils. Contaminated water was treated and discharged into the sewer system. All cleanup actions were completed in 1992. The site will be monitored for 30 years to ensure the remedy is effective.

Environmental Progress



Through the emergency actions to restrict site access, and the comprehensive actions taken to cleanup the soil, sludges, equipment and surface water, the potential threats posed by the Pesses Chemical Company have been eliminated. All cleanup actions were completed in 1992.

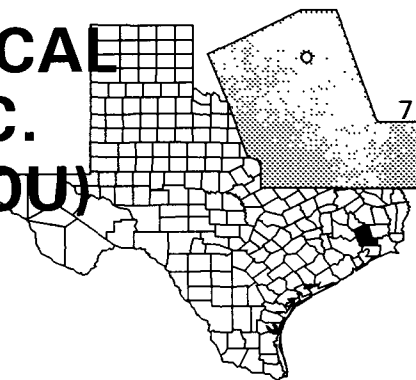
Site Repository



Fort Worth Central Library, 300 Taylor Street, Fort Worth, TX 67102

PETRO-CHEMICAL SYSTEMS, INC. (TURTLE BAYOU) TEXAS

EPA ID# TXD980873350



EPA REGION 6

Liberty County

7 miles north of Interstate 10

Other Names:

Turtle Bayou

Site Description

Before 1970, Petro-Chemical Systems, Inc. (Turtle Bayou) disposed of waste oils and other petrochemical sludges at this 296-acre site. Operators stored waste oils in three unlined pits on about 500 acres of land north of Frontier Park Road. Other waste disposal areas were located along the southern side of the road. Other areas identified at the site include the main waste area, the temporary office area, the east power line easement area, the bayou disposal area, and a section of the road on the west end of the site. Workers also spread waste oils on the site's roads to control dust. Waste disposal and road oiling apparently were discontinued in 1970, and the oil pits were covered. The facility's waste disposal permit was revoked in 1974. The land was then developed and subdivided into residential properties. There are 21 residences and one small business located within 1 mile of the site. There are rice farms immediately north of the site and heavily wooded, undeveloped land to the south. Numerous shallow wells supply drinking water to the area. Turtle Bayou flows through the site.

Site Responsibility: This site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

Threats and Contaminants



The soil is contaminated with volatile organic compounds (VOCs) including xylenes, benzene, naphthalene, and toluene, as well as lead, waste oils, and petrochemical sludges. Groundwater from the shallow aquifer is contaminated with VOCs.

Numerous wells, drawing from the deeper aquifer, are the current source of drinking water in the rural area. Residential wells are sampled frequently, and to date, no wells show the presence of VOCs. People could be exposed to contaminants through accidental ingestion, direct contact, and inhalation.

Cleanup Approach

This site is being addressed in four stages: initial actions and three long-term remedial phases focusing on cleanup of Frontier Park Road, source control, and groundwater cleanup.

Response Action Status



Initial Actions: In 1986, the EPA installed a fence and conducted site sampling. Two families were relocated away from the site by the EPA during cleanup. Both families have returned to their homes.



Frontier Park Road: The road site was excavated, backfilled, and rebuilt in asphalt. The contaminated materials are located in a double-lined on-site facility awaiting final disposal. EPA workers improved drainage in the area and reconstructed the Turtle Bayou crossing. Work was completed in 1988, and the two families were returned to their homes.



Source Control: After the Texas Water Commission conducted studies of contaminated areas both on and off the site, the EPA selected a cleanup remedy to control the source of contamination in late 1991. The remedy selected includes the construction of a soil vapor extraction system to remove VOCs from affected soils; a vapor collection and transport system; catalytic thermal destruction of contaminants in the soil; the construction of a synthetic cap over affected soils; the construction of a slurry wall to prevent contaminants from migrating off the site; the installation of structures to control and treat surface water runoff; and regrading of the site upon completion of site cleanup. Design of the cleanup remedy began in 1992 and is expected to be completed in 1996.



Groundwater: The Texas Water Commission completed site studies and the EPA selected a cleanup remedy in late 1991. The remedy includes injection of air at the base of the shallow groundwater to remove VOCs; installation of a vapor collection and transport system; catalytic thermal destruction of VOCs from the groundwater; and the ongoing monitoring of groundwater. The engineering design of cleanup actions began in late 1992 and is expected to be completed in 1996.

Site Facts: On March 6, 1991, the EPA and Atlantic Richfield Company signed an Administrative Order on Consent to conduct additional site studies.

Environmental Progress



With the cleanup actions described above, the EPA has reduced the potential for accidental contact or exposure to contaminated soil, groundwater, and dust along Frontier Park Road while cleanup actions are being designed. The two families temporarily relocated during the cleanup have returned to their homes, and Turtle Bayou again flows freely across the area.

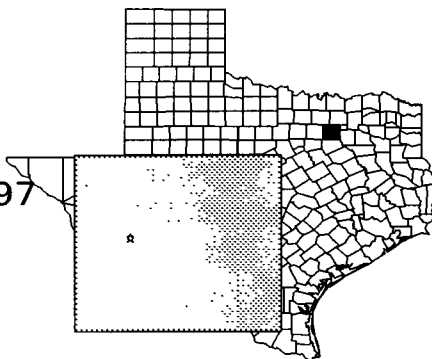
Site Repository



Liberty Municipal Library, 1710 Sam Houston Avenue, Liberty, TX 77575

RSR CORP. TEXAS

EPA ID# TXD079348397



EPA REGION 6

Dallas County
West Dallas

Other Names:
Southern Lead
Southern Smelter
Murph Metals
West Dallas Lead

Site Description

The RSR Corporation Smelter site is located in West Dallas. The site is bounded on the north and east by the Trinity River, on the south by the intersection of Davis Street and Loop 12, and on the west by the city limits approximately 1/2 mile west of Loop 12. From 1936 to 1984, numerous companies conducted lead smelting operations at this site including Southern Lead, Southern Smelter, Murph Metals, and RSR Corporation. Also present at the site are a disassembled battery wrecking facility and a lead manufacturing and fabricating facility. The battery casings and slag have been used as fill for residences, driveways, and gardens. Because the wind blows predominantly from the south, the lead emitted by the smelter was carried north and deposited in a mixed residential-commercial area. Contamination first came to the attention of local officials in the late 1970s when general blood screening indicated elevated lead concentrations in children. Soil sampling conducted in the early 1980s confirmed the presence of lead contamination. This contamination was traced to stack emissions from the RSR Smelter and two other smelters in the vicinity, Dixie Metals Inc. and NL Industries. Due to the RSR facility's operating history and zoning ordinance restrictions, the City of Dallas declined to renew the facility's operating permit and closed down operations in 1984. The current owners of the site, Murmur Corporation and Murmur Leasing Corporation, still are not permitted to operate the smelter. Despite cleanup efforts that took place in 1984 and 1985, lead contamination reemerged in mid-1991. Residents complained to the Texas Water Commission (TWC) about the presence of slag piles and battery chips allegedly originating from the RSR facility. This site is located in a primarily residential area; 170 homes, schools, churches, parks, recreation facilities, day care centers, and businesses fall within the boundaries of the site. Moderate amounts of light industry and some heavy industry also exist. The population within the area is approximately 17,000. The population affected is low income, and predominantly minority.

Site Responsibility: The site is being addressed through Federal, State, local, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 05/10/93

Threats and Contaminants



Elevated levels of lead have been detected in the soil. An analysis conducted in 1983 concluded that approximately 5 percent of children under 6 years of age and living within a 1/2 mile of the RSR Smelter had elevated blood levels of lead. Additional soil sampling conducted in 1991 detected lead contamination as well as elevated levels of arsenic and cadmium. People who incidentally touch or ingest contaminated soils may be at risk.

Cleanup Approach

This site is being addressed in six stages: early actions and five long-term remedial phases focusing on the cleanup of the residential areas, Dallas Housing Authority areas, slag pile, Murrum Smelter, and other properties.

Response Action Status



Early Actions: In 1984 and 1985, the RSR Corporation removed lead-contaminated soil within 1/2 mile from the site, replaced the areas with washed or clean soil; and resodded them. A vegetative barrier was constructed in areas with low levels of contamination to keep lead from migrating. EPA responded to the rediscovery of lead contamination in 1991 by removing soil from residential areas adjacent to the RSR facility. Contaminated soil has been removed from 420 single family properties and 167 multi-family properties. In mid-1994, the Dallas Housing Authority began demolishing 167 multi-family buildings and removing lead contaminated materials. In late 1994, the EPA approved the removal of 500 drums of spent battery acids, 55 containers of laboratory chemicals, and 1,800 cubic yards of loose contaminated debris at the Murrum Smelter, while investigations are underway.



Residential Areas: A full-scale investigation into the nature and extent of contamination was completed in late 1994. A proposal for no further action in these areas is currently being considered, because the investigation shows that contamination was addressed through the initial cleanup actions taken.



Dallas Housing Authority Areas: In 1992, the TWC began a door-to-door residential survey and sampling investigation of the west Dallas area in an attempt to locate and sample areas where battery chips or slag were used as fill by residents. A full-scale investigation into the nature and extent of contamination began in 1993 and is expected to be completed in 1995, and will result in the selection of remedies for final cleanup of these area.



Slag Pile: A full scale investigation into the nature and extent of contamination began in 1993. This investigation, expected to be completed in 1995, will result in the selection of remedies for final cleanup of the slag pile.



Mumur Smelter: A full scale investigation into the nature and extent of contamination began early in 1993. This investigation, expected to be completed in 1995, will result in the selection of remedies for final cleanup of Mumur Smelter.



Other Properties: A full scale investigation into the nature and extent of contamination began early in 1993. This investigation, expected to be completed in 1995, will result in the selection of remedies for final cleanup of remaining site contamination.

Site Facts: In 1968, the City of Dallas and the Texas Air Control Board brought suit against the RSR corporation because of air quality monitoring results and lead contamination found in the surrounding community. In October 1983, the State, city, and EPA directed the RSR Corporation to undertake corrective action at the site, including installing equipment to control stack and fugitive emissions and cleaning up the residential soils within 1/2 mile of the site. This site has been selected as a Superfund Accelerated Cleanup Model (SACM) pilot project. Under SACM, site assessment activities are undertaken to support both early and long-term cleanup actions. Site conditions and their associated risks are assessed continuously until all necessary data are collected to screen the site or support any needed response actions. Response actions are initiated once evidence indicates that early action is warranted. Under SACM, the public is notified early on of the potentially hazardous conditions of the site. The EPA also gives early notification to polluters of their potential liability for conducting or paying for cleanup activities. The RSR Corp. site is one of EPA Region 6's high-priority Environmental Justice sites.

Environmental Progress



By removing contaminated soil and materials and constructing vegetative barriers, the EPA and the RSR Corporation have reduced the immediate threat posed by contaminants at the RSR Corporation Smelter site. The EPA will remove any contamination that is discovered by the TWC survey. Once the full-scale investigations are completed, remedies will be selected for final cleanup of the site.

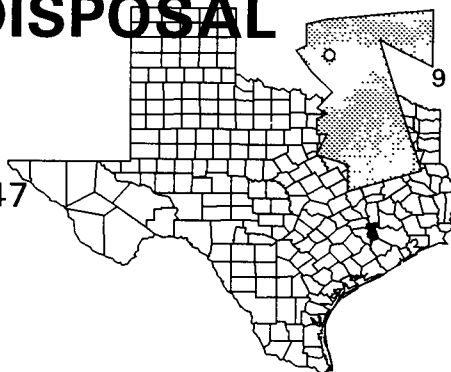
Site Repository



Dallas Public Library-West Branch, 2332 Singleton Blvd., Dallas, TX 75212

SHERIDAN DISPOSAL SERVICES TEXAS

EPA ID# TXD062132147



EPA REGION 6

Waller County

9 miles northwest of Hempstead

Site Description

The Sheridan Disposal Services site is located about nine miles northwest of Hempstead, and is bordered by the Brazos River and Clark Road. The site covers approximately 110 acres of this 695-acre tract of land and operated as a commercial and industrial waste disposal facility from 1958 through 1984. A 15-acre sludge lagoon, a 40-acre evaporation landfarm, nine storage tanks, and incineration plots were used for waste disposal. A pond levee around the lagoon was constructed, encompassing 17 acres. The State banned waste disposal in the lagoon in 1976, and revoked Sheridan Disposal Services' waste disposal permit in 1984 because the firm lacked technical and financial resources to adequately close the site. Elevated levels of heavy metals were found in river sediments downstream of the site. Elevated levels of heavy metals were found in river sediments downstream of the site. The Town of Brown College, with approximately 60 people, is about 1 1/2 miles north of the site. The nearest residence and drinking water wells are less than 1 mile from the site. Land immediately surrounding the site is agricultural, including pasture and range lands.

Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 06/10/86

Final Date: 03/31/89

Threats and Contaminants

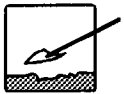


The groundwater is contaminated with volatile organic compounds (VOCs) including benzene, ethyl benzene, trichloroethylene (TCE), and toluene. The soil and sludge are contaminated with VOCs, including benzene and toluene, as well as polychlorinated biphenyls (PCBs). The upper aquifer, which is connected to the Brazos River, is contaminated and believed to be connected to the lower Evangeline Aquifer. The Brazos River, the shallow alluvial aquifer, and Evangeline Aquifer are used for drinking water supplies. Direct contact with contaminated soil is unlikely, since access to the site is limited. In 1978, water overflow from the site killed fish in Clark Lake, but off-site sampling of the Brazos River and Clark Lake from 1984 to 1986 detected no contamination. Marshlands lie 3,000 feet to the east of the site.

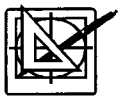
Cleanup Approach

This site is being addressed in three stages: initial actions and two long-term remedial phases focusing on soil and sludge cleanup and groundwater treatment.

Response Action Status



Initial Actions: In 1986, a fence was installed around the site to control unauthorized site access. Periodic maintenance of the levee system also has occurred to prevent flooding of former disposal areas and possible contamination of the Brazos River. In 1987, the potentially responsible parties, with EPA oversight, transferred rainwater to the evaporation pond for on-site treatment.



Soil and Sludges: To control the source of contamination, the potentially responsible parties will, under supervision by the EPA, use bioremediation to reduce PCB levels in soil and sludges. Treated sludges will then be stabilized, returned to the pond, and capped. Treated sludges that still have elevated PCB levels will be disposed of in a federally-approved landfill in the pond area. The cleanup is scheduled to begin in late 1995.



Groundwater Treatment: The EPA selected natural attenuation as the remedy for groundwater contamination. This remedy relies on natural processes such as sorption and biodegradation to alleviate contamination. Sorption is the tendency of natural materials, such as clay, to bind or to reduce the mobility of contaminants. Biodegradation is a process by which microorganisms break down contaminants in groundwater. Because groundwater moves so slowly, it is expected to take a minimum of 30 years for the contamination to be eliminated. The remedy provides for: monitoring of surface water to ensure that protective levels are maintained in the Brazos River, which would be the first point of potential exposure to contaminated groundwater; monitoring of groundwater to track movement of the contaminant plume; and prevention of future use of groundwater as a source of drinking water for nearby residents through deed restrictions and other precautions. The remedy also established contaminant concentration limits specifically for this site, including enforceable water quality measurements that are designed to ensure that no contamination is found in the Brazos River. Design of the remedy is currently underway; cleanup activities are scheduled to begin once the treatment for soil and sludges is complete.

Site Facts: In 1987, 58 potentially responsible parties entered into an Administrative Order with the EPA to conduct an investigation of the feasibility of various methods of cleanup. The Order was amended to include eight additional potentially responsible parties. A group of potentially responsible parties has formed the Sheridan Site Committee. Based on an Administrative Order on Consent, the committee agreed, in 1991, to conduct a pilot of the bioremediation technology. The pilot was successful.

Environmental Progress



The initial actions to secure the site and to treat or contain liquid wastes and contaminated rainwaters have reduced exposure risks at the Sheridan Disposal Services site. The site is safe while final cleanup remedies are being designed.

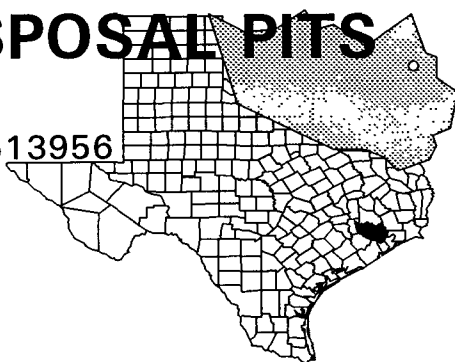
Site Repository



Waller County Library, 2331 11th Street, Hempstead, TX 77445

SIKES DISPOSAL PITS TEXAS

EPA ID# TXD980513956



EPA REGION 6

Harris County
2 miles southwest of Crosby

Site Description

The Sikes Disposal Pits site is located about 2 miles from Crosby, immediately north of U.S. Highway 90. The 185-acre site has been used as a dump for petrochemical wastes. Between the early 1960s and 1967, the site operated as a waste depository, and petrochemical wastes and numerous drums were deposited in the old sand pits. Evidence of indiscriminate dumping of wastes is found throughout the site. The site is in the flood plain of the San Jacinto River. It has been flooded six times since 1969, and the waste overflowed the pit boundaries, contaminating the surrounding area. There are two shallow water-bearing zones, and the Chicot and Evangeline aquifers are found below several hundred feet of clay. The nearest residence and drinking water well lie 1,000 feet from the site. The area immediately surrounding the site is wooded and largely undeveloped, with numerous active and abandoned sand pits and low-lying swampy areas. Sport fishermen and water sports enthusiasts use the surrounding San Jacinto River and Jackson Bayou. Approximately 10,000 people reside in Crosby and the surrounding communities.

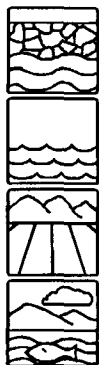
Site Responsibility: This site is being addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 10/23/81

Final Date: 09/08/83

Threats and Contaminants



The groundwater, surface water, sludge, and soil are contaminated with heavy metals, volatile organic compounds (VOCs) including toluene and xylene, and polycyclic aromatic hydrocarbons (PAHs) including creosote, phenolic compounds, and halides. The frequent flooding of the area threatens the San Jacinto River and the Jackson Bayou, both of which are used for recreation. Although the groundwater contamination in the shallow aquifer is heavy, no residential wells currently are affected. Neither surface water nor groundwater contamination has migrated beyond the site boundaries.

Cleanup Approach

Response Action Status



Initial Actions: In 1983, approximately 40 cubic yards of phenolic tars and sand were removed by the EPA and landfilled at an off-site hazardous waste disposal facility. The EPA backfilled the pit and covered it with clean sand. The EPA fenced the site in 1988 and repaired fences that were damaged by floods in 1989.



Entire Site: In 1986, the EPA selected the cleanup remedies for contaminated soil and water, including on-site incineration of the sludge and soil and treatment of contaminated water. The remedy required construction of flood control structures, installation of a temporary incinerator, and construction of a water treatment facility. Natural attenuation over 30 years is expected to reduce residual contamination to acceptable levels. The cleanup design was completed in 1989. Incineration was completed in 1994; the incineration facilities have been removed and the site has been restored. One billion pounds of contaminated soil and sludge, and 350,000 million gallons of contaminated surface water were treated through incineration.

Environmental Progress



The removal of contaminated tars and sand, fencing of the site, and incineration of contaminated soils, sludges, and surface water have eliminated the exposure potential at the Sikes Disposal Pits site. The preliminary Close Out Report, documenting completion of remedy construction activities, was signed in January 1995.

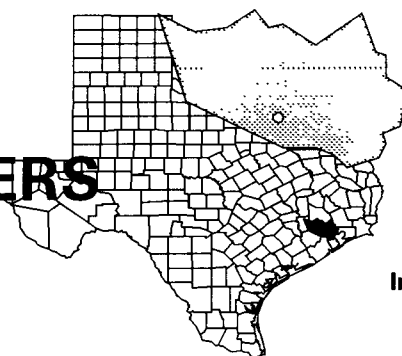
Site Repository



Crosby Public Library, 135 Hare Road, Crosby, TX 77532

SOL LYNN/ INDUSTRIAL TRANSFORMERS TEXAS

EPA ID# TXD980873327



EPA REGION 6

Harris County
Houston
South Loop 610 West

Other Names:
Industrial Transformer Site
Industrial Transformers (Sol Lynn)

Site Description

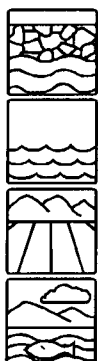
The Sol Lynn/Industrial Transformers site, located in Houston, is a 2-acre facility. From 1965 to 1975, the Industrial Transformer Company operated an electrical transformer cleaning and recycling facility, which contaminated the soil and groundwater. From 1975 to 1981, the owner leased the property to Sila-King, a chemical supply company that bought used drums for cleaning and resale. Trichloroethylene (TCE) was released during this operation. The area around the site is a mix of residential, commercial, and light industrial facilities. Approximately 2,100 residents live within a 1-mile radius of the site. The site is within the Texas Gulf Coastal Plain. Four City of Houston drinking water wells and four private drinking water wells, which serve more than 10,000 people, are located within 3 miles of the site. The Houston Astrodome is located within 1/2 mile of the site.

Site Responsibility: This site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84
Final Date: 03/31/89

Threats and Contaminants



The groundwater in on- and off-site wells is contaminated with TCE. Sediment samples from a drainage ditch and soils are contaminated with polychlorinated biphenyls (PCBs) and TCE. It is unknown how deep the TCE contamination penetrated surrounding wells. The drainage pathways and site soils make contact with PCBs a possible threat. The site supports substantial animal and plant life, which also are threatened by the contaminants.

Cleanup Approach

Response Action Status



Immediate Actions: The parties potentially responsible for site contamination removed 230 drums of contaminated waste and installed a fence around the site in 1989 to limit direct access to hazardous chemicals.



Source Control: The EPA-selected cleanup action for source control at this site includes excavation of PCB-contaminated soil and treatment using chemical dechlorination with on-site disposal of treated hazardous residues. The potentially responsible parties began cleanup operations at the site in mid-1991. A chemical dechlorination unit was installed on the site. However, soil treatment was discontinued due to the unfavorable operation of the unit. The remedy was revised in 1992. Excavation and off-site disposal was chosen as the final cleanup method. Over 2,700 cubic yards of contaminated soil have been treated or removed.



Groundwater: As part of an agreement with the EPA, the State is cleaning up the groundwater contamination. The remedy chosen in 1988 entails pumping the groundwater and treating it by using an air stripping process to remove the TCE from the water. Clean groundwater is either discharged off site or reinjected into the groundwater-bearing zone. Air stripping operations will ultimately treat over 12 million gallons of TCE-contaminated groundwater. The Texas Water Commission completed the design for the groundwater treatment facility in late 1991. Construction of the extraction wells and the treatment system was completed in 1993. Groundwater treatment is expected to take approximately 10 years to complete.

Site Facts: In 1981, strong odors originating from the site prompted investigation, which found approximately 75 punctured TCE drums scattered about the property. A Consent Decree signed in 1989 made Gulf States Utilities Company responsible for the first phases of the cleanup.

Environmental Progress



Construction of the source control and groundwater treatment remedies is complete. Groundwater treatment will take approximately 10 years to complete. Fencing the site and removing 230 drums of waste and over 2,700 cubic yards of contaminated waste to an off-site landfill have reduced the possibility of direct contact with contaminants at the Sol Lynn/Industrial Transformers site.

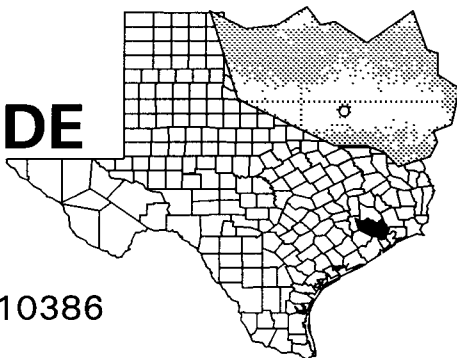
Site Repository



Houston Central Library, Government Documents Area, 500 McKinney Street,
Houston, TX 77002

SOUTH CAVALCADE STREET TEXAS

EPA ID# TXD980810386



EPA REGION 6

Harris County
2 miles southwest of intersection
of Loop 610 North and U.S. Hwy. 59

Other Names:
Koppers Co., Inc.

Site Description

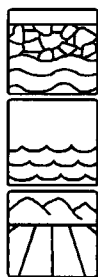
The 66-acre South Cavalcade Street site, located in northeastern Houston, was used as a wood preserving and coal tar distillation facility from 1910 to 1962. All original facilities were removed in 1962 and the site was covered with 1 to 2 feet of fill material. Subsequently, the site was subdivided and parts of the site were sold. This site is associated with the North Cavalcade Street site, which is also listed on the NPL. Currently, two-thirds of the site are owned or operated by three commercial trucking companies with large warehouses; the center third of the property is vacant. In 1983, the Houston Metropolitan Transit Authority investigated the site for potential mass transit use and found evidence of buried creosote from previous site activities. The EPA's analysis of historical aerial photographs indicates there are at least three waste pits on the site that have been filled in or paved over. Beginning in 1985, the EPA sampled all environmental media and found two discrete areas of contamination at the site corresponding to the former locations of the wood treating operations and coal tar plant in the southern portion of the site and a pond previously existing in the northern part of the site. The site is surrounded by residential, commercial, and industrial properties. About 4,500 people reside within a 1-mile radius of the site, and the nearest residence is 200 feet to the west. The nearest water well is 1,500 feet away, although no private wells are used for drinking water within a 2-mile radius. A city well exists about a mile from the site, but draws water from a 600-foot depth and will not likely be affected by the site.

Site Responsibility: The site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 10/5/84
Final Date: 06/10/86

Threats and Contaminants



High levels of polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), and heavy metals were found in the shallow zone of the groundwater. VOCs were found in the sediments. PAHs, VOCs, heavy metals, and components of creosote were detected in the soil. VOCs and heavy metals were detected in on- and off-site surface water. Off-site surface water and sediments pose a minimal risk. On-site workers and trespassers might come into direct contact with or accidentally ingest contaminants in groundwater, soils, sediments, and surface water. On-site activities may stir up contaminated dusts.

Cleanup Approach

This site is being addressed in a long-term remedial phase focusing on cleanup of contamination at the entire site.

Response Action Status



Entire Site: Based on the site investigation, the remedies for cleanup selected by the EPA include: excavating and on-site washing of 19,500 yards of soil and replacing the soil; treating and flushing 10,500 yards of soil in the excavation's wash water; pumping and treating of 50 million gallons of groundwater using physical chemical separation, pressure filtration, and carbon adsorption, with reinjection into the aquifer or, if necessary, discharging to the on-site drainage ditch that flows into Hunting Bayou; incinerating or recycling all hazardous liquids separated out from the groundwater; and groundwater monitoring. The potentially responsible parties completed the design of the cleanup technologies in early 1995, and cleanup activities are underway.

Site Facts: In 1985, Koppers Company signed an Administrative Order agreeing to perform the investigation to determine the extent of contamination on the site and to identify alternatives for cleanup. The EPA reached an agreement with the potentially responsible parties for the development of the engineering design and cleanup. The resulting Consent Decree was signed in June 1990.

Environmental Progress



After conducting site investigations at the South Cavalcade Street site, the EPA determined that no immediate actions currently are needed to make the site safe while cleanup activities are underway.

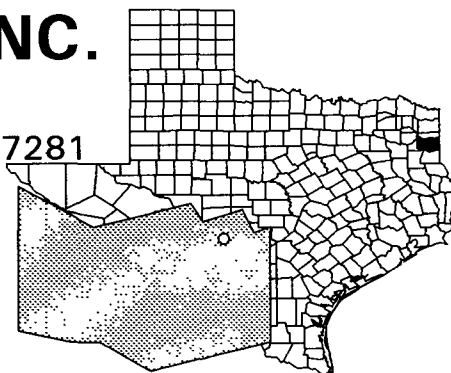
Site Repository



Houston Central Library, Government Documents Area, 500 McKenney Street,
Houston, TX 77002

STEWCO, INC. TEXAS

EPA ID# TXD0055337281



EPA REGION 6

Harrison County
1/2 mile south of the intersection
of Hwy. 9 and Interstate 20

Site Description

The 2½-acre Stewco, Inc. site, located in a mixed residential, commercial, and industrial zone, consists of two non-adjacent locations. The first location is a ½-acre plot that includes a maintenance shop with fueling facilities, a truck-tank washing facility, and two backfilled and capped evaporation ponds that received wastewater from the tank washing operation. The previous owner contracted with the oil and gas industry to haul glue, resin, gasoline, diesel fuel, jet fuel, and creosote. The tank trucks were steam-cleaned between loads with an alkaline solution and the wash water was routed to a pond to evaporate. The ponds were unlined and in poor condition, allowing materials to contaminate the soil and groundwater. The two ponds contained about 4,685 cubic yards of wastes. The second location consists of a 52,000-foot capacity pond that received excess wastewater conveyed by truck from the evaporation ponds at the first location. The ponds were to be skimmed to lessen the oil layer on the surface, but according to the EPA, no record exists of this activity. Thus, when the ponds overflowed, the surface layer of oil moved with the overflow onto surrounding drainage areas. The site overlies the Cypress Aquifer. Land close to the site is used for limited grazing of livestock. Approximately 3,300 people live within 3 miles of the site; 50 residences are located within ½ mile of the first location, and 30 residences are located within ½ mile of the second location. Approximately 3,100 people living within a 3-mile radius use groundwater wells for drinking water. The nearest well is found 1,850 feet from the site.

Site Responsibility: This site was being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 10/05/84

Final Date: 06/10/86

Threats and Contaminants



Wastes found at the site include Di(2-ethyhexyl)phthalate sludge and DDT sludge. The groundwater is contaminated with volatile organic compounds (VOCs), including perchloroethylene (PCE). The soil was contaminated with petrochemicals as well as VOCs. Since the removal of contaminated liquids and sludges, contamination threats to the public are remote. However, groundwater contamination has been identified that is not attributable to the site. Therefore, the Texas Water Commission is investigating a facility adjacent to the Stewco, Inc. site, which may be responsible for the groundwater contamination.

Cleanup Approach

Response Action Status



Immediate Actions: The EPA removed 6,830 cubic yards of contaminated waste and 350,000 gallons of contaminated water from both evaporation ponds at the first location in 1984. The liquids were then treated and discharged. Pond sludges were removed and disposed of off site, and the ponds were backfilled with clean soil and capped with clay. The EPA did not deem an emergency removal of any materials from the pond at the second location necessary. A fence was constructed at the second location to restrict access.



Entire Site: Although it was likely that the majority of the sources of contamination at the site were removed in 1984, the EPA determined an additional study would be appropriate. In 1988, the EPA concluded investigations of potential off-site and active facilities that appeared to be contributing to groundwater contamination at the site. The additional study confirmed that residual contamination of soils, sediments, and groundwater at the site posed no threat to public health and that no long-term monitoring was necessary. The EPA and the State have determined that remaining groundwater contamination is not attributable to this site and no further actions are required at the Stewco site. The Texas Water Commission currently is investigating a facility adjacent to the site, which may be responsible for the groundwater contamination. The EPA is planning to delete the Stewco, Inc. site from the NPL in 1995, since contamination at the site has been addressed.

Site Facts: The operators of the Stewco site were cited for permit violations in 1979, 1980, 1981, and 1982. The owners filed for bankruptcy in 1983.

Environmental Progress



The removal of contaminated waters and sludges from the ponds has eliminated threats to the public at the Stewco, Inc. site. Although further investigations are being performed to identify off-site sources of the remaining groundwater contamination, surface contamination from the site has been fully addressed and final site cleanup goals for these sources of contamination have been achieved. The site is planned for deletion from the NPL in 1995.

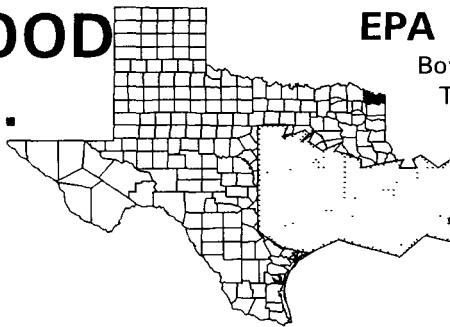
Site Repository



Waskom City Hall, 304 Texas Avenue, Waskom, TX 75692

TEXARKANA WOOD PRESERVING CO. TEXAS

EPA ID# TXD008056152



EPA REGION 6

Bowie County
Texarkana

Site Description

The 25-acre Texarkana Wood Preserving Company site is an abandoned wood-treating facility that operated under various owners from 1909 to 1984. Approximately 793,000 gallons of hazardous waste had been abandoned at the site. Wastes were stored in pressure vessels, steel tanks, retention ponds, surge tanks, and three evaporation ponds. All units were heavily contaminated with creosote and pentachlorophenol (PCP) used in the treatment process, as well as several by-products. Approximately 200 people live in a largely rural area within a 3-mile radius of the site. The nearest residence is 500 feet to the west of the site, and the nearest drinking well is 2,400 feet away. Most area drinking water comes from Wright Patman Lake (formerly Lake Texarkana), which is not threatened by site contaminants.

Site Responsibility: This site is being addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 03/29/85

Final Date: 06/10/86

Threats and Contaminants



An estimated 16 million gallons of groundwater and 67,000 cubic yards of soil and sludge are contaminated with polynuclear aromatic hydrocarbons (PNAs), PCP, and dioxins from wood-treatment processes. Direct contact with groundwater and soils, and inhalation of airborne site wastes are the major threats to health. Contamination periodically was spread off site by runoff, threatening nearby residents and the environment; however, removal actions have controlled runoff and restricted public access.

Cleanup Approach

This site is being addressed in three stages: emergency actions and two long-term remedial phases focusing on soil and shallow groundwater cleanup and cleanup of the deep groundwater.

Response Action Status



Emergency Actions: In 1986, the EPA conducted an emergency pump-down of the creosote and PCP ponds and process area. Workers pumped the liquids to the evaporation ponds. In 1987, the EPA fenced and secured the site and posted warning signs. Emergency workers returned to the site later that year, after a car accident destroyed a section of the fence. They made repairs and put up new warning signs, as the old ones had been removed. In 1988, EPA emergency response workers observed that the main process containment area was at the point of overflowing and acted swiftly to stop the threat. The crew transferred contaminated rainwater from the containment to the evaporation lagoons, which had adequate space and posed no danger of overflow. In the fall of 1989, another pump-down occurred. Berms also were constructed to alleviate the overflow problem.



Soil and Shallow Groundwater: The State conducted an investigation into the nature and extent of the soil and shallow groundwater contamination at the site. In 1990, the EPA selected the cleanup approach including excavation of contaminated soils, treatment of soils using an on-site thermal destruction process, and replacement of treated soils, followed by covering the treated soil with topsoil and vegetation. This activity will be followed up by pumping, treating, and reinjecting the groundwater in the shallow aquifer. Cleanup activities began in 1993.



Deep Groundwater: The State completed an investigation of the nature and extent of deep groundwater contamination in late 1992. A cleanup remedy was selected by the EPA in 1993 which includes pumping and treating the deep groundwater and reinjecting the treated water back into the aquifer. The design of the cleanup activities is underway.

Site Facts: The plant has received three citations from the State for unauthorized discharges of process wastewater into the Days Creek drainage system.

Environmental Progress



The actions performed by the EPA's emergency response workers to control and remove contamination at the site and the excavation of contaminated soils have reduced the exposure of nearby residents and the environment from hazardous substances while groundwater treatment continues.

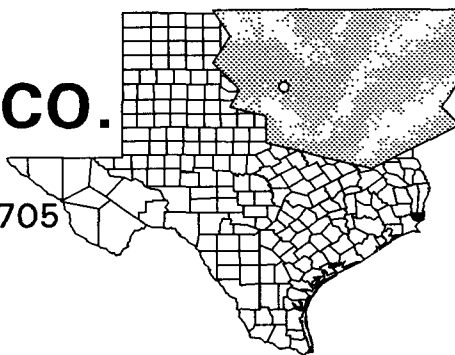
Site Repository



Texarkana City Hall, 320 Texas Boulevard, Texarkana, TX 75501

TRIANGLE CHEMICAL CO. TEXAS

EPA ID# TXD055143705



EPA REGION 6

Orange County
Bridge City

Site Description

The 2 1/3-acre Triangle Chemical Co. site contains a brick office building and three metal process and warehouse buildings. Thirty above-ground storage tanks were removed. From 1970 to 1981, the facility was used for the production of antifreeze, windshield washer solvent, industrial cleaning compounds, hand cleaners, and brake fluids. In 1981, when a temporary injunction was issued, the company went bankrupt and abandoned the site. There were volatile organic compounds (VOCs) on site, and the surface soil was contaminated with spilled hazardous materials. This is a moderately populated residential area, with 15 residences and 50 mobile homes within 1/4 mile of site. The nearest drinking water wells are located more than 3 miles from the site; the nearest residence is 200 feet south of the site. The site is bordered by Coon Bayou and Highway 87, and is 1/2 mile south of the Orange County Airport.

Site Responsibility: This site was addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



The air, groundwater, soil, surface water, and liquids in the abandoned tanks were contaminated with VOCs and various acids. Groundwater in the aquifer under the site flows to the northeast and discharges into Coon Bayou. Some evidence suggested that fish kills in the Bayou were caused by contaminants at the site. The concentrations of contaminants in the air and surface waters were low and were unlikely to pose a threat to the nearby population. However, the site was unfenced for a period, allowing nearby residents to potentially come into direct contact with hazardous materials.

Cleanup Approach

Response Action Status



Initial Actions: In 1982, the EPA installed a fence to stop public access to the site. Drums were removed, and contaminated soils were bulked and solidified, and then landfilled along with equipment. In 1985, the EPA fixed the fence, which had been destroyed by vandals. A drainage canal was dug. The EPA conducted an emergency removal of contaminated materials, including approximately 1,000 55-gallon drums, 21,000 gallons of tank liquids, and 350 cubic yards of contaminated trash and soil.



Entire Site: Liquids in the storage tanks and drums were incinerated off site or were injected into a deep well. The storage tank sludges were landfilled off site. All on-site structures were decontaminated. Contaminated soils were plowed and aerated to release contaminants. These actions were completed in 1987. A total of 53,000 gallons of hazardous liquids and over 3,000 cubic yards of contaminated sludge have been cleaned up at the site. The Texas Water Commission (TWC) has completed a supplemental investigation of the groundwater at the site, including a groundwater modeling study. The study indicates that contaminants in the shallow groundwater will naturally decline to acceptable levels prior to reaching Coon Bayou. The TWC will continue site operation and maintenance activities to monitor contaminant reductions in the uppermost aquifer.

Environmental Progress



Construction of all cleanup remedies is complete, and all cleanup goals have been met. The initial actions to secure the site and remove contaminated materials, as well as the completed actions to decontaminate and treat remaining contamination areas, have eliminated the exposure threat to residents and nearby Coon Bayou. Final goals have been achieved for the cleanup of surface contamination. A five-year review concluded that the remedy was still protective of human health and the environment, and recommended continued groundwater monitoring.

Site Repository



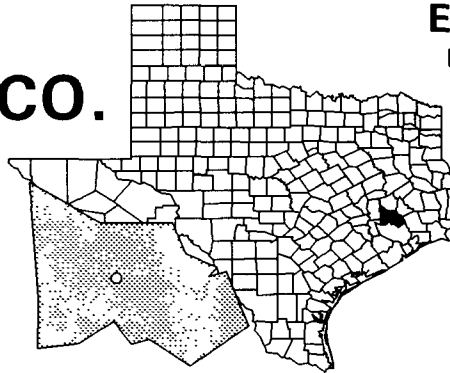
City of Orange Public Library, 220 North Fifth Street, West Orange, TX 77630

UNITED CREOSOTING CO. TEXAS

EPA ID# TXD980745574

EPA REGION 6

Montgomery County
Conroe



Site Description

The 100-acre United Creosoting Co. site, located north of Houston, was once a wood preserving facility. From 1946 to 1972, lumber was pressure-treated with creosote and pentachlorophenol (PCP). Operators disposed of the wastes from the treatment process in two surface lagoons on site, which are now covered. Prior to salvage operations in 1972, the site contained a coal-tar distillation still, a processing building, tanks and pressure cylinders, two waste ponds, and several lumber storage areas. Only an office building, garage, and the remnants of the waste ponds were left behind. Redevelopment of the abandoned property began in 1977, and the site now contains a residential subdivision of approximately 100 residences and two commercial properties. In 1980, the County used soils from the site to improve local roads in a nearby subdivision. Citizens living along one of these streets complained of headaches, burns, and respiratory problems. Upon discovering PCP contamination, the County removed soils from the roadway and disposed of them by landfarming. Approximately 13,000 people live within a 2-mile radius of the site. The nearest drinking water well is located about 2 miles southeast.

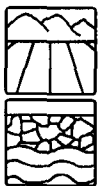
Site Responsibility: This site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 09/08/83

Final Date: 09/21/84

Threats and Contaminants



Soils are contaminated with PCP, creosotes, and dioxin. Groundwater sampling has shown low levels of PCPs and creosote compounds from contact with soils. The major health threat is direct exposure to heavily contaminated soils; groundwater contamination is low and currently is not considered to be a threat to nearby residents or the environment.

Cleanup Approach

This site is being addressed in four stages: initial actions and three long-term remedial phases focusing on home demolition, cleanup of the neighboring area, and cleanup of the industrial area.

Response Action Status



Initial Actions: In 1983, under EPA supervision, the potentially responsible parties covered a highly contaminated area with a synthetic membrane and 6 inches of compacted clay. They also built drainage structures to divert water away from the subdivision and fenced the area.



Home Demolition: The EPA's selected remedy included demolishing the six houses directly above and next to the former pond area, then compensating and relocating the residents of the houses. Title transfers were completed for all properties, and residents were relocated in preparation for demolition activities. Demolition of the six houses and removal of debris were completed in 1990. The pond area was fenced to restrict access in 1991.



Neighboring Area: The yards of 35 residences neighboring the site contained contaminated soils. The selected remedy for these residences included excavating the contaminated soils, temporarily storing excavated materials on the industrial portion of the site, using an on-site critical fluid extraction system to clean the soils, and regrading and landscaping the yards. The treatment mechanism is similar to that of solvent extraction and cleans soil to meet existing health standards. Cleanup was completed in late 1993 and the yards have been restored.



Industrial Area: The same critical fluid extraction system chosen for the neighboring area will be applied to contaminated soils at the industrial area of the site. Contaminated soils will be excavated and treated on site. The EPA and the State conducted a focused site study that refined soil volume estimates. Cleanup currently is underway and is expected to be completed in 1998.

Site Facts: The potentially responsible parties, under an Administrative Order from the EPA, constructed a clay cap and drainage diversion berms to remedy the runoff problem. Residents were concerned over health effects from the site but are satisfied that homes have been purchased and residents relocated.

Environmental Progress



By fencing, capping, and draining the contaminated area, the EPA has reduced the possibility of nearby residents' exposure to contaminants. In addition, the relocation of residents of the homes adjacent to the former waste pond and the demolition of surrounding houses have eliminated any possible exposure at the United Creosoting Co. site, making the area safe while final cleanup activities are underway. To date, approximately 67,000 cubic yards of contaminated soil has been cleaned up.

Site Repository



Montgomery County Library, 400 North San Jacinto, Conroe, TX 77301