United States Environmental Protection Agency
Region V
POLLUTION REPORT

Date: Wednesday, November 28, 2007
From: Steven Renninger

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Subject: INITIAL
Delphi VOC Plume Site
2701 Home Avenue, Dayton, OH
Latitude: 39.7474512
Longitude: -84.2382886

POLREP No.:	1	**Site #:**	B5KG
Reporting Period:	October - November 2007	**D.O. #:**	
Start Date:	11/5/2007	**Response Authority:**	CERCLA
Mob Date:	11/5/2007	**Response Type:**	Time-Critical
Demob Date:		**NPL Status:**	
Completion Date:		**Incident Category:**	Removal Action
CERCLIS ID #:		**Contract #**	
RCRIS ID #:			

Site Description

The Delphi VOC Plume Site is located at 2701 Home Avenue, Dayton, Montgomery County, Ohio, including a nearby residential area, approximately 1 mile west of the Downtown Dayton. Delphi Automotive Holdings Group of Delphi Corporation (Delphi) owns and operates the Home Avenue facility. Delphi manufactures vehicle engine mounts and brake products at the facility. The facility was previously owned by General Motors, Corp.

The groundwater beneath the Delphi facility is contaminated with volatile organic compounds, including Chloroform, trichloroethene (TCE), and tetrachloroethene (PCE). Delphi installed a Soil Vapor Extraction system on the Delphi facility property for soil remediation and began 24-hour operations in 2007.

The TCE, PCE, and Chloroform contaminated ground water has migrated to the Southeast and to the Northeast to a residential area adjacent to the Delphi facility, including but not limited to Cowart Avenue, Bish Avenue, and South Ardmore Avenue.

From April 2005 through September 2006, Delphi installed a total of one hundred twenty-eight soil gas probes along Cowart Avenue, Bish Avenue and South Ardmore Avenue to evaluate the potential risk posed by vapor intrusion from a VOC groundwater plume originating from the UST area. Groundwater was determined to be approximately sixteen to eighteen feet below ground surface. Once the soil probes were installed, an air sample was collected and analyzed for VOCs.

Delphi analytical results documented soil gas with elevated VOC concentrations. Soil gas monitoring indicated chloroform concentrations as high as 11,000 parts per billion by volume (ppbv); PCE concentrations as high as 180,000 ppbv; and TCE concentrations as high as 7,700 ppbv.

On March 5, 2007, the Ohio EPA requested assistance from U.S. EPA Region V to investigate potential vapor intrusion from historic spills (from underground storage tanks containing TCE, PCE, and Chloroform) originating from the Delphi facility on Home Avenue, Dayton, OH.

On March 26, 2007, EPA and the Public Health District for Montgomery County representatives visited the residential area to inform residents of the vapor intrusion investigation and request access to homes for

sampling.

From April 2007 through June 2007, Delphi's environmental consultant, Haley and Aldrich, conducted a vapor intrusion investigation focused on residential sub-slab air without U.S. EPA oversight. Haley and Aldrich collected fourteen sub-slab air samples from twelve residences located east of the Delphi facility, along Bish Avenue and South Ardmore Avenue. The sub-slab air samples were collected using summa canisters over a 24-hour sampling period according to U.S. EPA Environmental Response Team (ERT) sampling procedures.

Of the fourteen sub-slab samples collected:
• eight sub-slab samples showed chloroform concentrations greater than the ATSDR and ODH screening level of 22 ppbv, with a maximum chloroform concentration of 4,700 ppbv;
• thirteen sub-slab samples showed TCE concentrations greater than the ATSDR and ODH screening level of 4 ppbv, with a maximum TCE concentration of 1,300 ppbv; and
• two sub-slab samples showed PCE concentrations greater than the ATSDR and ODH screening level of 120 ppbv, with a maximum PCE concentration of 3,600 ppbv.

Vapor Intrusion is the migration of volatile organic compounds from contaminated shallow groundwater to soil gas to indoor air. The Ohio Department of Health (ODH) has established Chloroform, TCE, and PCE screening and action levels for residential and commercial sub-slab and indoor air. For Chloroform, the ODH residential indoor air screening level is 2.2 parts per billion (ppb) and the action level is 50 ppb. For TCE, the ODH residential indoor air screening level is 0.4 parts per billion (ppb) and the action level is 100 ppb.

From May 2007 - July 2007, Delphi and EPA sampled 15 residential properties for sub-slab and indoor air.

On May 31, 2007, U.S. EPA, ODH, City of Dayton, Ohio EPA, and Delphi conducted a public meeting to discuss the initiation of a vapor intrusion investigation with the area residents.

Current Activities
On October 3, 2007, U.S. EPA, ODH, City of Dayton, Ohio EPA, and Delphi conducted individual meetings with residents sampled during Phase I. Meetings included residents sampled by U.S. EPA and/or Delphi that either require being placed in a quarterly monitoring program or a sub-slab depressurization system (SSDS). A total of five residential locations will be placed in the quarterly monitoring program and a total of five residential locations will require a SSDS be installed. Five other residential locations require no further action and property owners were sent a letter via certified mail informing them of their sample results.

On October 16, 2007, U.S. EPA, Montgomery County Health Dept, and Delphi briefed the Southwest Priority Board on the status of the vapor intrusion investigation to date and Phase 1 plans (Sampling and Mitigation).

On October 17, 2007, Delphi submitted the Draft Phase 1 Work Plan for Indoor Air Sampling and Mitigation to EPA for review and approval.

On October 24, 2007, U.S. EPA and Delphi met to discuss Draft Phase 1 Work Plan and finalize U.S. EPA comments to be incorporated in the Final Phase 1 Work Plan.

On November 5, 2007, U.S. EPA approved the Phase 1 Work Plan submitted by Delphi. Delphi will continue to sample and mitigate homes as described in the Phase 1 Work Plan.

An Administrative Order on Consent signed by U.S. EPA and Delphi, with and effective date of November 6, 2007.

On November 14, 2007 U.S. EPA, ODH, City of Dayton, and Delphi conducted a public meeting to discuss the current status of the Delphi VOC Plume project and the upcoming Phase 2 Work Plan.

Planned Removal Actions
1. Delphi to install a vapor abatement system in 5 residential locations and conduct confirmation sampling to ensure the system is operating effectively according to the schedule outlined in the approved Phase 1 Work Plan. The vapor abatement system installations will begin the week of December 3, 2007.
2. Delphi will collect quarterly samples from the 5 residents that showed sub-slab exceedance for Chloroform, TCE, and/or PCE. The quarterly monitoring sampling to begin the week of Novemeber 12,

2007.
3. Delphi to begin drafting the Phase II Work Plan.

Next Steps

1. Draft and finalize Phase II Work Plan. The Phase II investigation area will include at a minimum further residential sampling to the north and south of the Delphi facility.

Key Issues

1. Chloroform, TCE, and PCE-contaminated groundwater at the Delphi VOC Plume Site is causing elevated levels of Chloroform, TCE, and/or PCE vapors to migrate via soil gas into structures (vapor intrusion).
2. A total of 5 vapor abatement systems will been installed in residences along South Ardmore Avenue, Dayton, Ohio.
3. A total of 5 residential locations will be placed into a quarterly monitoring program along Bish Avenue and South Ardmore Avenue, Dayton, Ohio.
4. Phase II of the work will involve additional vapor intrusion investigation north and south of the Delphi facility.

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