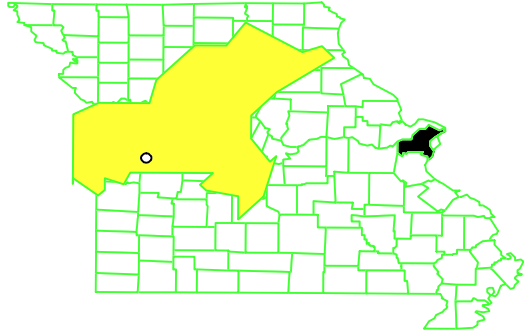


**VALLEY PARK TCE**  
**MISSOURI**  
**EPA ID# MOD980968341**

**EPA Region 7**  
**City: Valley Park**  
**County: St. Louis County**  
**Other Names: TCE Study**

**04/21/2009**



## **SITE DESCRIPTION**

The Valley Park TCE site is located within the city limits of Valley Park. The site boundaries are the extent of a plume of contaminated ground water in the Meramec River alluvial aquifer. In 1982, the Missouri Department of Natural Resources (DNR) detected a number of volatile organic chemicals (VOCs) including trichloroethylene (TCE), tetrachloroethene (PCE), and trichloroethane (TCA) in all three municipal water supply wells serving the community. Private wells within the vicinity of the site are also contaminated with VOCs. However, the private wells reportedly are used only for industrial purposes. There were approximately 3,000 people in the community who had obtained drinking water from the affected ground water.

### **Site Responsibility:**

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

### **NPL LISTING HISTORY**

**Proposed Date:** 04/10/85

**Final Date:** 06/10/86

**Deleted Date:**

## **THREATS AND CONTAMINANTS**

The aquifer poses a potential health threat due to uses of the ground water



contaminated with TCE, PCE and TCA. Those health threats include both area residents and workers. Exposure to contaminants released to the air is possible since industries use the contaminated ground water in the area. Exposure to contaminants in drinking water is possible in the future since the contaminated ground water could migrate to the Kirkwood water supply, if not controlled within Valley Park.

## CLEANUP APPROACH

### Response Action Status

**Immediate Actions:** In 1986, Valley Park installed aeration equipment at its water treatment plant to remove the VOCs that had been detected in the drinking water. In 1989, Valley Park was connected to the St. Louis County public water system, which now supplies its drinking water. Since Valley Park was connected to the County public water system, the residents no longer are using contaminated water for domestic purposes. In 1990, a responsible party removed 331 cubic yards of PCE- and TCE-contaminated soil and backfilled the area. The predetermined cleanup levels were not attained; however, planned studies and future activities were expected to attain the cleanup levels.

**Entire Site:** Under supervision by the DNR, one responsible party agreed to conduct a site investigation on their property. In the fall of 1994, EPA selected a remedy for cleanup of the Wainwright operable unit. The remedy included: limited soil excavation; soil vapor extraction (SVE) and after 5 years, additional soil excavation if needed; air sparging to accelerate the soil cleanup; ground water extraction and treatment by air stripping; discharge of treated ground water into a public storm sewer; and ground water monitoring. During negotiations with Wainwright, DNR and EPA agreed to modify the remedy by replacing in-situ SVE with ex-situ SVE and deleting the air-sparging. This change was completed in 1996 with an Explanation of Significant Differences (ESDs) document. Wainwright Industries signed a consent decree with DNR in 1996 to implement the remedy.

The investigation for the operable unit two, the area-wide ground water problem, began in 1997 and was completed in 2001, when EPA and DNR selected a remedy. This remedy includes: limited soil excavation followed by ex-situ SVE at a second source area; in-situ SVE at the second source area; ground water extraction and treatment with air stripping, and reinjection downgradient of the second source area; and, finally, installation of air stripping systems on two industrial wells located within the contaminated aquifer.

During the design process for operable unit 2, several changes to the selected remedy were identified: 1) offsite disposal of contaminated soils replaced ex-situ SVE due to a lack of required treatment space; 2) discharge of treated ground water to a storm sewer replaced reinjection due to locating a previously unknown sewer line; and, 3) deletion of air strippers on

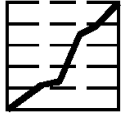
the two industrial wells after sampling and risk analysis did not identify an unacceptable risk level. These changes were documented in a 2005 Explanation of Significant Differences.

In 2006, EPA's construction contractor completed the 5000 cubic yard soil excavation, and constructed the ground water extraction well and air stripper treatment system, the in-situ SVE treatment system, and the ground water monitoring network. The EPA Operation and Functional period was completed in 2008.

**Site Facts:** Wainwright Industries entered into an administrative order with DNR in 1991 to conduct the remedial investigation for operable unit one. Subsequently, Wainwright entered into a consent decree with DNR in 1995 to implement the remedy for operable unit one. Negotiations with responsible parties for operable unit two resulted in settlements with EPA amounting to \$500,000 for use in implementation of the remedy.

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## ENVIRONMENTAL PROGRESS



By connecting the public water supply to the County water system, the potential for exposure to contaminated drinking water was reduced at the Valley Park TCE site while final cleanup remedies were planned. The design for the Wainwright source was completed in 1998. Implementation began in 1998, and construction activities were completed in 1999. The soil source cleanup was completed as designed. However, the ground water extraction and treatment process was suspended in 1999 due to the occurrence of methyl, tertiary butyl ether (MTBE) in the incoming ground water. The MTBE source is unrelated to the Wainwright source and caused unacceptable removal efficiencies. After significant delays due to technical and legal problems, the ground water system was modified and began operating at full, design capacity in 2004. Also, the in-situ soil vapor extraction system began operation in 2004.

EPA completed the design for operable unit two - the area-wide ground water plume - in 2005. Also in 2005, EPA awarded the construction contract which achieved construction completion of the ground water and soil treatment systems in 2006.

Two Five Year Reviews have been conducted, in 2003 and 2008. The 2008 review identified several operational issues which could affect the long-term protectiveness of the remedies for both source areas, and the review recommended a vapor intrusion study to check ambient air in commercial and residential buildings located immediately adjacent to the two source areas. Based upon available data, the review concluded that the remedy is currently protective.

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## COMMUNITY INVOLVEMENT

EPA and DNR have conducted periodic community outreach efforts to coincide with cleanup activities.

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## SITE REPOSITORY



Valley Park City Library,  
320 Benton Street,  
Valley Park, MO 63088

Superfund Records Center  
901 N. 5th St.  
Kansas City, KS 66101  
Mail Stop SUPR  
(913)551-7166

## REGIONAL CONTACTS

**SITE MANAGER:**

**E-MAIL ADDRESS:**

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**COMMUNITY INVOLVEMENT**

**COORDINATOR:**

**PHONE NUMBER:**

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**STATE CONTACT:**

**PHONE NUMBER:**

Wane Roberts

(573) 526 - 7309

## MISCELLANEOUS INFORMATION

**STATE:**

MO

077F

**CONGRESSIONAL DISTRICT:**

02

**EPA ORGANIZATION:**

SFD-MOKS

## MODIFICATIONS

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