OAK GROVE VILLAGE WELL

MISSOURI EPA ID# MOD981717036 EPA Region 7

City: Oak Grove Village/Sullivan County: Franklin County

Other Names:

02/11/2009



### SITE DESCRIPTION

The Oak Grove Village Well site is a federal-lead Superfund site that has an unattributed and undefined tricholoethylene (TCE) ground water plume. TCE has been detected in the Oak Grove Village municipal drinking water well above the maximum contaminant level (MCL) since 1986. Oak Grove Village is a small rural community, with a population of about 420 people. It is adjacent to and northeast of the city of Sullivan, Missouri, which has an approximate population of 6,400. The Oak Grove Village Well site is located on the Sullivan 7.5-minute quadrangle map in Sections 4 and 9, Township 40 North, Range 2 West. The site is underlain by dolomitic formations of the Ordovician and Cambrian Age that lend themselves to karst features including springs, sinkholes, and losing streams. Regionally, the ground water flow direction is parallel to the major surface-water drainages, which trend north to northeast, causing the ground water flow in Oak Grove Village and the city of Sullivan to vary from an easterly direction to a northeast direction. However, due to the karst terrain, ground water flow in the Oak Grove Village/Sullivan area is complicated by the possibility of fractures and subsurface conduits that run beneath the site.

The site is divided into two operable units. Operable Unit 1 (OU1) consists of the OGV wells, the Highway AF wells, and the area west and south of the Oak Grove Village wells. Operable Unit 2 (OU2) consists of the closed Sullivan Landfill and/or other unknown potential source areas, wells and springs around the closed Sullivan Landfill, the Meramec River, and the La Jolla Spring cave complex.

#### **Site Responsibility:**

The site is being addressed through federal and state actions.

NPL LISTING HISTORY

**Proposed Date:** 09/13/2001

**Final Date:** 09/05/2002

**Deleted Date:** 

#### THREATS AND CONTAMINANTS



TCE contamination has been known to be present in the Oak Grove Village municipal well since 1986. Private and public wells scattered within a three mile radius of the Oak Grove Village well have also shown TCE at detectable levels. Franklin County residents use the ground water for drinking purposes, which raises a concern regarding ingestion. Inhalation is also a factor as the ground water is used for household activities such as showering, cooking, and washing dishes and clothing. There has also been significant detections of TCE in the air inside a local cave complex.

#### CLEANUP APPROACH

#### **Response Action Status**



**Initial Actions:** In 2001, based on a health consultation by the Agency for Toxic Substances and Disease Registry (ATSDR) and the Missouri Department of Health (MDOH), EPA initiated a Time Critical Removal Action. This action provided two whole-house filtration systems for private wells that had TCE detected above the maximum contaminant level (MCL) established by EPA.



**Site Studies:** A full-scale Remedial Investigation/Feasibility Study has been completed for OU1. Additional investigation is needed on OU2 before the nature and extent of the ground water contamination at the site can be identified.



**Remedy Selected:** An interim remedy has been selected for OU1. The major components of the selected interim remedy include:

- 1) Properly plug and abandon the Oak Grove Village Well 01 to prohibit exposure to contamination in ground water.
- 2) Provide an alternate water supply via the public water distribution system to homes with residential wells and businesses with commercial/industrial wells that

have site contamination in ground water that exceeds the cleanup level and are within the feasible limits of a public water distribution system. Provide private wellhead treatment systems for residential and commercial/industrial wells found outside the feasible limits of extending water lines to a public water distribution system.

- 3) Conduct ground water sampling of residential and commercial/industrial wells with treatment at wellhead, and of residential, commercial/industrial, municipal, and monitoring wells, which are part of the OU1 well inventory. The sampling of wells, which are part of the well inventory, would ensure the safety of the water sources supplied to homes and businesses and would detect any new wells that may exceed the cleanup level. Once a well exceeds the cleanup level, it would be connected to an alternate water supply (city water) or a private treatment system would be installed at the wellhead to prevent continued exposure to site contamination in ground water.
- 4) Monitor Oak Grove Village Well 02 to ensure that the air stripper continues to provide a clean water supply to Oak Grove Village, while remediating the ground water within the cone of capture of OGV02.
- 5) Implement informational institutional controls (ICs), including the development and distribution of educational materials to raise future awareness of the site contamination. Signs would be placed on wells that are replaced by a private wellhead treatment system indicating the appropriate uses of the well. The need for any additional ICs will be evaluated over the course of this interim action. If additional ICs are necessary, they will be implemented as part of the final remedy.
- 6) Five-year reviews of OU1 would be conducted since contamination in ground water would remain onsite.



**Remedy Design:** The remedial design to implement the remedy selected in the interim Record of Decision (ROD) for OU1 was completed in September 2008. The Remedial Design Plan included five components:

- 1) The Sampling and Analysis Plan;
- 2) The plan for the Implementation of Informational ICs;
- 3) The plan for Well Abandonment;
- 4) The Technical Data Summary; and
- 5) The Operation and Maintenance Plan.



Cleanup Ongoing: The remedial action for the site started in September 2008. The first round of ground water sampling was collected in November 2008. The abandonment of an Oak Grove Village municipal well (01) and a monitoring well (MW2) has been initiated and the wells are scheduled to be closed by the end of February 2009.

#### ENVIRONMENTAL PROGRESS

Oak Grove Village has installed a new municipal well with a well-head treatment system, and residents within Oak Grove Village are receiving clean water. Two private homes with TCE detected above the MCL have been provided household filtration units, and other homes are being monitored on a regular basis. Therefore, the potential for exposure to contaminated drinking water has been reduced while investigations continue in order to determine the nature and extent of the TCE contamination.

## **COMMUNITY INVOLVEMENT**

A public meeting to share the Proposed Plan to address contamination at the Oak Grove Village Well Site was held on September 15, 2005, at the Eagles Hall in Sullivan, Missouri.

Fact Sheet for Proposed Plan and Public Meeting

Faxed to Sen. Christopher Bond, Columbia Office on September 1, 2005

Faxed to Sen. Jim Talent, Jefferson City Office on September 1, 2005

Faxed to Rep. Kenny Hulshof, Columbia Office on September 1, 2005

Mailed to site mailing list on September 6, 2005

Notification letter extending the public comment period an additional 30 days was distributed to mailing list on September 23, 2005

Display Ad to Announce Public Meeting

Placed ad in Cuba Free Press on August 25, 2005

Placed ad in Sullivan Independent News on August 31, 2005

Placed an ad to extend public comment period in the Sullivan Independent News on September 21, 2005



OakGrove.FactSheet.Sept2005.final.doc

## SITE REPOSITORY



Oak Grove Village City Hall 260 James Street Oak Grove Village, MO 63080 Superfund Records Center 901 N. 5th St. Kansas City, KS 66101 Mail Stop SUPR (913)551-7166

## REGIONAL CONTACTS

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**COORDINATOR:** 

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## MISCELLANEOUS INFORMATION

STATE: MO

07PZ

CONGRESSIONAL DISTRICT: 9

**EPA ORGANIZATION:** SFD-MOKS

# **MODIFICATIONS**

Created by: Tonya Created Date: 06/17/2002 01:21 PM

Howell/SUPR/R7/USEPA/U

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