

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Navy Yard Mills - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region I

Subject: POLREP #3
Navy Yard Mills

Dracut, MA
Latitude: 42.6645955 Longitude: -71.3224182

To:
From: Catherine Young, OSC
Date: 6/6/2012
Reporting Period:

1. Introduction

1.1 Background

Site Number:	01FD	Contract Number:	
D.O. Number:		Action Memo Date:	3/26/2010
Response Authority:	CERCLA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	11/28/2011	Start Date:	11/28/2011
Demob Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

The 2.08 acre Site was a former cotton and woolen mill which operated from approximately 1739 until the 1960's and used the abutting waters of Beaver Brook to power mill operations. Currently there are thirteen interconnected buildings which were constructed between 1860 and 1952. The current owner of the property, Tucard LLC (Tucard), has renovated several of the buildings and is currently leasing space to commercial tenants. A large portion of the property is paved. The nearest residence is approximately 50 feet northwest of the site boundary.

According to the EPA Region 1 Environmental Justice Mapping tool, the Site is not located in an environmental justice area and, according to the 2000 U.S. Census, there are approximately 1,749 people located within 1 mile.

1.1.2.1 Location

The Site is located at 76-100 Pleasant St. in Dracut, Middlesex County, MA. The geographic coordinates of the Site are: 42° 39' 52" north latitude; and 71° 19' 28" west longitude.

The Site is bounded: ·

- to the Northwest - Condominium complex and residential buildings;·
- to the Northeast - Beaver Brook;·
- to the Southeast - Pleasant Street;·
- to the Southwest - School Street.

1.1.2.2 Description of Threat

The major CERCLA hazardous substances, pollutants or contaminants that are being released, or for which there is a threat of a release, include but are not limited to the following:

Substance	Media
Tetrachloroethylene	Soil, water, air
Trichloroethylene	Soil, water, air
Volatile Chlorinated Solvents	Drums

In December 2008, April 2011 and July 2011, EPA conducted soil and groundwater sampling. Tetrachloroethylene (PCE), trichloroethylene (TCE), and other volatile organic compounds (VOC's) exceeding MassDEP and EPA action levels were detected in soil and groundwater throughout the Site which has been identified as the source of vapor intrusion within several buildings at the Site. EPA sampling results found TCE and PCE in soils within 4 feet of the surface at concentrations as high as 25,000 ug/kg and 19,000 ug/kg, respectively, which exceed the EPA Region 9 Preliminary Remediation Goals (PRG) standards for TCE (14,000 ug/kg) and PCE (2,700 ug/kg). EPA groundwater sampling results found exceedences of the MCP GW-2 standards for TCE (30ug/L) and PCE (50 ug/L) at concentrations as high as 540 ug/L and 820 ug/L, respectively. Due to PCE and TCE detected above State action levels from groundwater near the Northwest property line to the Site, there is also a potential vapor intrusion threat to residents living at a neighboring condominium complex, with TCE detected near the property line at 170 ug/L (MCP Method 1 Standard for TCE: 30 ug/L) and PCE detected at 180 ug/L (MCP Method 1 Standard for PCE: 50 ug/L). A sample taken from piping insulation in December 2008 confirmed the presence of asbestos in the former boiler room.

In January 2011, EPA conducted sub slab vapor and indoor air sampling, which detected levels of PCE and TCE above MassDEP imminent hazard levels. Depth to groundwater ranges from 1.5 feet at locations near Beaver Brook to over 20 feet on the southwestern section of the property.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

At the request of the Massachusetts Department of Environmental Protection (MassDEP), the EPA initiated an investigation in October 2008 to identify the source of contamination contributing to vapor intrusion within several buildings located at the Site. The investigation included a review of MassDEP-provided data of previous and current actions. EPA collected soil, groundwater, soil gas, indoor air and asbestos samples in December 2008, January 2011, April 2011 and July 2011. Data from these samples confirmed the presence of high levels of volatile organic compounds (VOC) in all media at several locations across the Site, and friable asbestos-containing material (ACM) within an on-site building.

1.1.2 Site Description

See previous Pollution Reports for the Site.

1.1.2.1 Location

See previous Pollution Reports for the Site.

1.1.2.2 Description of Threat

See previous Pollution Reports for the Site.

In February, 2012, EPA requested that the Agency for Toxic Substances and Disease Registry (ATSDR) conduct a Health Consultation to assess the vapor intrusion threat within the occupied spaces of buildings 1, 4 and 19. Between January and April of 2012, EPA conducted several rounds of indoor air sampling and provided the resultant data to ATSDR for review. Based on the 12 weeks of data, the final Health Consultation document was submitted to EPA in July 2012. After review of the EPA data, ATSDR concluded that air concentrations of PCE and TCE in the occupied sections of Buildings 1, 4, and 19 (baseball practice areas) represent a public health hazard under certain scenarios, and recommended that immediate steps be taken to stop or reduce exposure to PCE and TCE.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

See previous Pollution Reports for the Site.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Based on sampling results, methods for addressing contaminated soil which is the source of vapor intrusion into several building will include in-situ chemical oxidation (ISCO) treatment and potential excavation of surface soils. The scope of the area to be treated was determined by the indoor air samples taken by EPA which confirmed potential human exposure to TCE and PCE through vapor intrusion. Based on indoor air samples, Buildings 1 and 4, which are occupied by commercial tenants, has concentrations of TCE and PCE which exceed MassDEP action levels. The area delineated for treatment will encompass these buildings and will be reassessed as the ISCO injections proceed and progress is determined.

2.1.2 Response Actions to Date

See Polrep #2 for action taken prior to January 2012

After several rounds of ISCO injections into the cells opened up within the basement floor of building #1, the VOC concentrations were not being reduced significantly enough to make continued ISCO treatment practical. Therefore, the OSC determined that the soils would need to be excavated and removed for disposal at a CERCLA permitted facility. Excavation and disposal of the soils within the cells located within the basement of building #1 was completed in April 2012.

In January 2012, the contractor conducting indoor air sampling for the PRP, which was required under a MassDEP order, informed the OSC that the indoor air levels had exceeded the MassDEP PCE action levels in buildings #1 and 4. As a result of the contractors air sampling data and the elevated groundwater concentrations of TCE and PCE which were identified in the January 2012 EPA samples, EPA conducted its own air sampling within buildings #1, 4 and 19. In addition to the time-weighted ambient air sampling that EPA was conducting, EPA also took a grab air sample in January 2012 from an area between buildings #1 and 4 near the PRP contractors vapor extraction piping. The grab sample was then analyzed on EPA's mobile lab. The concentrations of this sample were significantly higher than the MassDEP and EPA action levels and it was determined that this location provided a significant pathway for vapor intrusion. To address this particular pathway immediately, EPA attempted to seal the approximately 14 ft x 8 in area with pourable grout. Post sealing sampling showed that the concentrations were approximately reduced by 50% but were still above the MassDEP and EPA action levels for PCE and TCE.

It is assumed by EPA that several pathways exist for vapor intrusion into several buildings at the site. Due to this assumption and the potential difficulty is controlling these pathways given the current construction of the buildings, EPA requested support from the federal public health agency, the Agency for Toxic Substances and Disease Registry (ATSDR), in determining if a potential threat exists to the tenants. EPA has conducted several rounds of air sampling within buildings #1, 4 and 19 and has submitted that data to ATSDR for review. EPA has also submitted to ATSDR the indoor air data collected by the contractor for the PRP from 2007 through 2011. ATSDR is currently in the process of reviewing the data and will provide an assessment of the threat to EPA within the next 4-6 weeks. ATSDR is coordinating its review with the Massachusetts Department of Public Health (MADPH). Based on the results of the ATSDR assessment, additional measures may be required to be taken at the site to protect public health.

EPA has temporarily demobed from the site while it awaits the public health assessment. If it is determined that additional removal activities are required, EPA will mobilize to the site again to continue removal activities.

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

A PRP has been identified. This will be an EPA-lead removal action. Removal site activities were delayed for approximately 1.5 years as negotiations and legal proceedings were conducted to obtain access to the site to conduct the removal action.

2.1.4 Progress Metrics

Contaminant	Volume	Media	Treatment or Disposal?
TCE and PCE	37.1 tons	soil	disposal
TCE and PCE	1 ton	piping from soil vac process	treatment
TCE and PCE	11 tons	Concrete removed in building #1	disposal
TCE and PCE	5	Drums of soil from sump area in building #1	treatment

2.2 Planning Section

2.2.1 Anticipated Activities

All sampling and removal activities have been complete.

2.2.1.1 Planned Response Activities

Based on the public health assessment currently being completed, additional removal activities may be required to address vapor intrusion pathways.

2.2.1.2 Next Steps

Meet with ATSDR and MADPH to determine if additional activities are required at the site to address potential inhalation threats to the tenants at the site.

2.2.2 Issues

The property is privately owned and has several commercial tenants onsite.

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

No information available at this time.

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.