United States Environmental Protection Agency
Region V
POLLUTION REPORT

Date: Tuesday, May 6, 2008
From: Steven Renninger

To:

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Subject: Behr VOC Plume - EPA Fund Lead Removal
919 North Keowee Street, Dayton, OH
Latitude: 39.7739250
Longitude: -84.1814060

POLREP No.:	4	**Site #:**	B5FH
Reporting Period:	2/18/08 through 5/2/08	**D.O. #:**	0091
Start Date:	11/2/2007	**Response Authority:**	CERCLA
Mob Date:	11/2/2007	**Response Type:**	Time-Critical
Demob Date:		**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Action
CERCLIS ID #:		**Contract #**	68-S5-03-06
RCRIS ID #:			

Site Description

The Behr VOC Plume (EPA Fund Lead Removal) and the Behr VOC Plume Site (funded by Chrysler) are simultaneous removal actions at the same site. This POLREP is for the Behr VOC Plume (EPA Fund Lead Removal). For further information on the Behr VOC Plume Site (Chrysler funded) see the following link:

"http://www.epaosc.net/behrvocplume"

The Behr Dayton Thermal Products Facility (Behr-Dayton facility) is located at 1600 Webster Street, Dayton, Montgomery County, Ohio. The Behr-Dayton facility manufactures vehicle air conditioning and engine cooling systems at the facility. Chrysler Corporation owned and operated the Behr-Dayton facility from at least 1937 until April of 2002.

The groundwater beneath the Behr-Dayton facility is contaminated with volatile organic compounds, including trichloroethene (TCE). Chrysler contracted Earth Tech to design, install, and operate two systems for the remediation of soil and groundwater contamination under the Behr-Dayton facility, with TCE as the main contaminant of concern. Earth Tech installed a Soil Vapor Extraction (SVE) system on the Behr-Dayton facility property for soil remediation and began operation in October 2003. The system was operated through December 2005.

Earth Tech installed a groundwater remediation system on the Behr-Dayton facility property and began operation in June 2004.

The TCE-contaminated ground water has migrated from the Behr-Dayton facility to the south/southwest through residential, commercial and industrial areas.

Earth Tech has conducted groundwater monitoring on a network of 75 on-site and off-site groundwater monitoring wells since 2001. In 2003, the following monitoring wells were sampled and contained

elevated levels of TCE: MW010s (17,000 ppb), MW028s (9,600 ppb), and MW029s (16,000 ppb). These monitoring wells are located along the southern perimeter of the Behr-Dayton facility (MW010s) or in the adjacent neighborhood (MW028s and MW029s).

On September 28, 2006, Earth Tech submitted quarterly groundwater sampling results to Ohio EPA. In the report, Earth Tech stated that one shallow groundwater monitoring well, MW038s, which is located at the intersection of Daniel Street and Lamar Street (residential area south of Behr Dayton facility), contained a TCE concentration of 3,900 parts per billion (ppb). Groundwater in the area of the Behr-Dayton facility is located approximately 20 feet below ground surface.

On October 16, 2006, Ohio EPA installed a total of seven soil gas probes along Daniel Street, Lamar Street and Milburn Avenue to evaluate potential risk posed by vapor intrusion from a VOC groundwater plume. The depth of the soil gas probes were approximately one to two feet above the depth of groundwater, which was determined to be approximately 20 feet below ground surface. Once the soil probes were installed, an air sample was collected and analyzed for VOCs. Ohio EPA soil gas analytical results detected TCE concentrations as high as 160,000 ppb.

On November 6, 2006, Ohio EPA formally requested U.S. EPA to conduct a time-critical removal action to assess whether vapor intrusion was occurring at the site.

Vapor Intrusion is the migration of volatile organic compounds from contaminated shallow groundwater to soil gas to the indoor air of properties. ATSDR and the Ohio Department of Health (ODH) established TCE screening levels for residential and commercial sub-slab and indoor air. The ATSDR and ODH residential indoor air screening level is 0.4 ppb and the residential sub-slab screening level is 4 ppb. The ATSDR and ODH commercial indoor air screening level is 1.7 ppb and the commercial sub-slab screening level is 17 ppb.

In November 2006, U.S. EPA conducted a site assessment in the residential neighborhood immediately south of the Behr-Dayton facility. U.S. EPA tasked WESTON START to collect sub-slab vapor probe and indoor air samples from eight residences. Analytical results indicated that eight sub-slab vapor probe air samples had TCE vapor levels greater than the ATSDR and ODH screening level of 4 ppb, and five sub-slab vapor probe air samples have a TCE vapor level greater than the ATSDR immediate action level of 1,000 ppb, with a maximum TCE concentration of 62,000 ppb.

Analytical results indicated all eight residences which were sampled showed TCE vapor levels greater than the ATSDR screening level of 0.4 ppb, and three residences with an indoor air sample having a TCE vapor level greater than the ATSDR immediate action level of 100 ppb, with a maximum TCE vapor level of 260 ppb.

Based on analytical results and conditions during the 2006 Site Assessment, the Site met the criteria for a removal action as outlined in 40 CFR 300.415(b)(2). The chemicals detected at the Site pose an imminent health threat and present a danger to individuals occupying the residential structures at the Site.

In December 2006, Chrysler signed an Administrative Order on Consent (AOC) to conduct a removal action at the site. The removal action involves conducting a vapor intrusion investigation and installing vapor abatement systems in residential, commercial and industrial facilities that have indoor and sub-slab air concentrations greater than the ATSDR and ODH screening levels of 0.4 and 4 ppb, respectively.

From January through December 2007, Chrysler has sampled over 80 residential, commercial and industrial locations. Chrysler has submitted two work plans (Phase I and Phase II) to summarize and detail removal activities. A total of 35 vapor abatement systems have been installed in a combination of residential and commercial structures by Chrysler contractors. Chrysler will continue to conduct vapor intrusion sampling in the areas outlined in the Phase I and II work plans. For further information on the Behr VOC Plume Site (Chrysler funded) see the following link:

"http://www.epaosc.net/behrvocplume"

In August 2007, U.S. EPA issued a letter to Chrysler requesting Chrysler to conduct vapor intrusion sampling in an area of the McCook Field Neighborhood bordered to the north by Protzman Street, to the east by Kiser Street and to the south by State Route 4. 2007 groundwater and soil gas data indicated the potential for vapor intrusion in the area where additional removal work was required.

In October 2007, Chrysler issued a letter to U.S. EPA formally stating that they do not intend to conduct vapor intrusion sampling in the area U.S. EPA requested in August 2007.

Following a dispute resolution, on November 8, 2007, the U.S. EPA submitted a letter to Chrysler indicating that U.S. EPA would be initiating a fund-lead removal action within the McCook Field Neighborhood including residential sampling and mitigation.

On November 15, 2007, a U.S. EPA public meeting was conducted at Kiser Elementary School to update the community on the upcoming U.S. EPA-funded vapor intrusion investigation sampling within the McCook Field Neighborhood. Approximately 140 people attended the public meeting.

From November, 2007 - January 2008, EPA completed the following activities: 1) established a Command Post at 919 N. Keowee St; 2)sampled 127 residences; and 3) installed 19 residential vapor abatement mitigation systems.

From January 2008 through February 17, 2008, EPA sampled 68 residences and installed 28 residential vapor abatement mitigation systems.

Current Activities

Week of February 18, 2008
U.S. EPA collected 11 indoor air samples and 10 sub-slab air samples from 11 residential locations within the southern McCook Field Neighborhood. In addition, U.S. EPA collected vapor abatement mitigation system 30-day proficiency air samples (indoor and sub-slab samples) from 5 residential homes. Samples are being collected and analyzed by an off-site commercial laboratory.

During the week, U.S. EPA installed 5 vapor abatement mitigation systems.

Week of February 25, 2008
U.S. EPA collected 11 indoor air samples and 5 sub-slab air samples from 11 residential locations within the southern McCook Field Neighborhood. In addition, U.S. EPA collected vapor abatement mitigation system 30-day proficiency air samples (indoor and sub-slab samples) from 5 residential homes. Samples are being collected and analyzed by an off-site commercial laboratory.

During the week, U.S. EPA installed 5 vapor abatement mitigation systems.

Week of March 3, 2008
U.S. EPA collected 5 indoor air samples and 5 sub-slab air samples from 5 residential locations within the southern McCook Field Neighborhood. In addition, U.S. EPA collected vapor abatement mitigation system 30-day proficiency air samples (indoor and sub-slab samples) from 12 residential homes. Samples are being collected and analyzed by an off-site commercial laboratory.

During the week, U.S. EPA installed 4 vapor abatement mitigation systems.

Week of March 10, 2008
U.S. EPA collected 8 indoor air samples from 5 residential locations within the southern McCook Field Neighborhood. In addition, U.S. EPA collected vapor abatement mitigation system 30-day proficiency air samples (indoor and sub-slab samples) from 5 residential homes. Samples are being collected and analyzed by an off-site commercial laboratory.

During the week, U.S. EPA installed 1 vapor abatement mitigation system.

Week of March 17, 2008
U.S. EPA collected 13 indoor air samples and 10 sub-slab air samples from 13 residential locations within the southern McCook Field Neighborhood. In addition, U.S. EPA collected vapor abatement mitigation system 30-day proficiency air samples (indoor and sub-slab samples) from 3 residential homes. Samples are being collected and analyzed by an off-site commercial laboratory.

During the week, U.S. EPA installed 6 vapor abatement mitigation systems.

Week of March 24, 2008
U.S. EPA collected 10 indoor air samples and 9 sub-slab air samples from 10 residential locations within the southern McCook Field Neighborhood. In addition, U.S. EPA collected vapor abatement mitigation system 30-day proficiency air samples (indoor and sub-slab samples) from 5 residential homes. Samples are being collected and analyzed by an off-site commercial laboratory.

Week of March 31, 2008
U.S. EPA collected 5 indoor air samples and 5 sub-slab air samples from 5 residential locations within the

southern McCook Field Neighborhood. In addition, U.S. EPA collected vapor abatement mitigation system 30-day proficiency air samples (indoor and sub-slab samples) from 5 residential homes, 60-day proficiency air samples from 2 residential homes and 90-day proficiency air samples from 8 residential homes. Samples are being collected and analyzed by an off-site commercial laboratory.

During the week, U.S. EPA installed 8 vapor abatement mitigation systems.

Week of April 7, 2008
U.S. EPA collected 1 indoor air sample and 1 sub-slab air sample from 1 residential location within the southern McCook Field Neighborhood. In addition, U.S. EPA collected vapor abatement mitigation system 30-day proficiency air samples (indoor and sub-slab samples) from 2 residential homes, 60-day proficiency air samples from 1 residential home and 90-day proficiency air samples from 4 residential homes. Samples are being collected and analyzed by an off-site commercial laboratory.

During the week, U.S. EPA installed 1 vapor abatement mitigation system.

Week of April 14, 2008
U.S. EPA collected 2 indoor air samples from 2 residential location within the southern McCook Field Neighborhood. In addition, U.S. EPA collected vapor abatement mitigation system 30-day proficiency air samples (indoor and sub-slab samples) from 7 residential homes and 90-day proficiency air samples from 2 residential homes. Samples are being collected and analyzed by an off-site commercial laboratory.

During the week, U.S. EPA installed 6 vapor abatement mitigation systems.

Week of April 21, 2008
U.S. EPA collected vapor abatement mitigation system 90-day proficiency air samples from 10 residential homes. Samples are being collected and analyzed by an off-site commercial laboratory.

During the week, U.S. EPA installed 3 vapor abatement mitigation systems.

Week of April 28, 2008
U.S. EPA collected vapor abatement mitigation system 30-day proficiency air samples (indoor and sub-slab samples) from 2 residential homes and 90-day proficiency air samples from 9 residential homes. Samples are being collected and analyzed by an off-site commercial laboratory.

During the week, U.S. EPA installed 5 vapor abatement mitigation systems.

PROJECT SUMMARY:

As of May 2, 2008, U.S. EPA has sampled 266 out of 333 locations within the southern McCook Field Neighborhood.

A total of 137 of 266 locations show indoor air TCE levels greater than the TCE indoor air screening level of 0.4 ppbv.

A total of 42 of 266 locations are in the quarterly sampling program (indoor air below screening level and sub-slab air above screening level).

A total of 92 vapor abatement systems have been installed to date.

Dayton Metro Housing Authority (DMHA) will relocate residents at the Parkside Complex by June 1, 2008. 22 of 26 resiential buildings are documented with elevated levels of TCE in indoor air. Relocation plans were already in place prior to TCE sampling.

A total of 87 of 266 locations require "No Further Action" due to air sampling showing TCE levels less than the screening levels.

A total of 15 of the 266 locations "Denied Access" for EPA vapor intrusion sampling.

Planned Removal Actions
1. U.S. EPA to continue installing vapor abatement mitigation systems in residential locations within southern McCook Field Neighborhood and west of I-75 (Hall Ave area) that show indoor and sub-slab TCE concentrations greater than the screening levels established by the Ohio Department of Health.
2. U.S. EPA to continue, as necessary, vapor intrusion baseline sampling in residential locations within

southern McCook Field Neighborhood.
3. U.S. EPA to continue 30 and 90 day proficiency sampling of the installed-vapor abatement systems.
4. U.S. EPA to distribute Operation and Maintenance Information binders to the owners and/or tenants of the locations where vapor abatement systems were installed.

Next Steps

1. U.S. EPA to continue meeting with residents face-to-face that require a vapor abatement system. The meeting explains, in full detail, U.S. EPA sub-slab and/or indoor air sampling, and seeks owner permission to install the mitigation system.

Key Issues

1. TCE-contaminated groundwater is causing elevated levels of TCE vapors to migrate via soil gas into structures (vapor intrusion).
2. U.S. EPA has established a command post located at 919 North Keowee Street, Dayton, Ohio, 45404. Call 937-262-7919 for information.
3. EPA sampling at the DMHA Parside Complex has revealed elevated levels of TCE (>indoor air screening levels) in 22 of 26 residential buildings. EPA and Montgomery County Health Department meet with DMHA on a weekly basis to review DMHA's plan to relocate residents from buildings. All residents will be relocated from the Parkside Complex by June 1, 2008.
4. As of May 2, 2008, U.S. EPA has sampled 266 out of 333 locations within the southern McCook Field Neighborhood. A total of 137 of 266 locations show indoor air TCE levels greater than the TCE indoor air screening level of 0.4 ppbv. A total of 92 vapor abatement systems have been installed to date.
5. EPA will begin installing vapor abatement mitigation systems at 42 locations meeting the criteria for quarterly sampling. System installation will take the place of additional quarterly sampling.

response.epa.gov/behrvocplumeepafundleadremoval