Hart Creosoting Company
Jasper, Jasper County, Texas

EPA ID# TXD050299577
Site ID: 0601975

EPA REGION 6
CONGRESSIONAL DISTRICT 8

Contact:
Robert Sullivan 214-665-2223

Updated: March 2009

Current Status

- The EPA signed the Preliminary Close-Out Report on September 12, 2008, documenting the construction completion at the site. The EPA and State of Texas completed the Final Inspection at the site on September 10, 2008. The EPA initiated site construction on December 17, 2007.
- ! The EPA started the remedial action at the site on September 20, 2007.
- ! The EPA approved the final remedial design for the site on September 20, 2007.
- ! The EPA conducted a removal action in 1995 to remove existing tanks, structures and equipment, remove liquid waste for off-site disposal, drain the on-site impoundments, stabilize the remaining sludge, and consolidate the sludge and contaminated soil into an on-site waste cell.
- ! The EPA conducted a Remedial Investigation/Feasibility Study (RI/FS) and baseline risk assessment for the site in 2004 and conducted a Supplemental RI (SRI) in 2006. The RI and FS Reports were finalized in September 2006. The RI was conducted to further characterize the nature and extent of contamination originally documented by the earlier investigations and to provide data to support the completion of human health and ecological risk assessments. The FS report was completed to evaluate technologies and remedial alternatives for the purpose of selecting a final remedial alternative to address the risks presented in the final RI report.
- ! The EPA held a public meeting August 15, 2006, at the City of Jasper First National Bank in Jasper to present the Proposed Plan, to answer questions on the remedial alternatives and to present the EPA's preferred alternative for addressing cleanup of the Site. The RI/FS reports and Proposed Plan for the Site were made available to the public on July 26, 2006. The documents are in the Administrative Record file and the information repository maintained at the EPA Docket Room in Region 6, at the TCEQ offices in Austin, Texas, and at the Jasper City Library. The notice of the availability of these documents was published in the Jasper Newsboy on July 26, 2006. A Record of Decision was signed on September 21, 2006.
- ! To date, the EPA has spent approximately $2.6 Million for removal action and design work at this site. EPA's actions taken to date have considerably lessened the potential for human health or environmental exposure.

Benefits

The clean-up of the contamination present at the Hart Creosoting Company Superfund site will ensure the protection of human health and the environment.

National Priorities Listing (NPL) History

NPL Proposal Date: April 23, 1999
NPL Final Date: July 22, 1999

Site Description

Location:

The Hart Creosoting site is a former wood treatment facility located one mile south of the City of Jasper in Jasper County, Texas. The site is on the western side of State Highway 96, approximately 1 mile south of U. S. Highway 190. The site location coordinates are latitude 30□ 53" 38" N, longitude 93□ 59' 41" W.

Population:

The approximate population of the City of Jasper is 8,247 people. Approximately 1,000 people live within a one-mile radius of the site.

Setting:

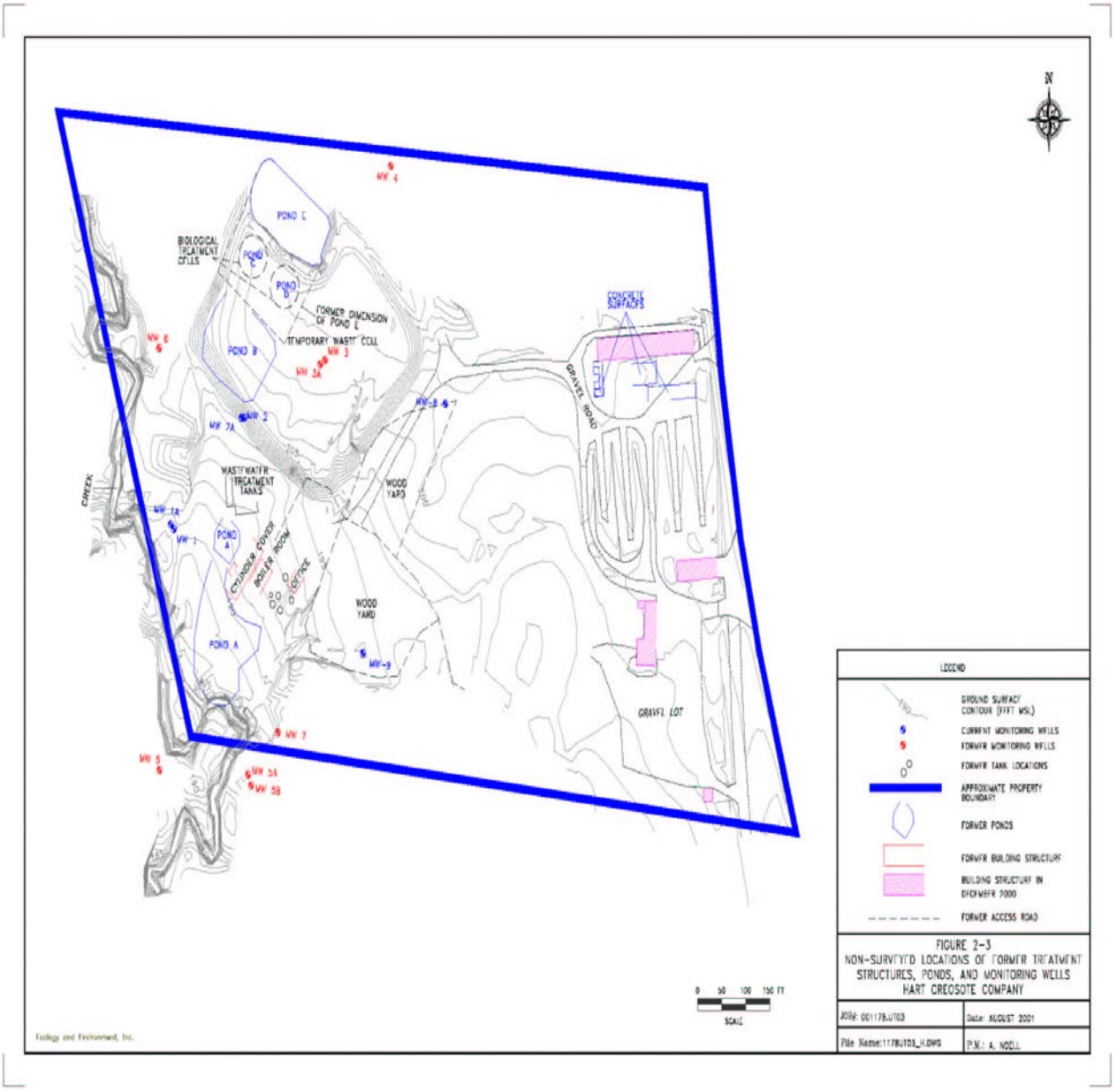
Hart Creosoting is a former wood treatment facility, which performed wood treatment, pole peeling, and pipe threading operations utilizing coal-tar creosote. The site occupies an approximate 12 acres.

The site is located approximately one mile south of downtown Jasper in an industrial/commercial wooded area. There are forests to the south, west and north, and an operating automotive detailing business east of the site. Other commercial businesses are located across U.S. Highway 96. The intermittent, unnamed creek and another woodland area are located along the western border of the site. The adjacent unnamed creek discharges into Big Walnut Run Creek approximately 1¼ mile south of the site. Big Walnut Run Creek ultimately discharges into the Neches River, approximately 24 miles downstream from its confluence with the unnamed creek.

The site is located on the outcrop of the Jasper Aquifer, a continuous 1,200-foot deep aquifer that serves as the primary source of drinking water for the Upper Jasper County Water Authority. Two public and 39 private wells are located within 4 miles of the site. The private wells are used for drinking water and irrigation purposes. The nearest off-site private water wells are approximately 0.5 and 1 mile south of the site. Each of these wells serves two people. The two public water supply wells, used as sources of drinking water, serve approximately 12,000 users and are located approximately 3 miles north of the site at depths of 764 and 802 feet BGL.

Photos: **Site Pictures 2008**

Site Map


N
MW 4
POND C
BIOLOGICAL TREATMENT CELLS
POND E
POND D
FORMER DIMENSION OF POND E
TEMPORARY WASTE CELL
POND B
MW 6
MW 3
MW 3A
MW 2
MW 7A
MW-8
CONCRETE SURFACES
GRAVEL ROAD
WASTEWATER TREATMENT TANKS
WOOD YARD
CREEK
MW 1A
MW 1
POND A
CYLINDER COVER
BOILER ROOM
OFFICE
WOOD YARD
MW-9
POND A
GRAVEL LOT
MW 7
MW 5
MW 5A
MW 5B
0 50 100 150 FT
SCALE
Ecology and Environment, Inc.
LEGEND
GROUND SURFACE CONTOUR (FEET MSL)
CURRENT MONITORING WELLS
FORMER MONITORING WELLS
FORMER TANK LOCATIONS
APPROXIMATE PROPERTY BOUNDARY
FORMER PONDS
FORMER BUILDING STRUCTURE
BUILDING STRUCTURE IN DECEMBER 2000
FORMER ACCESS ROAD
FIGURE 2-3
NON-SURVEYED LOCATIONS OF FORMER TREATMENT STRUCTURES, PONDS, AND MONITORING WELLS
HART CREOSOTE COMPANY
JOB#: 001178.0703
Date: AUGUST 2001
File Name: 1178UT03_H.DWG
P.M.: A. NOLL

Wastes and Volumes

Historic operations performed at HCC employed coal tar creosote dissolved in diesel to treat railroad ties and utility poles. Coal tar creosote, a listed hazardous waste (U051), is manufactured through the distillation of coal tar and is the most widely used wood preservative in the United States. It is a thick, oily liquid, typically amber to black in color, with a specific gravity of 1.03 to 1.09. Creosote contains over 300 different chemical compounds. One important group of environmentally significant compounds present in creosote is the PAHs. There are 16 PAHs routinely encountered at wood treating sites, seven of which have been identified as probable human carcinogenic polycyclic aromatic hydrocarbons (CPAHs).

An onsite waste cell with a clay cap was constructed during the1995 EPA removal action to store pond sediments and contaminated soil from the site. The waste cell is approximately 2.25 acres in area and has an approximate depth of 15 feet. The estimated volume of the waste cell, with a 20% contingency, is 65,400 cubic yards. A Total PAH (TPAH) concentration of 1,027 mg/Kg was detected in the waste cell visually contaminated composite sample. This value lies within the range observed during the EE/CA. In the native soil sample collected beneath the waste cell, a TPAH concentration of 2.19 mg/Kg was detected. The observed Total CPAH (TCPAH) concentration of 16.5 mg/Kg detected in the visually contaminated composite sample also fell within the range of 3.0 to 29.5 mg/Kg observed during the EE/CA. A TCPAH concentration of 0.03 mg/Kg was measured in the native soil sample collected beneath the Cell.

An unnamed creek (tributary to Big Walnut Run Creek) has extensive contamination. Pockets of creosote have been observed in the creek and in ground water in the area of the former wood-treating area. Sediment samples were collected from a total of 21 locations as part of the RI. Eight samples were collected at surface level from the top 6 inches for use in the risk assessments. Samples from 10 locations were collected in the un-named tributary at various depth intervals ranging from 13 to 51 inches to help determine both the lateral and vertical distribution of creosote within the tributary channel. All sediment samples were analyzed for SVOCs. PAHs were detected in most of the samples collected downstream of the Site. Upstream of the Site, concentrations are much lower. The results of the human health and ecological risk assessment indicate that the COCs in the un-named tributary pose unacceptable risks to human health and ecological receptors. A total of 7 PAHs are identified as the primary sediment COCs for human health. In addition to the human health COCs, 16 PAHs and 2 SVOCs, are also identified as sediment COCs for ecological receptors. Low-level PAH detections or estimated concentrations were observed in the Big Walnut Run Creek samples, both upstream and downstream of its confluence with the un-named tributary. The highest reported concentrations and estimated values were observed at the furthest downstream sample location WC-SD-03. Concentrations are below both human health and ecological screening values for all individual PAHs except benzo(b)fluoranthene, which exceeded the ecological screening value.

The primary sources of onsite subsurface contamination was found in the location of the former wood treating area and the former Pond A. Elevated levels of PAHs were identified in soil borings adjacent to the creek. To further define the extent of residual creosote underlying former Pond A, the RI advanced five soil borings to depths up to 65 feet with samples collected at 10 foot intervals. TPAH concentrations ranged from 3.9 mg/Kg to 17,740 mg/Kg with the highest concentrations generally occurring at depths less than 20 feet. However, increasing TPAH concentrations observed at a depth of 72 feet (58,635 mg/Kg) and 60 feet (7,384 mg/Kg) suggest there is potential for pooled creosote.

The ground water hydro-geologic investigation included sampling of six existing monitor wells and ten new monitor wells constructed during the RI, and sampling of 17 existing monitoring wells and 4 new monitor wells installed during the SRI. Free phase creosote was observed during the SRI sampling events in one well with a thickness of approximately 1.5 feet. Total PAH concentrations detected in shallow ground water varied from 0.17 to 9,110 µg/L, with the highest concentration observed near the Site of former Pond A.

At the two furthest down-gradient wells, TPAH concentrations of up to 25,500 µg/L and TPAH concentrations of up to 9,516 were detected. These levels are indicative of a large dissolved phase plume. Accordingly, two of the four new SRI monitor wells were installed approximately 700 feet down-gradient of the Site property line. Sampling of these wells in 2006 detected TPAH concentrations up to 10,276 µg/L.

Naphthalene accounts for a majority of the TPAH concentration at wells MW-11A/11B, MW-12A/12B, MW-13A/13B, MW-14A/14B and CMT well MW18. This condition is consistent with the makeup of creosote-based wood treating solutions where naphthalene typically accounts for 7 to 9-percent of the total fraction. Naphthalene also has a higher aqueous solubility than many other PAH compounds which allows for greater environmental mobility. The distribution of TPAH indicates that the contaminant plume has migrated beyond the down-gradient margins of the current monitor well network. To estimate the potential extent of the dissolved-phase plume, a one-layer ground water flow and contaminant naphthalene transport model was constructed. The model simulations indicate that naphthalene concentrations greater than the EPA Region 6 MSSL of 6.2 µg/L, could extend up to 1700 feet beyond the southern property line. The ground water velocity at the site is estimated to be 52 feet per year.

Health Considerations

In 1995, EPA conducted a time-critical removal action to drain and treat water from four of the five onsite impoundments. After the ponds were drained, sludge from the pond and visibly contaminated soil from the site were excavated, consolidated, and stored onsite in a fenced, natural clay-lined waste cell. The temporary waste cell was expanded during the removal to accommodate the substantial amount of contaminated soil that was excavated from the site. The bottom of the temporary waste cell was graded and compacted to ensure durability. The cell was covered and seeded for erosion control. This waste cell was completed on September 1, 1995 and surrounded by a six-foot high intruder-resistant fence that was posted with warning signs.

PAHs present the primary threat to public health and welfare from the site. Other constituents of coal tar creosote, including 1,1'-biphenyl, carbazole, and dibenzofuran were also identified at the site. Available literature reveals that numerous PAHs and carbazole are possible carcinogens. Reports on long term human exposure to PAHs in mixtures with other compounds through inhalation and dermal exposure have resulted in cancer. PAHs have caused tumors in laboratory animals through inhalation, oral, and dermal exposures. In addition, animal studies have revealed that developmental, reproductive, and immunosuppressant health effects have occurred with exposure to PAHs through the various exposure routes.

Sediment in the unnamed creek contains residual creosote oil and dissolved phase site-related chemicals (i.e., PAHs) at levels that may adversely affect the benthic organism community known to exist in these types of sediments. Creosote in the surface water and sediment of the creek has the potential to adversely affect aquatic life, including benthic invertebrates, amphibians, reptiles, fish, and algae, currently and in the future. Terrestrial wildlife, including birds and mammals that use the creek as a source of drinking water and food, could be exposed to contaminants.

Record of Decision (ROD)

The ROD was signed on September 21, 2006.

Major components of the selected remedy include:

Excavate soil and sediment containing chemicals of concern (COCs) at concentrations exceeding the preliminary remediation goals (PRGs) and disposing the excavated soil and sediment into an onsite RCRA containment cell to be constructed onsite.

Install a non-aqueous phase liquid (NAPL) recovery system to remove free phase and residual NAPL from the saturated zone to the extent practicable.

Site Contacts

EPA Remedial Project Manager:	Bob Sullivan	214-665-2223 or 1-800-533-3508
EPA Site Attorney:	Gloria Moran	214-665-3193 or 1-800-533-3508
EPA Public Liaison	Donn R. Walters	214-665-6483
TCEQ Contact:	Buddy Henderson	512-239-1520 or 1-800-633-9363

EPA Superfund Region 6 Toll Free Number: 1-800-533-3508

Community Relations Plan: January 2000

Site Repository: Jasper Public Library
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Jasper, TX
409-384-3791