

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Delmar Water Supply Well - Removal Polrep
Initial Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III

Subject: POLREP #1
Delmar Water Supply Well
A3XD
Delmar, DE

To:
From: Richard Rupert, OSC
Date: 9/4/2014
Reporting Period: 11-21-2013-9/12/2014

1. Introduction

1.1 Background

Site Number:	A3XD	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Assessment
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:		Start Date:	
Demob Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Removal Site Evaluation

1.1.2 Site Description

1.1.2.1 Location

The town of Delmar lies within the boundaries of the cross-border towns of Delmar, MD and Delmar, DE. The Site is located in a mixed residential and commercial use area.

1.1.2.2 Description of Threat

This project is to identify groundwater contamination in the town of Delmar. Low levels of tetrachloroethene, also known as perchloroethylene (PCE), have been detected in Delmar's sole source water supply well. Currently, whereas several sources of PCE are suspected in the town, only the former dry cleaning facility located at 3 South 1st Street, Delmar, Wicomico County, Maryland, has been documented as causing shallow, PCE-impacted groundwater. This Site is located approximately 2,100 feet south of the Delmar Utility Commission supply wells.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

The Maryland Department of the Environment (MDE) performed a Site Investigation (SI) at the former dry cleaner site. The SI indicated elevated levels of volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs) in several soil and groundwater samples collected during the May and December 2012 sampling events.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.2 Response Actions to Date

This project is to identify groundwater contamination in the town of Delmar which lies within the boundaries of the cross-border towns of Delmar, MD and Delmar, DE. The Site is located in a mixed residential and commercial use area. Low levels of tetrachloroethene, also known as perchloroethylene (PCE), have been detected in Delmar's sole source water supply well. Currently, whereas several sources of PCE are suspected in the town, only the former dry cleaning facility located at 3 South 1st Street, Delmar, Wicomico County, Maryland, has been documented as causing shallow, PCE-impacted groundwater. This Site is located approximately 2,100 feet south of the Delmar Utility Commission supply wells. The Maryland Department of the Environment (MDE) performed a Site Investigation (SI) at the former dry cleaner site. The SI indicated elevated levels of volatile organic compounds (VOCs) and semivolatile organic compounds

(SVOCs) in several soil and groundwater samples collected during the May and December 2012 sampling events.

In March 2014, The U.S. Environmental Protection Agency (EPA) Region III tasked Superfund Technical Assessment and Response Team (START) Contractors to collect groundwater samples at residential wells, farm irrigation wells, and/or town production wells at the Delmar Water Well site (Site). The purpose of this sampling event was to collect groundwater samples to assist in identifying soil gas sample locations for a future sampling event that will investigate the source of PCE, in the water supply well in Delmar, DE. Eight water samples were collected from residential wells, irrigation wells, and town production wells and were analyzed for target compound list (TCL) volatile organic compounds (VOCs) and TCL semivolatile organic compounds (SVOCs).

In May 2014, The EPA tasked START contractors to complete a contamination assessment by installing soil borings and collecting soil gas samples within residential, commercial, and town properties at the Delmar Water Well site (Site). The purpose of this sampling event was to investigate the source of PCE and extent of contamination by collecting soil gas samples as part of an intrusive sampling investigation. Soil borings were advanced to approximately 5 to 15 feet below ground surface (bgs) using direct push technologies. Soil gas samples were collected for onsite analysis by EPA's Emergency Response Team (ERT) mobile laboratory, called the Trace Atmospheric Gas Analyzer (TAGA), which was mobilized to the Site to provide near real-time soil gas results to guide the intrusive investigation. Soil gas samples were collected from these boreholes and analyzed for VOCs by TAGA staff analysts.

The resulting Soil Gas Report, which was completed in July, was inconclusive, in part, due to high groundwater levels during the period of the investigation. Therefore, the source of the PCE contamination remains unknown, at this time.

The next step that EPA plans to take is to install four groundwater monitoring wells at locations around the public water supply wells. The monitoring wells will help to determine the levels of PCE contamination and identify groundwater flow characteristics. START Contractors will subcontract and oversee the drilling and installation of four groundwater monitoring wells in the vicinity of the Site. Throughout the well drilling activities, soil samples may be collected for laboratory analysis. In addition, following installation and development of the monitoring wells, groundwater samples will be collected from each of the wells for laboratory analysis of the contaminants of concern (COC).

The purpose of the well installation and sampling program is to determine, if practicable, from which direction the tetrachloroethene, also known as perchloroethylene (PCE), is coming that has recently been detected in one of the Town of Delmar Public water supply wells. Due to the fairly high groundwater withdrawals of the Delmar Utility Commission wells, it is difficult to determine from which direction the PCE is migrating. The proposed monitoring wells are intended to bound the Site hydraulically in each of the four compass directions and serve as sentinel wells for the Town's production wellfield.

The proposed monitoring wells will be installed by a licensed drilling subcontractor in the State of Delaware under the direct supervision of a WESTON geologist. The wells will be drilled using mud rotary drilling techniques and completed to 150 feet (ft) below ground surface (bgs), equivalent to the depth of the impacted public water supply well. The depths of the proposed monitoring wells are comparable to the water supply wells as a result of the lack of topographic relief in the area. The borehole will be drilled using a nominal 8-inch-diameter, tri-cone roller bit and advanced to approximately 150 ft bgs.

Approximately 1 to 2 weeks following installation and development of the newly installed wells, groundwater samples will be collected from each of the monitoring wells for laboratory analysis of TCL VOCs. In addition, during sampling, water quality parameters (pH, dissolved oxygen, specific conductance, oxidation/reduction potential and temperature) will be monitored by START contractors using a YSI flow-through cell or equivalent. All samples will be collected using low flow micropurge technology, using either a 2-in Grundfos or peristaltic pump. The depth to standing groundwater and the total depth of the well will be measured from the height of the outer casing. The monitoring wells will be pumped at a low-flow rate of less than 0.5 liter per minute (0.13 gallon per minute [gpm]) with the pump set within the middle of the screened interval. When the general water quality parameters have stabilized, samples will be collected in 40-ml glass vials and analyzed for TCL VOCs.

As directed, START will also prepare a hydrogeological report that will include an aquifer description, groundwater flow regimes and concentrations of groundwater contamination. The report shall also consider seasonal fluctuations caused by groundwater pumping in the area.

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

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

The next step that EPA plans to take is to install four groundwater monitoring wells at locations around the public water supply wells. The monitoring wells will help to determine the levels of PCE contamination and identify groundwater flow characteristics. START Contractors will subcontract and oversee the drilling and

installation of four groundwater monitoring wells in the vicinity of the Site. Throughout the well drilling activities, soil samples may be collected for laboratory analysis. In addition, following installation and development of the monitoring wells, groundwater samples will be collected from each of the wells for laboratory analysis of the contaminants of concern (COC).

2.2.1.1 Planned Response Activities

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

DNREC

MDE

4. Personnel On Site

EPA:

Richard Rupert, On-Scene Coordinator

START:

Charles Rapone, Environmental Scientist

Sandy Richards, Environmental Scientist

Vironex Drilling

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.