United States Environmental Protection Agency
Region I
POLLUTION REPORT

Date: Thursday, March 25, 2004
From: Janis Tsang

Subject: Removal Action III - Progress Polrep #6
Fisherville Mill Site Removal Action III
62 Main Street (Rt. 122A), Grafton, MA
Latitude: 42.1778000
Longitude: -71.6903000

POLREP No.:	6	**Site #:**	017B
Reporting Period:	October2003 - February 2004	**D.O. #:**	0074/0012
Start Date:		**Response Authority:**	CERCLA
Mob Date:	5/10/2002	**Response Type:**	Time-Critical
Demob Date:		**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Action
CERCLIS ID #:	MASFN0102999	**Contract #**	68-R1-98-01/68-W-03-037
RCRIS ID #:			

Site Description
The Fisherville Site is located at 60 Main Street (Route 122A) in Grafton, Massachusetts. The approximately 16.2-acre site is bounded to the north by Fisherville Pond, to the east by the Blackstone River, to the south by Route 122A, and to the west by private residences. The South Grafton Water District (SGWD) utilizes two overburden water supply wells, approximately 1000 feet south of the Site on the west side of the Blackstone River (designated as an American Heritage River) to supply domestic water for area residences. The surrounding area is a mix of residential, commercial and industrial properties.

Current Activities
• Since September 2003, OSC Allen Jarrell assisted OSC Tsang in coordinating field activities including conducting oversight of the permanganate sampling, attending meetings and participating in conference calls for the site.

• From October 17, 2003 to November 13, 2003, Weston-Manchester developed construction plans for the installation of a sheetpile dam with stop log to replace the existing temporary sand bag dam.

• On October 21, 2003, EPA/START conducted a comprehensive permanganate monitoring sampling of all 99 injection wells and selected monitoring wells. The sodium permanganate concentration continues to persist in most of the down gradient injection points at an average concentration of approximately 2%. Groundwater elevation data was also collected for all the injection point well locations.

• From November 3 to December 2, 2003, Atlantic Retek, subcontractors to property owner Central Massachusetts Economic Development Authority, removed oil-contaminated debris from canal sluiceway north of Route 122A (Main Street) along the former mill building foundation and performed on-site asphalt batching treatment of the oil-contaminated soil pile located west of the canal sluiceway. The treated asphalt batch soil is being temporarily stored on-site.

• On November 13, 2003, EPA/ERRS conducted a bid walk for the construction and installation of a sheet and stop log dam to replace the existing temporary sand bag dam. Bid walk attendees included representatives from EPA/START, Weston-Manchester, South Grafton Water District, MA DEP, Cyn Environmental, and Carter Pile.

• On November 17 and 18, 2003, EPA/START collected VOC samples from 45 injection well and monitoring well locations where permanganate concentrations were below 1% (visually clear) and one

surface water location from the Blackstone Canal. Samples were field screened on-site by the EPA New England Regional Laboratory (NERL) Mobile Laboratory and additional samples were sent back to NERL in Chelmsford for confirmatory analysis. Groundwater elevation data was also collected for all the injection point well locations.

• From December 4 to 23, 2003, EPA/ERRS subcontractors constructed and installed the sheet piled dam with stop log to replace the existing temporary sand bag dam.

• On December 12, 2003, MA DEP subcontractor installed 8 additional steel drivepoint injection wells (IP-116 to IP-123) in a line extending eastward from the IP-15 location.

• On December 16, 2003, groundwater samples were collected from each of the steel drivepoint wells and taken to NERL for VOC analysis. Preliminary results of the VOC analysis of the screening samples provided by NERL:

* The concentration of PCE ranged from 1 ppb to 1.9 ppb.
* The concentration of TCE ranged from non-detect (ND) to 84 ppb.
* The concentration of cis-DCE ranged from ND to 198 ppb.

• On December 17 and 18, 2003, Shaw injected 1 55-gallon drum of 40% solution into the following injection well locations: IP-6, IP-7, IP-11, IP-12, IP-16, IP-21, IP-57, IP-63, IP-67, IP-116, IP-117, IP-118, IP-119, IP-120, IP-122, and IP-123. Injection into IP-121 was not attempted since the steel riser was bent approximately 10 feet below ground surface causing unknown damage to joints and screen. Injection into IP-62 was stopped soon after starting due to leaking from the PVC riser joint just below the ground surface. These injection locations were moved to IP-11 and IP-21.

• From December 18 to 23, 2003, Shaw conducted 24-hour groundwater re-circulation of the injection grid area. Groundwater was pumped from injection wells IP-99, IP-55, and IP-89 into IP-116 to IP-120, IP-122, and IP-123. Approximately 5,000 gallons of groundwater was re-circulated into IP-116, IP-117, IP-118, IP-119, and IP-123 (~5,500 gallons). Approximately 7,000 gallons was re-circulated into IP-120 and IP-122 (~6,900). Approximately 7,000 gallons of groundwater was re-circulated/pumped from MW-104 and injected into IP-7. Permanganate concentrations of groundwater re-circulated from IP-99, IP-55, IP-89, and MW-104 was approximately 1-2% permanganate.

• As of December 27, 2003, personnel and equipment/supplies including the office trailer, dumpster, port-a-johns, and equipment storage connex box were demobilized from the site.

Planned Removal Actions

The following activities have been completed:

• Conduct treatability study and field study to evaluate treatment technologies including, but not limited to, chemical oxidation for treating TCE and other chlorinated VOCs. The method selected will eliminate the VOC/DNAPL source and subsequently eliminate the threat to public drinking water supply posed by contaminated groundwater plume.

• Coordinate a meeting with MA DEP, CMEDA, the Town, WESTON and ERRS contractor to discuss the removal logistics and removal work plan.

• Conduct topographical (land and aerial) survey to establish base line reference (e.g., elevation) for removal planning, if necessary.

• Conduct field survey/evaluation and/or literature research for rock contour plan, if necessary.

• Conduct additional sampling including, but not limited to conducting soil gas survey to further delineate the nature and the-extent-of-contamination on-site and installation of additional monitoring wells. Off-site activities may include sediment and water sampling in the Blackstone River, Fisherville Pond and Blackstone Canal.

• Develop engineer-designed treatment plan utilizing the treatment technology evaluated in the above to treat the source areas and/or control the contaminant plume.

• Perform applicable environmental sampling and monitoring including soil and/or water testing during the removal.

• Implement interim water treatment including, but not limited to, installing portable dam(s) at various locations along the Blackstone Canal, monitoring the hydrologic conditions and/or installing temporary well head treatment.

• Implement the treatment plan in accordance with the engineered design and specifications. EPA, MA DEP and SGWD agreed that the objective of the treatment is to reduce the TCE contaminant level by approximately two orders of magnitude within a twelve-month period. If the results of the selected treatment does not accomplish the above-mentioned objective within the 12 months, EPA will review other options including reviewing whether the project should remain within the scope of the Removal Program.

The following activities are on-going:

• Conduct groundwater monitoring while implementing the treatment plan.

• Perform applicable air monitoring.

• Perform land survey and document the Site conditions with as-built drawings.

The OSC will coordinate with MA DEP, CMEDA, the town of Grafton, United State Army Corps of Engineers (USACE) and EPA Environmental Response Team (EPA/ERT) throughout the removal.

Next Steps

• Continue to conduct monitoring of the permanganate levels on a quarterly basis through Fall 2004 and conduct VOC sampling when the permanganate concentrations drop below 1% at all (or most) of the injection points.

• Conduct conference calls on an as-need basis with ERT/REAC, MA DEP, START and ERRS to review sampling data.

• Conduct limit site restoration of access way leading to sheet pile/stop log dam and the area around the dam in Spring 2004.

Key Issues

None

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