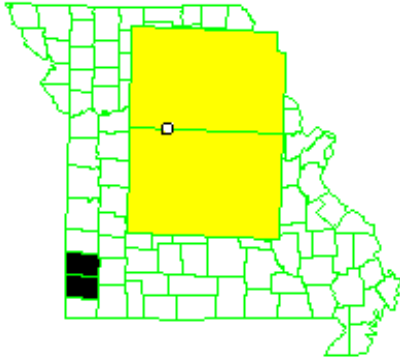


NEWTON COUNTY WELLS
MISSOURI
EPA ID# MOD985798339

EPA Region 7
City: Joplin
County: Newton
Other Names: FAG Bearings

02/11/2009



SITE DESCRIPTION

The Newton County Wells site is located in northern Newton County, in and near Joplin, in southwest Missouri. The site extends approximately 2 1/2 miles north to south and approximately 1 mile east to west and is located around the FAG Bearings property. From approximately 1972 to 1982, FAG Bearings manufactured steel balls used in the assembly of ball bearings. As part of that manufacturing process, trichloroethene (TCE) was used as a degreaser. TCE use was discontinued in 1981, shortly before halting the manufacture of steel balls. The site was initially identified in 1991 following a sampling event at the International Paper (IP) State Registry site by the Missouri Department of Health (MDOH). MDOH sampled the closest wells downgradient of the IP site, all located approximately one mile south of IP in the village of Silver Creek. TCE and cis-1,2-dichloroethylene (cis-1,2-DCE), which are not associated with the wood treatment wastes at the IP site, were detected in two of the residential wells, both located on Moorhead Drive, directly south of the FAG Bearings property in the village of Silver Creek. TCE and cis-1,2-DCE were detected at concentrations exceeding the Maximum Contaminant Level (MCL) established by EPA. Based on the detection of elevated concentrations of TCE in one of the original wells, nine other residential wells along Moorhead Drive were sampled to confirm the presence of TCE in the ground water. Results of the initial well sampling indicated that homes located along FAG Bearings' southern property had the highest incidence and concentrations of TCE in Silver Creek Village. EPA and the Missouri Department of Natural Resources (MDNR) were notified and conducted follow-up sampling and analysis.

Site Responsibility:

NPL LISTING HISTORY

The site is being addressed through federal, state and potentially responsible party (PRP) actions.

Proposed Date: 01/19/99

Final Date: 07/27/2000

Deleted Date:

THREATS AND CONTAMINANTS



TCE contamination was found as far as two miles south of the FAG Bearings property in the village of Saginaw, Missouri. TCE and TCE degradation products present in the soil and ground water at the site are a result of the cutting of and accidental release of TCE from the former TCE transfer pipeline on the FAG Bearings property. TCE and TCE degradation products are present in their dissolved phase in the uppermost ground water and the Mississippian Aquifer beneath the site. The occurrence of low concentrations of TCE and TCE degradation products in surface water bodies at the site is a result of discharge of the Mississippian Aquifer to those surface water bodies via springs.

Newton County residents use the ground water for drinking purposes. Residents, in Saginaw and Silver Creek who wanted to be included have been placed on a public water supply which is not contaminated.

CLEANUP APPROACH

Response Action Status

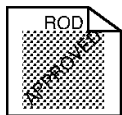


Initial Actions: In 1991, EPA initiated a Time Critical Removal Action to provide bottled water to the residents of Silver Creek. In January 1992, construction was initiated to connect residents of Silver Creek and Saginaw to the public water supply operated by the Missouri American Water Company. In July 1992, EPA started providing bottled water to the residents of Saginaw. A public water supply system was provided for Saginaw in 1994.



Site Studies: A Removal Assessment was conducted on the FAG Bearings property. The Removal Assessment concentrated on a known source area of TCE contamination. Once the Removal Assessment was complete, several different removal alternatives were evaluated for reducing the impact of that source on the

Newton County Wells Site. During this evaluation, in-situ chemical oxidation of the TCE in the pipeline trench (source) was determined to be the best alternative. From January 2002 to May 2003, multiple injections of potassium permanganate were used to effectively treat the TCE source area.



Remedy Selected: A full-scale Remedial Investigation/Feasibility Study has been completed that documents the nature and extent of the ground water contamination at the site. This investigation included looking at the ground water and bedrock dynamics throughout Silver Creek and Saginaw.

A Record of Decision (ROD) for the site was signed September 30, 2004. As outlined in the ROD, institutional controls (ICs) will be implemented at the site to enhance protectiveness. The ICs will be enforced and monitored by MDNR. The objective of imposing regional ICs is to eliminate or minimize exposures to contaminated ground water.

The following will be accomplished through the use of ICs:

- 1) Preventing installation of wells for domestic purposes into the contaminated portion of the Mississippian Aquifer;
- 2) Preventing cross contamination between contaminated portions of the Mississippian Aquifer and deeper aquifers;
- 3) Preventing residents from utilizing existing wells that were placed in the contaminated portions of the Mississippian Aquifer;
- 4) Requiring plugging of existing wells that present a potential threat to ground water; and
- 5) Monitoring the usage of the public water supply system by MDNR and MDHSS to ensure continued use and protection of that system.

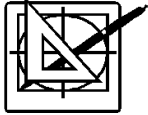
In addition to the ICs, MDNR will continue to provide public outreach and informational activities with respect to ground water quality in the site area to ensure continued compliance with existing regulations, as well as to communicate risks and well construction requirements to residents who may move into the area in the future.

The selected remedy will use monitored natural attenuation (MNA):

- 1) to confirm that the Removal Action destroyed all of the principal threat waste;
- 2) to confirm that TCE levels are decreasing after the destruction of the principal threat waste;
- 3) to ensure degradation products do not pose a risk as TCE breaks down within the aquifer; and
- 4) to ensure that the ground water plume does not migrate to new receptors.

Sampling events will be conducted over specified timeframes. The data from these sampling events will demonstrate that the hydrodynamic dispersion process is

continuing to reduce levels of contaminants of concern (COCs) to obtain the Remedial Action Objectives. If the sampling events do not demonstrate that hydrodynamic dispersion is an effective process within five years, then a contingency to revert to ISCO in the uppermost groundwater will be utilized.



Remedy Design: The Remedial Design (RD) was completed in December 2006. Consistent with the "Guidance on Expediting Remedial Design and Remedial Action," the RD process for the site was ideally suited for an expedited or fast-track approach. By using the expedited approach, the time period to complete the RD was shortened, which allowed implementation of the Remedial Action (RA) to start sooner.



Cleanup Ongoing: The Remedial Action for the site started in December 2006. All institutional controls at the site have been implemented. In April 2008, residential wells that needed to be abandoned to prevent ongoing contamination of the aquifer were decommissioned. These wells have since been properly closed. Quarterly ground water monitoring to evaluate natural attenuation at the site is ongoing.

Site Facts:

ENVIRONMENTAL PROGRESS



By connecting the residents of Silver Creek and Saginaw to a public water supply, the potential for exposure to contaminated drinking water has been reduced while efforts to remediate the ground water aquifer are ongoing.

COMMUNITY INVOLVEMENT

EPA ensures community members know about and participate in site issues and activities. Region 7 has assigned an EPA Community Involvement Coordinator to the site to answer community member/elected official/media questions and concerns; made the community aware of the Superfund Technical Assistance Grant; conducted community interviews; implemented a community involvement plan; briefed community members, elected officials and the media on site activities; held public meetings and/or public availability sessions; developed/mailed site specific fact sheets; and published display ads in local newspapers. The community involvement activities have been on-going since the site was proposed to the NPL.

SITE REPOSITORY



Joplin Public Library
300 South Main Street
Joplin, MO 64801

(417) 623-7953

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

REGIONAL CONTACTS

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COMMUNITY INVOLVEMENT

COORDINATOR:

PHONE NUMBER:

E-MAIL ADDRESS:

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STATE CONTACT:

PHONE NUMBER:

Don Van Dyke
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MISCELLANEOUS INFORMATION

STATE:

MO
07HK

CONGRESSIONAL DISTRICT:

07

EPA ORGANIZATION:

SFD-SUPR/MOKS

MODIFICATIONS

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