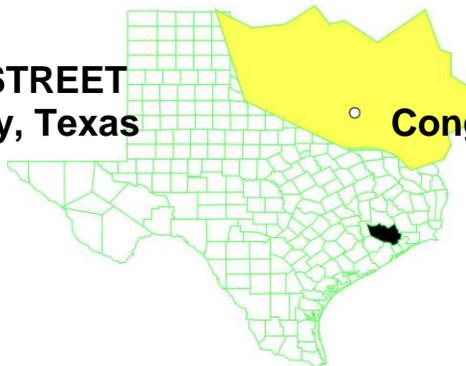


**SOUTH CAVALCADE STREET**  
**Houston, Harris County, Texas**  
**EPA ID# TXD980810386**  
**Site ID: 0602895**



**EPA Region 6**  
**Congressional District 18**

**Last Updated: June 2013**

**Contact: Raji Josiam**  
**214.665.8529**

## **Background**

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The South Cavalcade Superfund Site occupies approximately 66 acres of land located approximately three miles north of downtown Houston, Texas, and about one mile southwest of the intersection of Interstate Loop 610 and U.S. Highway 59. The Site is bounded by Cavalcade Street to the north, Collingsworth Street to the south, and the Houston Belt & Terminal Railway Company (HB&T) Passenger Main to the east, and HB&T and Union Pacific Railroad to the west. The Site is situated in what would be considered a light industrial corridor, and is bounded on the west side by a large residential area. The Site is rectangular in shape and is approximately 3,400 feet long in the north-south direction by 900 feet long in the east-west direction.

A wood treating plant operated at the Site from 1910 until 1962. Creosote and various metallic salts were used as the wood preservatives. The wood treating process area was located in the southern portion of the Site along Collingsworth Street. Koppers Company, Inc. (Koppers), now known as Beazer, operated the wood treating facility from 1940 until its closure in 1962. A coal tar distillation plant was also operated by Koppers on the southeastern portion of the Site from about 1944 until 1962.

The Site is currently occupied by trucking firms, with much of the ground surface (particularly in the southern half of the site) covered by pavement, buildings, or storage areas. A ground water treatment facility is located at the eastern boundary in the central portion of the Site became inoperative due to a lightning strike in April 2006. Since April 2006, Dense Non-Aqueous Phase Liquid (DNAPL) has continued via manual pumping of DNAPL from the collection wells. Two areas of contaminated soil, along the southeastern boundary and in the south portion of the Site, have been capped and are being used for truck parking. The northern contaminated area of the site is currently not being used by any businesses.

## **Site Photos**

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**Field Boring Evaluation – October 2012**



**Wastewater Treatment Plant**



**South Cap**



**Southeastern Cap**

## Current Status

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EPA, the Texas Commission on Environmental Quality (TCEQ), and the Site's Responsible Party, Beazer East, Inc. (Beazer), have been discussing different ground water remedial options for the Site, including a natural attenuation component. To support a possible modification of the current remedy, Beazer completed additional field work (9/2005) to better define the ground water plume at the southwest corner and the preferential migration pathways in the shallow (~ 6' to 22' below ground surface) and intermediate (~40-50' below surface) aquifers. This additional information is summarized in the *Supplemental Ground Water Investigation Report* (March 1, 2006) submitted to EPA. The first Site Map (included below) is taken from this report and illustrates the inferred boundaries of Dense Non-Aqueous Phase Liquid (DNAPL) for both aquifers.

Based on the results of the investigation and previous fate and transport reports, Beazer has submitted in May 2007, a follow-up draft Focused Feasibility Study (FFS) to evaluate the current remedy, as well as other options to address the impacted ground water. A meeting was held on June 26, 2007 and on November 29, 2007 with Beazer and the regulators to discuss comments to the draft FFS. Beazer has submitted a draft Technical Impracticability (TI) Demonstration Report to the regulators in November 2008. EPA, TCEQ, and Beazer met on January 18, 2011 to discuss plans for a ROD Amendment for the change in the groundwater remedy of the site from extraction and treatment to Monitored Natural Attenuation (MNA) and establishing TI zones at the site. EPA HQ has reviewed the MNA and TI waiver document and has provided comments. Beazer has prepared a matrix evaluating different technologies for the site to address those comments. A meeting between EPA HQ, EPA R6, TCEQ and Beazer was held on December 14<sup>th</sup> 2011 and Beazer is evaluating remedies for the northern portion of the site. Beazer has submitted an FFS Amendment with the additional remedial options. EPA, TCEQ, and Beazer discussed the FFSA on May 16, 2012 and have requested Beazer to further delineate the saturated source area. EPA and the TCEQ have discussed the draft Human Health Risk Assessment Report and provided comments to Beazer. Beazer has installed additional borings in October 2012 to verify historical boring log information and to confirm the nomenclature of the varying levels of contamination. A discussion between EPA, TCEQ, and Beazer was held on November 16<sup>th</sup> 2012 regarding the evaluation of the borings and steps to be taken. EPA, TCEQ, and Beazer met on April 9<sup>th</sup> 2013 to discuss additional steps to be taken for the proposed remedy.

The Harris County Toll Road Authority (HCTRA) is planning a north-south extension of the Hardy Toll Road, to be built in the rail right-of-way adjacent to the western boundary of the Site. The Toll Road, once constructed as planned, would further separate these industrial properties from the residential areas to the west. The HCTRA is also planning on expanding Collingsworth Street adjacent to the southern boundary of the Site.

The EPA, TCEQ and Beazer have been having discussions with the HCTRA regarding their plans for the

Hardy Toll Road extension and Collingsworth Street expansion. Several meetings and discussions have been held between EPA, TCEQ, Beazer, HCTRA, and City of Houston (COH) personnel to discuss the project. The discussions continue with the HCTRA regarding the plans. HCTRA met with EPA on January 26, 2010 and followed that up with a letter seeking EPA's concurrence on their approach to environmental management practices during construction. EPA has concurred/responded to the specific management practices listed in the letter on February 26, 2010. HCTRA has received approval for the project and soil sampling of the Collingsworth Road along the Site was completed in June. EPA and TCEQ met with ENVIRON (Technical Consultants to the Railroad and to HCTRA) and COH on October 9<sup>th</sup>, 2012 to discuss status of the Railroad relocation of fiber optic lines, the Collingsworth Bridge project, and Toll Road Expansion. EPA and TCEQ have reviewed the Materials Management Plan for the HB&T Passenger Main relocation from the west of the site to the east of the site within the existing railroad right-of-way.

EPA and TCEQ participated in a meeting held by the Ryon Civic Association on February 7, 2013 and presented information on the status of the site. EPA plans to have a community meeting with regards to the Proposed Plan once it is published.

Fieldwork at the Site is being conducted by Beazer to obtain additional soil and groundwater information needed in support of the proposal of a remedial alternative for the contaminated groundwater at the Site. The fieldwork began the week of May 20, 2013 and will continue for 3-4 weeks.

Different remedial alternatives for groundwater have been evaluated. The particular one that is being proposed for the groundwater remediation will be published in a Proposed Plan (Plan) that will include a request for public comments. EPA expects the Plan to be published later this summer. Once the Plan is published, a public meeting will be held by the EPA to present the Plan and to answer any questions. Also, once the Plan is published, the public will have 30 days to submit written comments on the proposed groundwater remedial alternative. The selected remedial alternative will be documented in a Record of Decision (ROD) Amendment and the response to the comments received on the Proposed Plan will be included with the ROD Amendment.

## **Benefits**

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Contaminated soils have been contained and capped in two separate areas of the Site, eliminating any potential for direct contact with impacted soils and ensuring current and future protection of human health and the environment.

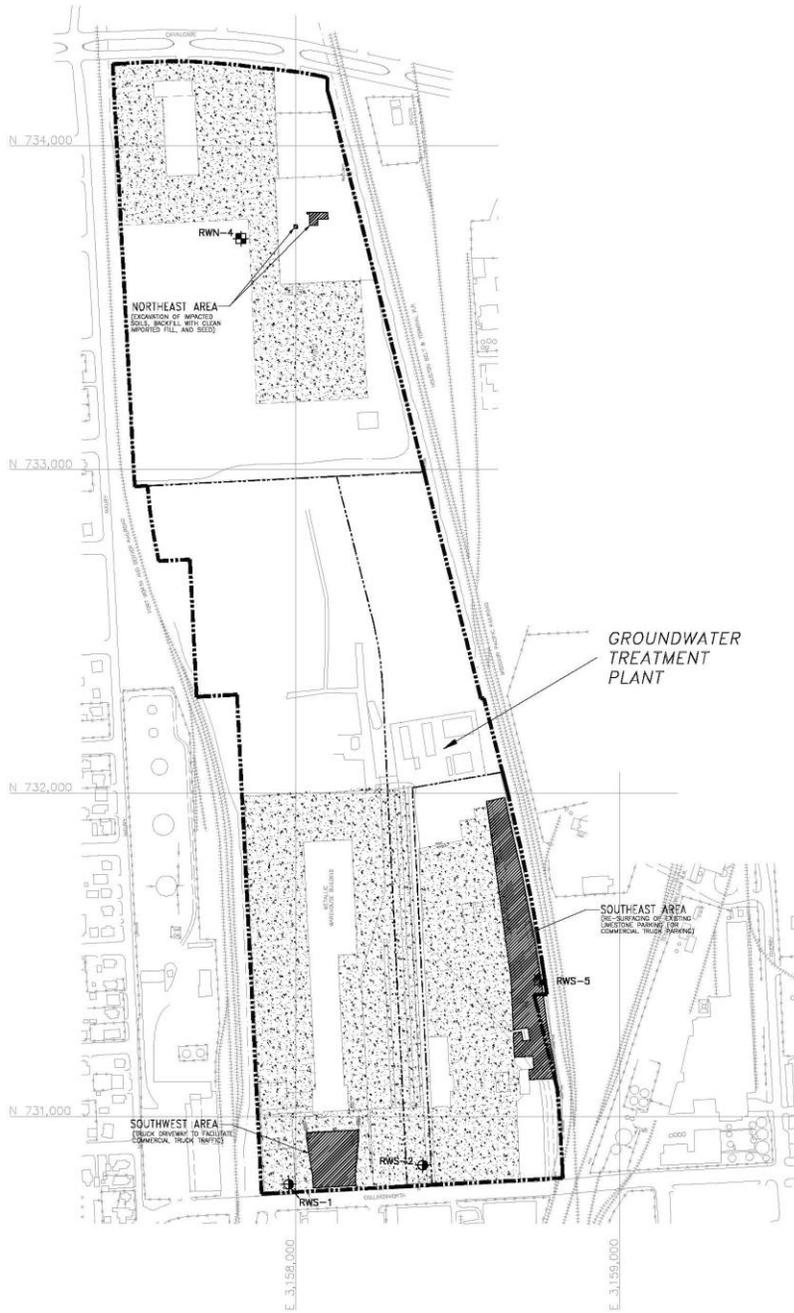
The DNAPL extraction system, in operation since 1996, has removed over 4000 gallons of product. The 1988 Record of Decision requires that ground water extraction continue until contaminants have been removed to the maximum extent practicable, through treatment to drinking water standards and no detectable polynuclear aromatic hydrocarbons (PAHs). That remedial technology is currently being re-evaluated, along with other alternatives. There is, however, no known exposure to contaminated ground water in the area. Drinking water is provided by the City's municipal water system, and there is no indication of private well use down gradient from the Site. Institutional controls have been established at the Site to ensure that future use will remain non-residential and to prohibit on-site ground water use.

## **National Priorities Listing (NPL) History**

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NPL Inclusion Proposal Date: October 15, 1984  
NPL Inclusion Final Date: June 10, 1986  
HRS Score: 38.69





**LEGEND:**

- SOUTH CAVALCADE SITE BOUNDARY
- - - PROPERTY BOUNDARIES
- ▨ AREAS COVERED WITH ASPHALT OR CONCRETE
- ▩ CONCRETE CAP AND EXCAVATION AREAS



REV #	DATE	DESCRIPTION	APPD

KEY ENVIRONMENTAL, INC.	ISSUE DATE:
KEY ENVIRONMENTAL, INC. 200 THIRD AVENUE CARLSBURG, PA 19108	

BEAZER EAST, INC. PITTSBURGH, PENNSYLVANIA	
DRWN: RMC	DATE: 3/1/08
CHKD: RMB	DATE: 3/1/08
APPD: JSZ	DATE: 3/1/08
SCALE:	AS SHOWN
<b>KEY ENVIRONMENTAL</b> INCORPORATED	
SUPPLEMENTAL GROUNDWATER CHARACTERIZATION SOUTH CAVALCADE SUPERFUND SITE HOUSTON, TEXAS	
SITE PLAN	PROJECT NO. 05-113 DRAWING NUMBER FIGURE 3-1

## Wastes and Volumes

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National Lumber and Creosoting Company constructed and operated a wood preserving facility on the Site from 1910 to 1938, at which time the property was acquired by the Wood Preserving Corporation, a subsidiary of Koppers Company. In 1940, that Corporation became a part of Koppers Company, Inc., now known as Beazer East, Inc., and operated the wood treating facility from 1940-1962. Koppers constructed a coal tar distillation plant in the southeastern portion of the Site, which operated from 1944 to 1962, at which time the property was again sold, and later subdivided.

In 1983, the Houston Metropolitan Transit Authority investigated the Site for potential use and found evidence of creosote in the subsurface. The site was referred to the Texas Department of Water Resources (TDWR) for further investigation and, in 1984, recommended to EPA for placement on the National Priorities List (NPL). The Site was added to the final List on June 10, 1986, for further assessment and remedial action.

The two capped areas of contaminated soils, associated with these operations, are shown on the second Site Map. Areas of ground water contamination have been defined for both the shallow and intermediate aquifers, as indicated on the first Site Map.

## Health Considerations

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Primary risk from the site stems from the carcinogenic polynuclear aromatic hydrocarbons (cPAHs), volatile organics, and metal salts associated with creosote and the wood preservation process. These constituents are found both in the contaminated soils and in ground water, as DNAPL and dissolved-phase constituents.

## Record of Decision (ROD)

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The Record of Decision for the Site was signed by EPA on September 26, 1988, and remedies selected for surface soils (0-6"), surficial soils (0-6' below ground surface), and ground water:

**Soils:** The ROD recommended soil flushing and washing to reach a risk-based remedial goal of 700 parts per million for carcinogenic PAHs, based on ingestion and direct contact. A subsequent pilot study demonstrated that the contaminants would not reduce to the required levels. Beazer East, Inc. submitted a proposal to contain contaminated soils under a protective cap. On June 26, 1997, the Regional Administrator signed an Amended ROD to allow contaminants to be sealed and contained under a six-inch thick reinforced concrete cap. Two areas of contaminated soils were capped, with a remedial design that optimized reuse of the property as parking space for trucks. Construction was completed in June 2000.

**Ground Water:** The ROD required the extraction and treatment of contaminated ground water, including the recovery and treatment of a (DNAPL) to the maximum extent practicable. Remaining contamination would then be allowed to naturally attenuate to background levels. The decision document also allowed biological treatment to reach remedial goals.

In 1995, EPA agreed to reconsider the remedial goals outlined in the 1988 ROD against other options, including monitored natural attenuation or a Technical Impracticability (TI) waiver. Beazer East, Inc. has since submitted additional ground water information to support re-evaluation of the remedy and discussion of an appropriate ground water monitoring network. Any new remedial options not specified in the 1988 ROD will be considered through the remedy decision process as a ROD Amendment or Explanation of Significant Differences. See the "Current Status" section for an update on this process.

The third Five-Year Review for the South Cavalcade Superfund Site, signed in September 2012, evaluated the effectiveness of the current remedies in place. In summary, the review found the remedy implemented for contaminated soils to be protective of human health and the environment. The ground water remedy

was also considered protective in the short-term. Once the remedial alternative is selected and implemented the groundwater remedy will continue to be protective in the long-term. The Third Five-Year Review for the South Cavalcade Superfund Site is available at [http://www.epa.gov/region6/6sf/texas/south\\_cavalcade/final-5-year-review-south-cavalcade.pdf](http://www.epa.gov/region6/6sf/texas/south_cavalcade/final-5-year-review-south-cavalcade.pdf).

## Site Contacts

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EPA Superfund Region 6 Toll Free Number: 1-800-533-3508  
TCEQ Superfund Toll Free Number: 1-800-633-9363

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