

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Louisa Acme Well Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III

Subject: POLREP #6
Residents Connected to Public Water
Louisa Acme Well Site

Louisa, VA
Latitude: 38.0129580 Longitude: -77.9855590

To: Mr. Jeff Lake, Virginia Department of Health
Mr. Dean Rodgers, Louisa County Water Authority

From: Christine Wagner, OSC

Date: 3/15/2011

Reporting Period: 1/30/11-3/15/11

1. Introduction

1.1 Background

Site Number:	A3RC	Contract Number:	
D.O. Number:		Action Memo Date:	11/24/2010
Response Authority:	CERCLA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	11/26/2010	Start Date:	11/26/2010
Demob Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	VDEQ
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

An emergency sampling assessment led to a Time-Critical Removal Action which began on 11/26/10. The removal action scope includes providing bottled water to affected residents until a permanent water supply could be connected. During the week of March 7, 2011, two residential properties which had highly elevated levels of tetrachloroethylene in their drinking water wells were connected to public water.

1.1.2 Site Description

100-200 Area of Jefferson Highway, Louisa, Virginia. Area may be expanded upon additional information. The Site boundaries have not been defined as the source of contamination is still unknown.

1.1.2.1 Location

38.012958 N
-77.985559 W

The coordinates above are for the Acme Well. This is not considered the Site source, but is being used as a reference for documentation purposes.

1.1.2.2 Description of Threat

Tetrachloroethylene (perchloroethylene, "perc" or tetrachlorethene)

Tetrachloroethylene is a manufactured chemical used for dry cleaning and metal degreasing. It is also known as perchloroethylene or "perk"

The EPA maximum contaminant level for the amount of tetrachloroethylene in a public water drinking supply is 5 micrograms tetrachloroethylene per liter of water (0.005 mg/L).

The Occupational Safety and Health Administration (OSHA) has set a limit of 100 parts per million in air for an 8-hour workday over a 40-hour work week.

The National Institute for Occupational Safety and Health (NIOSH) recommends that tetrachloroethylene be handled as a potential carcinogen and recommends that levels in the workplace air should be as low as possible.

For more information on tetrachloroethylene, please see the "DOCUMENTS" section of the main website.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

An assessment is currently underway. The EPA OSC is coordinating with the EPA Site Assessment Manager, Ms. Dawn Fulsher, to ensure that removal assessment activities are consistent with information required to perform a formal Site Inspection under 40 CFR 300.420.

The Site was brought to EPA's attention when a sample from an unused Town well (known hereafter as the "Acme Well") indicated high levels of tetrachloroethylene. The Town of Louisa contacted the Virginia Department of Environmental Quality (VDEQ). VDEQ requested EPA assistance to perform sampling.

The Virginia Department of Health and EPA collected samples from nearby residents who still use private drinking water wells. Most of the residents in the area are already connected to public water.

Results from the testing indicated elevated levels of tetrachloroethylene in several of the residential wells. In November of 2010, EPA activated emergency funds to provide bottled water to the most affected residents.

The source, nature, and extent of contamination are unknown and background information is limited.

A Real Estate Transfer Environmental Assessment was prepared for the former Acme Visible Records facility in 1992. This document is now posted in the "DOCUMENTS" section of this website.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

The Louisa Acme Well is owned by the Town of Louisa. This well has been inactive for approximately 20 years. The Town had been investigating the possibility of reactivating this well for use. As part of the feasibility study, the Town arranged to have the well sampled.

The well sample indicated a high level of tetrachloroethylene, also known as tetrachloroethene, perchloroethylene, "PCE", or "perc". Perc was formerly widely used in the dry-cleaning business. The chemical is also used as an industrial solvent.

In October of 2010, the Town of Louisa resampled the Acme Well. The result for tetrachloroethene was 6.61 mg/l.

In November of 2010, EPA also resampled the Acme Well. The result for tetrachloroethene was 9.2 mg/l.

2.1.2 Response Actions to Date

Please Note: Actions are being separated into two categories. Assessment Actions pertain to the ongoing investigation to try and determine the nature, source, and extent of contamination. Removal Actions pertain to the mitigation of the threat of tetrachloroethylene contamination to residential drinking water wells.

REMOVAL ACTIONS

Through coordination with the Town of Louisa officials, the Louisa County Water Authority, and the cooperation of the property owners, EPA and its contractor, WRS, were able to procure public water connections for the two residents most impacted by the presence of tetrachloroethylene in their drinking water wells. In both instances, results were greater than 10 times the maximum contaminant level (MCLs) of 5 microgram/liter for tetrachloroethylene in a public water supply. Although MCLs do not apply to private drinking water wells, the standard is used as a basis for comparison. In EPA's Special Bulletin to activate a Removal Action, the OSC

proposed actions for residential properties which had tetrachloroethylene at levels twice the MCL. Both of these residential properties met this criteria. EPA worked directly with the property owners to discuss options and obtain the necessary permission. The names and addresses of these residences will not be disclosed on the public EPA website.

As of 3/11/11, both residents are now connected to public water and the threat to their drinking water supply has been mitigated.

ASSESSMENT ACTIVITIES

During the week of January 17, 2011, EPA collected samples from four monitoring wells located on the Piedmont Metal Fabricators property. The owner of Piedmont Metal Fabricators granted EPA access to sample these wells and also informed EPA that these wells are not used by the current property owner.

The results of the monitoring well samples indicated that two of the four wells contained tetrachloroethylene in concentrations of 370 micrograms/liter and 390 micrograms/liter respectively. For more information on the monitoring well data, please check the "Monitoring Well Sampling Results Jan 2011" in the DOCUMENTS section of this website.

Also, during the week of January 17, 2011, EPA collected water samples from three residential properties. Two of the three residents have been receiving bottled water from EPA. The January results indicated that tetrachloroethylene levels in both of these wells were still significantly elevated. No tetrachloroethylene was detected in the third residential well.

During the week of February 14, 2011, EPA, EPA's START contractor, and VDEQ returned to the Site to perform additional groundwater, surface water, sediment, and surface soil samples. A summary of these sampling locations can be found in the DOCUMENTS section of the website. These sampling locations were primarily located on the Piedmont Metal Fabricators property. EPA received permission from the owner to sample.

Groundwater samples were collected from 12 separate locations from around the property.

Surface water samples were collected from the pond located on the Piedmont Metal Fabricators Site and from surrounding stream and surface water collection areas. Surface water samples were collected from seven separate locations.

Sediment samples were collected from the pond and from three additional locations.

Two surface soil samples were collected from debris areas around the Site.

Six subsurface samples were collected from soil borings from the Geoprobe locations

Results from the February sampling have not yet been received and finalized.

Air sampling was also planned for this event. Because EPA was not able to procure a laboratory for the requested time frame, EPA performed air monitoring in several of the geoprobe locations.

As the geoprobe borings were extricated, they were screened using a photoionization detector which detects volatile organic contaminants (VOCs) in the parts per billion range. However, this instrument does not distinguish individual compounds. This is a common field screening technique to identify areas for further consideration.

EPA's contractor detected VOCs in subsurface locations in the southeast area, closest to the Acme Well. Soil gas was screened in several areas. Readings from the soil gas screening indicated the presence of volatile organic compounds in levels from 1.2 - 32.4 parts per million. This information will be used to identify areas for further testing.

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

The source, nature, and extent of contamination have not yet been identified. EPA will continue to work on enforcement issues as the assessment progresses.

2.2 Planning Section

2.2.1 Anticipated Activities

Further assessment activities are planned. These activities will focus on the southeast area closest to the Acme Well. A sampling plan is being developed for further investigation.

2.2.1.1 Planned Response Activities

EPA is working to obtain access from the owners of additional properties further from the Site. Several downgradient residences have been identified as having private drinking water wells. However, to the knowledge of EPA and VDH, no one is currently using these drinking water wells.

2.2.1.2 Assessment

EPA is planning additional assessment activities, which include, but are not limited to::

1. Sample further downstream to determine the leading edge of any tetrachloroethylene contamination in surface water or sediments;
2. Sample groundwater wells no longer in use;
3. Sample pipes around a former suspected lagoon area southeast of the Piedmont Metal Fabricators facility.
4. Research the feasibility of air sampling in crawl spaced in low-lying area.

2.2.2 Issues

Piedmont Metal Fabricators is cooperating with EPA's investigation. Piedmont Metal Fabricators does not and has not in the past ever used tetrachloroethylene in its manufacturing process.

The two residents affected by the presence of tetrachloroethylene have now been connected to public water. Bottled water distribution has been discontinued.

Additional sampling is necessary to determine the possible source and extent of contamination.

EPA is working on a Fact Sheet to be distributed to the residents in the area. EPA will work closely with the Unified Command members on this document.

EPA will arrange for a contractor to perform a hydrogeologic study of the affected area.

In coordination with VDH and ATSDR, EPA will propose future air sampling of crawl spaces of several residences. This plan is still under development.

Sampling will be conducted consistent with protocols for a Remedial Site Evaluation as defined by 40 CFR 300.420.

A map depicting sampling locations is being developed.

A trip report summarizing EPA's sampling activities for Jan-Feb 2011 will be released in mid-April. EPA wishes to acknowledge Mr. Brad Humphrey of the Town of Louisa and Ms. Pam Baughman of the Louisa County Water Authority for their assistance to secure the public water connections as quickly as possible.

2.3 Logistics Section

The Town of Louisa and the Louisa County Water Authority provided water connections services. WRS, a contractor to EPA, finalized connections from the residential meter boxes to the homes. WRS also performed repairs as needed.

TechLaw, Inc. is the EPA START contractor currently performing the assessment activities for the Site.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

2.5.1 Safety Officer

A Health and Safety Plan has been developed for the Site. EPA personnel oversee all field activities.

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer

Dr. Maureen Dempsey - VDH
Dr. Lilian Peake, VDH

Roy Seneca - EPA

2.7.2 Community Involvement Coordinator

Trish Taylor - EPA

3. Participating Entities

3.1 Unified Command

Town of Louisa

Brad Humphrey - Asst Town Mgr

Louisa County Water Authority

Mr. Dean Rodgers, Director

VDEQ

Devlin Harris - Site Assessment Manager

Richard Doucette - NRO Waste Program Manager

VDH

Dr. Maureen Dempsey, VDH, Deputy Commissioner

Dr. Lilian Peake, VDH, Thomas Jefferson Health District

Mr. Jeff McDaniel, VDH, Thomas Jefferson Health District

G. Steven Rice, VDH, Louisa County

DCLS

Mr. Greer Mills

EPA

Chris Wagner, OSC

Todd Richardson OSC

Francisco Cruz, OSC

Trish Taylor, CIC

Victoria Binetti, Water Protection Division

Carlyn Prisk, Cost Recovery

ATSDR
Lora Werner

3.2 Cooperating Agencies

4. Personnel On Site

EPA - Chris Wagner, Todd Richardson, Francisco Cruz
VDEQ - Devlin Harris
Town of Louisa officials
Louisa County Water Authority
WRS - EPA Contractor
TechLaw, Inc. - EPA Contractor

5. Definition of Terms

Maximum contaminant level means the maximum permissible level of a contaminant in water which is delivered to the free flowing outlet of the ultimate user of a public water system; except in the case of turbidity where the maximum permissible level is measured at the point of entry to the distribution system. Contaminants added to the water under circumstances controlled by the user, except for those resulting from corrosion of piping and plumbing caused by water quality are excluded from this definition. (40 CFR 142.2)

6. Additional sources of information

6.1 Internet location of additional information/report

Two documents have been added to the website
Monitoring Well Data Summary
Sampling Locations Descriptions

6.2 Reporting Schedule

The next reporting schedule has not yet been finalized.

7. Situational Reference Materials

No information available at this time.