

# Community Relations Fact Sheet

for

## Delphi Corporation Located In Vandalia, Ohio

**November 2006**



**U.S. Environmental Protection Agency, Region 5  
Chicago, Illinois**

### History of Delphi Corporation

The Delphi Corporation (Delphi) facility is located just east of the Dayton International Airport between North Dixie Drive Highway and U.S. Interstate 75 in Vandalia, Ohio. The Great Miami River is located approximately one-mile to the east. The facility began operating in 1941 manufacturing airplane and helicopter parts. It has manufactured automobile parts since 1961.

In 2002, Delphi and U.S. EPA entered into an Administrative Order on Consent (AOC) pursuant to the Resource Conservation and Recovery Act (RCRA). The AOC requires Delphi to conduct investigations, and evaluate and implement corrective measures to address releases of hazardous waste to the environment. The AOC also required Delphi to stabilize the migration of contaminated groundwater and control exposures to hazardous waste that could potentially impact human health.

Delphi operates two groundwater migration control systems on-site that have removed over 4000 pounds of hazardous waste from soil and groundwater over the last eight years. The systems continue to capture and remove about two pounds of hazardous waste per day.

### Investigation Results

○ Groundwater underlying the Delphi facility is contaminated with chlorinated solvents.

○ Chlorinated solvents are present in the deep bedrock aquifer and have migrated off-site toward the Great Miami River. The contaminant plume discharges in springs along the west valley wall of the Great

Miami River. The contaminated groundwater poses a significant risk to human health if used as a source of potable water.

○ The main groundwater contaminant is trichloroethene (TCE), along with its degradation products cis-1,2-dichloroethene, and vinyl chloride. These contaminants in groundwater are likely to pose a potential risk to human health for decades.

○ Contaminants in the deep bedrock aquifer pose no unacceptable risk to off-site residential areas provided the groundwater is not used directly for human consumption.

○ Contaminants in soil may pose an unacceptable risk to on-site workers as soil vapor migrates to indoor air.

○ Institutional controls are necessary to restrict on-site use and restrict regional groundwater use.

### Scope of Corrective Action

Releases of hazardous waste to the environment from the Delphi facility have been partially addressed by interim actions performed by Delphi. The interim actions have stabilized the release of contaminants to groundwater, soil, and air. Final actions are necessary to fully address long-term requirements such as operation and maintenance, monitoring, and meeting cleanup goals.

Contaminated groundwater is the principal threat to human health in the area due to the long-term potential for use via private water wells. Our cleanup objectives are to eliminate the migration of contaminated groundwater off-site and to reduce

groundwater contaminant concentrations below Federal Maximum Contaminant Levels (MCLs) in a timely manner.

Local areas of contaminated groundwater and soil are a potential risk to on-site industrial workers due to the migration of vapors into indoor air. The cleanup objectives are to reduce the contaminant concentrations in indoor air to acceptable levels.

### Summary of Corrective Measures

The possible measures evaluated to cleanup groundwater, soil, and indoor air at the Delphi facility are:

- **Sub-Slab Depressurization:** Apply a slight vacuum to induce a negative pressure beneath the building foundation to prevent vapor migration into buildings.
- **Operate HVAC:** Use building heating, ventilation, and air conditioning (HVAC) systems to minimize buildup of contaminated soil vapor indoors.

### U.S. EPA Proposed Remedy

The measures proposed by U.S. EPA to cleanup groundwater, soil, and indoor air contamination at the Delphi facility are:

- Implement *Institutional Controls* that modify the Delphi property deed to restrict groundwater use and limit future use to industrial/commercial, impose controls on subsurface excavations, pursue a local ordinance restricting groundwater use in the local area, and provide periodic public advisories of groundwater use restrictions.
- Continue operating the *Groundwater Migration Control Systems* that capture and treat contaminated groundwater before it

- **Institutional Controls:** Modify Delphi property deed to restrict groundwater use and limit future use to industrial/commercial, impose controls on subsurface excavations, pursue a local ordinance restricting groundwater use in the area, and provide periodic public advisories of groundwater use restrictions.

- **Groundwater Migration Control:** Continue to operate on-site systems that capture contaminated groundwater before it migrates off-site and safely remove the contaminants.

- **Pump-and-Treat:** Install numerous migrates off-site.

- Operate the *HVAC system* to minimize buildup of contaminated soil vapor indoors.

The estimated net present value of the proposed remedy is \$5.4 million. The estimate does not include costs associated with any contingency measures required to achieve groundwater cleanup levels within a reasonable time frame if the proposed remedy fails to expedite groundwater cleanup.

### Your Opinion Counts!

U.S. EPA wants your opinion on the cleanup proposed for groundwater, soil, and indoor air at the Delphi facility. A public comment period to accept written comments on the proposed remedy will be held from November 7 to December 15, 2006. A public meeting will be held at the Vandalia Senior Center, 21 Tionda Drive South, Vandalia, Ohio on November 16, 2006, to take oral comments.

The Administrative Record for the Delphi

recovery wells off-site to collect contaminated groundwater and safely remove the contaminants.

- **Enhanced Anaerobic Bioremediation:** Install injection wells off-site to treat contaminated groundwater by injecting proprietary chemicals into the groundwater to increase the breakdown of contaminants by microorganisms.

- **Monitoring:** Sample selected wells and springs to ensure the contaminant plume is not increasing in size or concentration and that contaminated groundwater is not present in private wells. Monitor indoor air to ensure that contaminants do not pose an unacceptable risk to the facility is available at:

**Vandalia Branch Library**  
500 S. Dixie Drive  
Vandalia, Ohio 45377  
(937) 898-6541

**U.S. EPA, Region 5**  
7th Floor RCRA Records Center  
77 W. Jackson Blvd.  
Chicago, IL 60604  
(312) 886-0902  
Hours: Mon-Fri, 8AM - 4PM

After consideration of substantive comments received, U.S. EPA will select a final remedy and document its selection in a Final Decision. Written and oral public comments will be summarized and responses provided.

To send written comments or request more information, contact:

Mr. Kenneth Bardo  
U.S. EPA, Region 5  
Corrective Action Section, DE-9J  
77 W. Jackson Blvd.  
Chicago, Illinois 60604-3590

unacceptable risk.

- **Excavation and Disposal:** Excavate contaminated soil at certain on-site areas that pose a potential unacceptable risk to industrial workers.

- **Soil Vapor Extraction:** Apply a vacuum to the soil to safely remove contaminants through extraction wells.

(312) 886-7566

Written comments may also be e-mailed to:

bardo.kenneth@epa.gov

## Glossary

*Administrative Record* - Written record compiled by U.S. EPA to support the proposed remedy.

*Chlorinated Solvents* - Chemical compounds containing chlorine that are relatively insoluble in water and will volatilize when exposed to air. Chlorinated solvents such as TCE were used at the Delphi facility to degrease metal parts. The chlorinated solvents were stored in underground storage tanks which leaked and/or had spills.

*Federal Maximum Contaminant Levels* - The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards developed under the Safe Drinking Water Act.

*Groundwater Migration Control Systems* - Recovery systems installed on-site by Delphi to capture and treat contaminated groundwater. Contaminated groundwater at the water table is recovered using a storm sewer and an extraction well is used to recover groundwater in bedrock. Contaminants are removed using an air stripper and clean groundwater is discharged to East Creek.

*Institutional Controls* - Legal mechanisms designed to control exposure to chemicals in soil and groundwater. Can include deed notices, easements, covenants, well drilling prohibitions, and zoning restrictions.

*Net Present Value* - Present cost estimate using a nominal discount rate to account for a 20-year operation and maintenance period.

*RCRA* - The Resource Conservation and Recovery Act regulates hazardous waste management activities.

*Trichloroethene (TCE)* - A chlorinated solvent used at the Delphi facility to degrease metal parts.

