

Pohatcong Valley Groundwater Contamination

New Jersey

EPA ID#: NJD981179047

EPA REGION 2

Congressional District(s): 05

Warren

Washington and Franklin Townships

NPL LISTING HISTORY

Proposed Date: 6/24/1988

Final Date: 3/30/1989

Site Description

The Pohatcong Valley Groundwater Contamination Site (Site) involves primarily tetrachloroethylene (TCE), and perchloroethylene (PCE), contamination of the Kittatinny Limestone Aquifer underlying the Pohatcong Valley. The aquifer serves as the sole source of drinking water for public water systems and private parties in the area.

The EPA has divided the Site into three operable units, called OUs. OU1 includes portions of Franklin Township, Washington Township, and Washington Borough in the Valley, and encompasses approximately 5,600 acres. Analyses of two public water supply wells in 1978 and 1979 revealed levels of TCE and PCE, prompting the closing of one well and the installation of a carbon filtration system at the other. In 1984 and 1985, the Warren County Health Department identified volatile organic compounds (VOCs), including TCE and PCE, in 79 private wells. In 1988 and 1989, the NJDEP created a well restriction area, hooked up affected residences to a public water supply, and sealed impacted wells. Approximately 12,000 people obtain drinking water from public and private wells within 3 miles of the OU1 portion of the Site.

The OU2 study area is immediately downgradient of OU1, and includes portions of Franklin and Greenwich Townships. As of spring 2006, field work for a remedial investigation and feasibility study (RI/FS) has been underway to determine the nature and extent of TCE contamination in the OU2 area. EPA will use the data from the RI/FS to determine an appropriate remedy for the OU2 area. At the present time, a public water supply does not extend into this area, and the NJDEP has provided individual treatment systems to residences where TCE levels have been detected above the state drinking water standard of one part per billion. EPA plans to complete the RI/FS in 2009, followed by release of a proposed remedial plan to the public. A subsequent Record of Decision (ROD) will document the selected remedy for the OU2 area.

The OU3 study area is within the borough of Washington, and includes the source areas of contamination for the Site's TCE contaminated groundwater. In March 2008, EPA initiated enforcement negotiations with a Potentially Responsible Party (PRP) for the performance of an RI/FS. The purpose of the RI/FS is to fully determine the nature and extent of contaminated source material.

Site Responsibility : This site is being addressed through Federal, State, and county actions.

Threat and Contaminants

OU1 Site groundwater is contaminated with the volatile organic contaminants TCE and PCE. In addition, specific soil source areas containing elevated levels of TCE have been detected within the OU1 Study Area, within Washington Borough. Contaminated groundwater, as well as contaminated soil in the source areas, may pose health threats to persons exposed to them. For the most part, it appears that use of contaminated private wells has been discontinued within the OU1 Study Area, and affected residences in the OU1 Study Area are currently either connected to a potable municipal water supply, or have been provided by the NJDEP with individual treatment systems. As part of the EPA's OU1ROD remedy, issued in July 2007, a well survey is in the planning stages of the remedial design (RD) to identify whether any residents remain with open residential wells, and EPA will assess the best method of addressing them as part of the ROD remedy.

In the downgradient area, the OU2 RI/FS is currently underway to determine the nature and extent of TCE contamination. At the present time, a public water supply does not extend into the OU2 study area, and the NJDEP has provided individual treatment systems to residences where TCE levels have been detected above the state drinking water standard of one part per billion.

In March 2008, EPA began the process of initiating an OU3 RI/FS, in order to define the nature and extent of the source

areas of the TCE contaminated groundwater for the Site. Contaminated surface water, as well as contaminated soils within the source areas, may pose health threats to persons exposed to them.

Cleanup Approach

The site is being addressed in two stages: initial actions and a long-term remedial phase focussing on the cleanup of the entire site.

Response Action Status

Immediate Action:

In the OU1 Study Area of the Site, Warren County originally supplied bottled water to affected residences where the drinking water exceeded standards in the mid 1980s. In 1988 and 1989, the NJDEP hooked up the majority of affected businesses and residences to public water supply wells. For the most part, it appears that use of contaminated private wells has been discontinued within the OU1 Study Area, and affected residences in the OU1 Study Area are currently either connected to a potable municipal water supply, or have been provided by the NJDEP with individual treatment systems. As part of the EPA's OU1 ROD Remedy, a well survey is in the planning stages to identify whether any residents are using wells. In the OU2 Study Area of the Site, the NJDEP has provided individual treatment systems to residences where TCE levels have been detected above the state drinking water standard.

In addition, as part of its vapor intrusion investigation, during 2007, EPA installed vapor intrusion remedial systems in one public school, as well as in one residence.

Entire Site:

Due to its size and complexity, EPA divided the Site into three operable units, referred to as OU1, OU2, and OU3. OU1 addresses TCE and PCE groundwater contamination and its sources in Washington Borough, and parts of Washington and Franklin Townships, up to the Village of Broadway, at approximately Asbury Broadway Road. OU2 relates to the TCE groundwater contamination downgradient of the current OU1 Site study area, through approximately New Village and Stewartville, in Greenwich Township. EPA initiated OU2 RI/FS field activities in the spring of 2006. Monitoring well installation planning began in January 2007. EPA expects to complete the OU2 RI/FS in 2009, by issuing a draft proposed remedial plan to the public, followed by a ROD, which will document the selected remedy for the OU2 area.

EPA conducted an extensive OU1 Remedial Investigation/Feasibility Study (RI/FS) between 1999 and 2005. EPA screened 107 potential source areas (PSAs) throughout the Pohatcong Valley. Of these, 37 PSAs underwent further evaluation during the first phase of field work. As part of phase 2, the number of PSAs was narrowed down to 16, and comprehensive studies were then conducted at the 16 locations, to help locate the source areas of PCE and TCE affecting Site groundwater. During the RI, extensive groundwater, soil, and sediment sampling was performed. In addition, geophysical studies were performed over several miles to help understand the nature of local geology, soils and contaminants in the wells, and to characterize the flow of groundwater contamination. In July 2005, EPA issued a proposed plan to address groundwater and soil contamination with the OU1 Study Area of the Site, and opened a public comment period on the proposal. EPA issued a ROD, selecting the remedy for OU1 on July 13, 2006.

In 2002 and 2003, the NJDEP sampled dozens of additional residential wells located several miles downgradient of the OU1 study area. This sampling revealed low levels of TCE, above the NJDEP's drinking water standard, in a significant number of the tested wells. The NJDEP has provided individual treatment systems to residences that have been impacted by TCE contamination. In the Spring of 2006, EPA initiated a second operable unit RI to determine the nature and extent of the TCE contamination in the downgradient OU2 area. As part of the OU2 RI/FS, EPA has been conducting a vapor intrusion evaluation at selected houses and schools, within both the OU1 and OU2 study areas. EPA is also installing groundwater monitoring wells, and taking sediment and surface water samples to determine the nature and extent of Site related groundwater contamination in the OU2 area. In April 2008, EPA plans to sample select residential wells. The OU2 study is ongoing, and is scheduled to be completed by the end of 2009.

The OU3 study area is the within Washington Borough, and includes the contaminated source areas of the TCE contaminated groundwater plume for the Site. In March 2008, EPA initiated enforcement negotiations to the PRP for the conduct of the OU3 RI/FS. The purpose of the RI/FS is to determine the nature and extent of TCE contaminated source material to select an appropriate remedial action to be documented in a subsequent separate ROD. EPA expects to complete negotiations with the PRP for the conduct of the OU3 RI/FS later in 2008.

Site Facts: Based on the RI and available data, EPA has identified three potentially responsible parties in the Borough of Washington, believed to be historically responsible for the bulk of the PCE contamination. L&L Dry Cleaners and Modern Valet Service, and a defunct Vacuum Tube Company that was called Tungsol Tubing. In addition, EPA has identified Pechiney Plastics Packaging Incorporated (the former American National Can facility in the borough), as a major source for TCE contamination.

Cleanup Progress

Within the OU1 study area, the provision of a public water supply in 1988/1989, has eliminated the potential of exposure to hazardous substances contained in groundwater. The provision of individual treatment units to residences in the OU2 Study Area pending additional investigation has reduced the potential for exposure in those homes. OU1 RI/FS activities have been completed and EPA has selected the remedy to address OU1 area groundwater contamination in July 2006. Remedial Design (RD) activities were initiated in the fall of 2006 to address the PCE groundwater contamination, and are on-going within Washington Borough. The PCE related work is being conducted as Federal lead. RD activities were initiated in the fall of 2007 to address the TCE groundwater contamination. The TCE work is being conducted by the PRP, under federal and state oversight . In Spring 2006 EPA initiated field work for OU2 RI/FS. Field work is ongoing, and will continue through the end of 2008. EPA expects to complete the OU2 RI/FS in 2009, by issuing a draft proposed remedial plan to the public, followed by a ROD, which will document the selected remedy for the OU2 area.

During 2007, EPA installed vapor intrusion remedial systems in one public school, as well as in one residence within the OU2 study area.

The OU3 study area is the within Washington Borough, and includes the TCE contaminated source areas of the TCE contaminated groundwater for the Site. In March 2008, EPA initiated enforcement negotiations to the PRP for the conduct of the RI/FS. EPA expects to complete these negotiations by late 2008.

Site Repositories

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