

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Bonair Avenue Vapor Intrusion Investigation - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III

Subject: POLREP #7
Progress / Action Memorandum Exemption from 12-Month Statutory Limit
Bonair Avenue Vapor Intrusion Investigation
A35J
Hatboro, PA

To:
From: Kelley Chase, On-Scene Coordinator
Date: 2/15/2019
Reporting Period: 7/25/2018 through 2/15/2019

1. Introduction

1.1 Background

Site Number:	A35J	Contract Number:	
D.O. Number:		Action Memo Date:	8/15/2017
Response Authority:	CERCLA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	2/19/2018	Start Date:	12/28/2017
Demob Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

1.1.2 Site Description

EPA's Removal Program is conducting sampling to further evaluate the potential for vapor intrusion (VI) at properties located on or near Bonair Avenue in Hatboro, Montgomery County, PA.

VI is the term used to describe the migration of volatile chemicals from subsurface contaminated soils and groundwater into the indoor air spaces of overlying buildings through openings in the building foundation. Common sources of VI include petroleum products, dry cleaning solvents, and other industrial solvents and degreasers.

Groundwater in the area has historically been contaminated with trichloroethylene (TCE) and other volatile organic compounds (VOCs) due to the nearby Raymark Superfund Site, Hatboro, PA (Raymark Site) and other potential sources in the surrounding area.

The Raymark Site includes a 7-acre facility located at 220 Jacksonville Road in Hatboro (approximately 500 feet east/southeast of Bonair Avenue) where TCE and other VOCs were released. Metal-fabrication operations, including rivet manufacturing and electroplating, began at the Raymark Site in 1948. Historically, solvents containing TCE were used in the manufacturing process to clean and degrease metal parts. Over a period of several decades, TCE reportedly leaked or spilled in areas where it was used and/or stored at the former Raymark facility.

EPA is coordinating with the Borough of Hatboro, the Pennsylvania Department of Environmental Protection (PADEP) and the Centers for Disease Control and Prevention (CDC)/Agency for Toxic Substances and Disease Registry (ATSDR).

1.1.2.1 Location

The Site is located in Hatboro, Montgomery County, Pennsylvania.

1.1.2.2 Description of Threat

Certain residential properties were initially sampled in 2013 as part of investigations by EPA's Remedial Program at the Raymark Site and found to have elevated levels of TCE in sub-slab vapor. Based on the

results of the initial sampling of indoor air, ambient (outdoor air) and sub-slab vapor, further investigation was recommended. EPA's Removal Program is conducting sampling to determine whether VI is occurring, and if so, whether any of the chemicals detected present a potential health risk to the residents.

Additional information regarding site threats is included in the August 15, 2017 Action Memorandum.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

A summary of the Removal Site Evaluation activities conducted from March 2016 through August 2017 is included in POLREPs 1 through 6 and in the August 15, 2017 Action Memorandum.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Based upon information obtained during the Removal Site Evaluation and upon consideration of the factors in the NCP, the OSC recommended a response action be conducted to mitigate potential threats posed by the TCE contamination at the Site. The OSC participated in meetings with management and staff regarding the proposed response action. The OSC coordinated with management, attorneys and other staff to help finalize a decision document and compile documents that supported the selection of a response action.

On August 15, 2017, an Action Memorandum was signed by Region 3 which selected a response action for the Site and approved the necessary funding. The selected response action calls for mitigation of vapor intrusion at several residential structures located on or near Bonair Avenue in Hatboro, PA. Mitigation is expected to include installation of vapor-abatement systems, such as sub-slab depressurization systems and/or other appropriate measures (i.e., sealing cracks in basements, sealing sump pumps, etc.). The August 15, 2017 Action Memorandum includes a detailed description of activities conducted during the Removal Site Evaluation and the selected response action.

In February and April 2018, vapor-abatement mitigations systems were installed at two residences. The Removal Site Evaluation is ongoing. Additional monitoring and sampling was conducted in April and July 2018.

Because some of the original threats existing at the time of the August 15, 2017 Action Memorandum still exist, on December 18, 2018, an Action Memorandum was signed approving an exemption from the 12-Month Statutory Limit for the ongoing Time-Critical Action at the Site. The response activities, intended to mitigate the threats posed by TCE contamination were unchanged from those selected and funded in the August 15, 2017 Request for Funding Action Memorandum. There is some uncertainty regarding the full extent of contamination, as the Removal Site Evaluation is ongoing. Estimated costs assume up to ten vapor-abatement mitigation systems may be installed.

Information regarding previous activities are included in POLREP 6.

Activities for this reporting period beginning July 25, 2018 through February 15, 2019 included the following:

Due to issues with analysis of certain samples collected in April 2018, the EPA laboratory recommended re-sampling. In July 2018, EPA and its Superfund Technical Assessment and Response Team (START) contractor re-sampled all three homes that had been sampled in April 2018 (Properties 3, 20 and 21). In addition, EPA re-sampled a fourth home that was last sampled in 2016 (Property 4). The July 2018 sampling included the collection of indoor air, ambient (outdoor) air samples and sub-slab vapor samples. Sub-slab samples were not collected from the two homes where vapor mitigations systems have been installed (Property 3 and 20). The systems were operating for the duration of the sampling. Air samples were collected from each location into canisters fitted with regulators set to collect a sample over a 24-hour period. All air samples were sent to an off-site laboratory and analyzed for a site-specific contaminant list of VOCs including, 1,2-dichloroethane, 1,4-dichlorobenzene, benzene, carbon tetrachloride, chloroform, dichlorodifluoromethane, ethylbenzene, tetrachloroethene (PCE), and trichloroethene (TCE).

Prior to sampling, monitoring of the homes was conducted by EPA's Environmental Response Team (ERT) and its Scientific, Engineering, Response and Analytical Services (SERAS) contractor. The monitoring utilized EPA's mobile Trace Atmospheric Gas Analyzer (TAGA) laboratory. The real-time monitoring by the TAGA provided screening for TCE and PCE and information regarding potential indoor air sources and/or pathways where TCE or PCE may be entering buildings. Indoor and ambient (outdoor) air was analyzed using a 300-foot long hose that was connected directly to the TAGA. Sub-slab samples were also collected and analyzed for TCE and PCE by the TAGA at Properties 4 and 21.

At the three homes that were sampling in April, the TAGA monitoring did not detect TCE in indoor air or any pathways where TCE vapors were entering the homes. At the homes where mitigation systems had been installed, TCE was detected outside where the vapor system fans are located. The detections were attributed to small leaks in the outdoor connections at the fan. The leaks have since been addressed. TCE was not detected in any of the other outdoor air monitoring locations. Low levels of TCE were detected in the indoor air of Property 4. The reported levels were slightly above the detection limit and were reported as estimates. The TAGA also detected TCE at a floor drain in the basement of Property 4. PCE was not detected during the screening by the TAGA at any of the indoor or outdoor monitoring locations at any of the four residential properties.

In September 2018, the OSC received the final validated laboratory sampling results for the four homes.

The laboratory results were consistent with and confirmed the results of the screening by the mobile TAGA laboratory. At Property 4, TCE was reported slightly above the detection limit of the laboratory; the values are estimated. Elevated levels of TCE were detected in the sub-slab vapor at this home. Elevated sub-slab concentrations of TCE had been detected during the 2016 sampling at this location. Low levels of TCE and PCE were reported in the sub-slab vapor at Property 21. TCE was not detected in the indoor air of properties 3, 20 or 21.

In summary, low levels of VOCs were detected in indoor air at each of the homes. Trace levels of TCE were reported in the indoor air of Property 4. Many household items contain VOCs; the sampling and laboratory analysis will detect low levels of VOCs from indoor and outdoor sources. Exposure to the VOCs, including TCE, at the reported levels are not expected to result in adverse health effects in adults or children. Based on the monitoring and sampling results, the vapor mitigation systems installed at Properties 3 and 20 are functioning as intended to prevent TCE in sub-slab vapors from entering the homes. The TCE detected at the basement floor drain during the TAGA monitoring at Property 4 suggests that vapor intrusion is occurring. While the reported levels of TCE and other VOCs in indoor air do not present a health concern, if conditions change, TCE levels in indoor air could increase. Since elevated levels of TCE continue to be detected in the sub-slab vapor, EPA continues to recommend installation of a vapor mitigation system at this location. Property 4 is an attached twin to Property 3 where a mitigation system has been installed.

2.1.2 Response Actions to Date

On February 19, 2018, GES and Safe Shelter mobilized materials, equipment and personnel to the Site. Activities included the installation of a residential vapor-abatement mitigation system in one home. The mitigation system was primarily composed of a sub-slab depressurization system. Activities included the installation of suction points, piping and a fan/blower to vent vapors from beneath the concrete basement floor to the outside of the home above the roof-line. A vapor barrier was installed in a small crawl space area, openings in the basement floor were sealed, and the sump was covered and sealed. Following installation, pressure field measurements were collected to confirm that the system was achieving sufficient sub-slab vacuum across the basement.

On April 11, 2018, GES and Safe Shelter mobilized materials, equipment and personnel to the Site. Activities included the installation of a residential vapor-abatement mitigation system in one home. The mitigation system was composed of a sub-slab depressurization system. Activities included the installation of suction points, piping and a fan/blower to vent vapors from beneath the concrete basement floor to the outside of the home above the roof-line. In addition, some openings in the basement floor were sealed. Following installation, pressure field measurements were collected to confirm that the system was achieving sufficient sub-slab vacuum across the basement.

On April 11th, GES and Safe Shelter made a minor adjustment to the vent pipe installed at another home in February. On April 25th, Safe Shelter returned to make a minor repair to an electric connection at the home.

In October 2018, Safe Shelter addressed the minor leaks found in the outside vent pipes near the location of the fans at both residences.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

The OSC will continue to coordinate with EPA staff as needed regarding potentially responsible party (PRP) search efforts.

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

2.2 Planning Section

2.2.1 Anticipated Activities

Assessment activities will continue in an effort to identify the source and extent of TCE contamination. Additional residential structures and/or commercial properties may be included in the response action, based on the results of future sampling as assessment activities proceed.

The OSC will continue to coordinate with the RPM for the Raymark Superfund Site to evaluate data collected as part of ongoing groundwater and vapor intrusion investigations at Raymark.

2.2.1.1 Planned Response Activities

EPA has recommended installation of a vapor mitigation system at Property 4. The OSC is attempting to secure permission from the property owners for the system installation.

2.2.1.2 Next Steps

2.2.2 Issues

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

3.2 Cooperating Agencies

EPA continues to coordinate with the following regarding the implementation of the response action:

Hatboro Borough

Pennsylvania Department of Environmental Protection (PADEP)

Centers for Disease Control and Prevention (CDC) /Agency for Toxic Substances and Disease Registry (ATSDR)

4. Personnel On Site

No information available at this time.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.