

**United States Environmental Protection Agency
Region V
POLLUTION REPORT**

Date: Monday, January 31, 2005
From: Kevin Turner and Steven Faryan

To: Brian Schlieger, U.S. EPA
Kevin McCormack, U. S. Coast Guard

Jason El-Zein, U.S. EPA

Subject: POLREP #7
Hartford Area Hydrocarbon Plume Site
N. Olive Street, Hartford, IL
Latitude: 38.8361210
Longitude: -90.0951620

POLREP No.:	7	Site #:	524
Reporting Period:		D.O. #:	
Start Date:	10/20/2003	Response Authority:	CERCLA/OPA
Mob Date:		Response Type:	Non-Time-Critical
Demob Date:		NPL Status:	Non NPL
Completion Date:		Incident Category:	Removal Assessment
CERCLIS ID #:		Contract #	
RCRIS ID #:		Reimbursable Account #	
FPN#	E04503		

Site Description

Please refer to POLREP's #1 and #4 for details.

Current Activities

Response activities to date

After a series of meetings with the Hartford Work Group (HWG) respondents in the Summer/Fall of 2003, the U.S. EPA requested that Work Plans be submitted and site activities commence during negotiations of a final Administrative Order of Consent (AOC). Representatives from U.S. EPA and Illinois EPA continue to meet with the HWG technical committee once per month in addition to monthly teleconferences.

Vapor Related Activities

- Determined the status of current operations and maintenance activities regarding the existing soil vapor extraction (SVE) system including a series of vacuum tests to determine the vacuum influence exerted upon the vapor control boring's and corresponding vapor probes.
- Provided control of vapors into selected residential living spaces by interim protection measures.
- Conduct investigation for petroleum pipelines and utility lines contaminant migration pathways and how they relate to the Mississippi River.
- To date, a total of 67 homes have been inspected for "needs assessment" purposes.
- Oversee the pilot testing for interim control of petroleum vapors from an internally and externally installed sub-slab de-pressurization systems. Oversee HWG conducted tracer gas studies for in-home vapor protection systems effectiveness.
- Due to vapor intrusion into the Village of Hartford Community Center, an investigation to determine the cause, a series of vapor probes were installed adjacent to the Community Center. Additional vapor sampling wells and use of Gore-Sorber™ screening capabilities to measure the extent of petroleum vapors will be utilized.
- Representatives from the Illinois Department of Public Health (IDPH) have completed the quarterly air sampling activities using summa canisters. An ATSDR fact sheet is currently in development reflecting

IDPH's air sampling results.

- U. S. EPA stipulated that elevated levels related to lower explosive limits must be ventilated to mitigate the potential of explosive vapor concentrations invading into the Village of Hartford sanitary sewer system.
- A portion of a deteriorated sanitary sewer line along Watkins Street was replaced in April, 2004. This street has previously experienced a high frequency of residential vapor complaints. START observed and recorded oil impacted residuals from the deteriorated municipal sewer line. This documented observation further demonstrates actual or potential impacts to the Mississippi River.
- The U.S. EPA requested revisions upon the needs assessment procedures so as to greatly improved the manner by which information is collected on individuals homes and the speed at which interim response measures are to be provided.
- The HWG has completed the replacement of the 12 vapor extraction wells that were plugged. The HWG has submitted a conceptual design for expansion of the existing soil vapor extraction system. Three additional vapor extraction wells were installed along East Watkins Street related to the future expansion of the vapor extraction system.
- The HWG has committed to capital improvements related to the thermal treatment unit used to destroy the collected petroleum vapors. Furthermore, the HWG has initiated connections to the new SVE wells and construction of the manifold pipe network related to the phased SVE expansion program.
- The HWG has recently installed 32 new vapor monitoring points with a total of 87 individual sampling ports. Also, 26 co-located shallow soil gas monitoring wells were installed for a comparison study between EM-FLUX™ and GORE-Sorbers™ soil gas indicators.

Groundwater Related Activities

- Install 5 sentinel wells for Village of Hartford wellhead protection purposes. These wells have been sampled in January, April, and September 2004 with no impact discovered.
- Investigate the lateral extent of free product hydrocarbons with the HWG recommended random optical screening tool (ROST™). Review ROST™ data and evaluate the lateral extent of the free phase hydrocarbon plume.
- Oversee the pilot tests for free product hydrocarbon removal and “bio-slurping” hydrocarbon removal. Oversee the ongoing pilot testing of a multi-phase hydrocarbon pumping system utilizing “bio-slurping” technology which started on May 17, 2004 and completed on July 30, 2004. Two locations were evaluated.
- At this time, the U.S. EPA awaits updates to visual information depicting the vertical extent of the dissolved phase hydrocarbon plume. This conceptual site model (CSM) information is to be updated as new geotechnical and groundwater plume data becomes available.
- The HWG has presented a portion of the raw data for conceptual site groundwater modeling (CSM) purposes. The CSM will be updated as data is collected and will help determine and measure the impacts to the area wide regional groundwater and Mississippi River.

General Project Activities

- U.S. EPA has participated in the development of a formal program with the local fire department to prepare for and respond to vapor intrusions through the 911 emergency notification system.
- The language related to a formal access agreement between the HWG and the residents is no longer an issue.
- U.S. EPA Headquarter's Office of Superfund Remediation and Technology Innovation (ORSTI) provided a comprehensive report that included critical information regarding project geotechnical and geochemical requirements. The report also identified existing data gaps with the plume investigation including recommendations how to optimize the overall nature of the PRP conducted investigation activities, data objectives, and for both short-term and long-term project goals.
- The HWG Technical committee has committed to a monthly schedule for both conference calls and

personal meetings for 2005.

Community Relations Activities

- U. S. EPA has issued a response to public comments obtained during and after the public meeting held on March 19, 2004. As a result of comments provided during the public meeting, the U.S. EPA has committed to a more active role in the implementation of the required needs assessments.
- A second public availability session was held on July 8, 2004 to communicate the HWG offer for the planned basement ventilation fan installation offer.
- U. S. EPA again met with many homeowners and their attorney on January 19, 2005, to discuss the needs assessment process and answer questions prepared by the attorney in addition to any questions raised by the homeowners.

Planned Removal Actions

Vapor Related Activities

- Future actions will include continued vapor removal utilizing the existing SVE system.
- Oversee vapor migration pathway assessment and related investigations.
- Expansion of the existing SVE system will occur in various stages over a longer time frame. While this effort was recently initiated, the phase construction schedule will continue at this time.
- Measures will be taken to deploy a large sub-slab depressurization system at the Hartford Community Center.
- START has assisted in the development of a passive soil gas pilot study to assist with the future placement of HWG installed active monitoring ports.
- Oversee installation of various active vapor monitoring ports within the free-phase plume.
- A vacuum extraction pilot study at the Community Center was suspended due to equipment malfunction. Setup for the pilot study is scheduled for January 31, 2005.

Groundwater Related Activities

- Oversee petroleum pipeline and utility line investigation activities and continue to assess their interactions upon fate and transport of vapors and free-phase hydrocarbons in the shallow subsurface.
- Oversee free-phase and dissolved-phase investigation activities.

Next Steps

- Expansion of the existing SVE system will occur in various stages over a longer time frame. While this effort was recently initiated, the phase construction schedule will continue at this time.
- Oversee free-phase and dissolved-phase investigation activities.

Key Issues

- Residents represented by counsel have recently allowed oil company agents into the homes to perform the required initial needs assessment. Unfortunately, their counsel has not allowed the installation of vapor mitigation activities until further notice.
- The current ceiling using OPA funds is \$249,000.00. As the project progresses additional reimbursable monies will be needed from the oil pollution fund in order to maintain current level of effort.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
RST/START	\$189,000.00	\$166,422.27	\$22,577.73	11.95%
Intramural Costs				

USEPA - Direct (Region, HQ)	\$60,000.00	\$57,641.00	\$2,359.00	3.93%
Total Site Costs	\$249,000.00	\$224,063.27	\$24,936.73	10.01%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

response.epa.gov/HartfordArea

POLREP #7 Last Updated 1/31/2005