

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Schemerhorn Creek - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II

Subject: POLREP #4
Schemerhorn Creek
ZL
Schenectady, NY
Latitude: 42.8080940 Longitude: -73.9464700

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Date: 3/1/2010

Reporting Period: 02/01/2010 - 02/28/2010

1. Introduction

1.1 Background

Site Number:	ZL	Contract Number:	EP-W-04-055/EP-S6-07-02
D.O. Number:	0086/0031	Action Memo Date:	9/25/2009
Response Authority:	CERCLA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	RV2
Mobilization Date:	11/11/2009	Start Date:	9/28/2009
Demob Date:		Completion Date:	
CERCLIS ID:	NYN000206220	RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Stabilization action for soil and sediment contamination.

1.1.2 Site Description

The Site is located in a commercial area along Edison Avenue in the City of Schenectady, New York. The Site includes a one-acre paved parcel that is currently being used as a materials storage area for Quality Roofing and Siding Supplies, Inc. (Quality). The Site is bounded to the west by the Delaware and Hudson (D&H) railroad line. A steep embankment along the railroad separates the tracks from the paved parking/storage lot on the Site. Edison Avenue borders the Site to the south and the Quality warehouse building (96 Van Guysling Avenue) borders the Site to the east. Schermerhorn Creek flows to the north on the eastern edge of the Site. The creek is situated between the roofing supply warehouse and the paved lot. There is roughly 440 feet of the creek exposed on the Site from Edison Avenue to a culvert before it goes underground for approximately 225 feet. It emerges again for about 75 feet and is culverted again on its way to the Mohawk River to the north. The water in the creek is down a very steep bank about ten feet below the surrounding grade, approximately 18-24" deep, and ten feet wide.

Historical documents indicate that the Site was owned by The Delaware and Hudson Company from 1907 until 1930 when it was transferred to The Delaware and Hudson Railroad Corporation; and then to The Delaware and Hudson Railway Company in 1968; and then to the Bankruptcy Trust in 1991; and then to CP Railroad whose name was changed to the Delaware Railway Company, Inc. Documents also indicate that by 1900, the F.W. Rankin Company operated a coal and wood storage yard at the Site. By 1914 the Site was occupied by the Crane-Veeder Company who operated a general supply store and storage area for furniture, terra cotta, fertilizer, brick, and coal. By 1953 the Site had changed occupants from the Crane-Veeder Company to Buff & Buff, Inc. who operated it as a scrap metal yard until 1993 when the Site was vacated. EPA and NYSDEC historical files seem to indicate that transformers were scrapped at the Buff &

Buff facility and PCB oils were discharged onto the ground surface at the Site.

Polychlorinated biphenyls (PCBs) have been released into the soils at the Site. These PCB contaminated soils have migrated into the sediment of Schermerhorn Creek. In addition, oil is discharging from a subsurface perched water zone present under the asphalt lot into the creek. Sampling of the soil on the Site indicates elevated levels of PCBs in the creek bed, on the creek embankment, in the soil below the asphalt lot and on the railroad embankment.

1.1.2.1 Location

The Site is an asphalt paved parking/storage lot located on the western portion of an operating commercial property owned by Quality Roofing and Siding Supplies, Inc. The address for Quality is 95 Van Guysling Avenue, Schenectady, New York, 12306. The Site is approximately one acre in size and can be entered from Edison Avenue which borders the Site to the south. The western boundary is a set of D&H railroad tracks with a steep embankment separating the railroad tracks from the parking lot. Schermerhorn Creek forms the eastern boundary and separates the parking lot from a Quality warehouse. Schermerhorn Creek is an open channel for approximately 440 feet as it flows northeast from Edison Avenue. It then enters a culvert for approximately 225 feet and emerges for approximately 75 feet before it enters another culvert. Approximately one mile from the Site, Schermerhorn Creek discharges into the Mohawk River. The Site is situated in a mostly commercial/industrial area with the nearest residence 750 feet to the east. Over 6,000 people reside within a one-mile radius of the Site.

1.1.2.2 Description of Threat

The Site is in an active commercial area. Approximately a half dozen employees work at the Site daily. These employees could be exposed to PCBs from the soil from the railroad or creek embankments on a regular basis. Wind can entrain soil particles as dust and employees or visitors on the Site could ingest or inhale these particles. Wind can also carry soil particles from the stream and/or railroad embankments to other areas on or off-Site.

PCBs have been released into soils and have migrated into the sediments of Schermerhorn Creek. In addition, oily residue beneath the paved lot continues to seep into the creek. Laboratory analyses of soil samples indicate that elevated levels of PCBs are present in concentrations as high as 4,900 mg/kg. Sediment samples collected from the creek bed revealed PCBs at concentrations as high as 860 mg/kg. Based on the available information, a CERCLA Removal Action is warranted at the Site. Approximately 5,400 cubic yards of soil beneath the paved lot and in the railroad embankment are contaminated with PCBs in excess of 50 mg/kg. Approximately 5,500 cubic yards of soil are impacted with PCB concentrations in excess of 1 mg/kg. Approximately 325 feet of creek sediments are contaminated with PCB concentrations in excess of 1 mg/kg. Lead is comingled with the PCBs in concentrations as high as 7,770 mg/kg.

The high PCBs in the soils and creek sediment at the Site pose a potential health threat from direct contact to individuals working on the Site. PCBs and oily waste have been and continue to be released to the creek. Both the PCBs and oil also present threats to the biota of Schermerhorn Creek and could migrate downstream and threaten the Mohawk River and its ecosystem. The mechanisms for future releases are from PCBs in surface soil which becomes readily airborne when disturbed under dry conditions. Under this scenario, PCBs could migrate off-site. In addition, a mechanism for a future release is leaching of the hazardous substances into the ground through precipitation events and into surface water through runoff.

The highest concentration of lead detected in surface soil was 7,770 mg/kg in a sample collected from the railroad embankment. Lead in the surface soil could migrate off-site under dry soil conditions. When disturbed, a future release of lead could occur when it becomes airborne and potentially impact downwind receptors.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

In November 2007 and January and February 2008, the Removal Support Team contractor (RST) conducted sampling events to assess surface and subsurface PCB contamination. A total of four water samples and 199 soil/sediment samples were collected from the Site. Eight of the 24 sediment samples collected along the Schermerhorn Creek bed and bank exhibited concentrations of PCBs above 50 mg/kg, the highest concentration identified was 860 mg/kg. In January and February 2008, a total of 43 soil borings were advanced, via a Geoprobe, into the asphalt parking lot to a depth of 15 feet below ground surface (fbgs). Of the 51 soil samples collected from the 0-5 foot interval, 13 samples exceeded a PCB concentration of 50 mg/kg, the highest concentration identified was 4,100 mg/kg. Of the 44 soil samples collected from the 5-10 foot interval, no samples exceeded 50 mg/kg, the highest concentration identified was 23 mg/kg. Thirty-three soil samples were collected from the 10-15 foot interval, the highest concentration identified was 16 mg/kg. One soil boring was advanced to 20 fbgs and two samples were collected, the highest concentration identified was 2 mg/kg. An oily sheen was observed in several borings at the 10-15 foot interval. The RST contractor also collected twelve soil samples from the embankment located between the paved parking lot and the railroad tracks. Eight of these twelve samples were collected from the surface (0-6"). Laboratory results on the eight surface soils samples indicated that three exceeded a PCB concentration of 50 mg/kg. The highest PCB concentration was 980 mg/kg from a sample collected from 18 to 24".

In February 2009, the RST contractor conducted a sampling event to further delineate PCB contamination in soil on the railroad embankment and to investigate the presence of the oily sheen on the groundwater. During this sampling event, 24 test pits were excavated within the railroad embankment from which 66 soil samples were collected. The targeted depth for each of test pits was five feet below grade. All test pits were completed to the targeted depth except for one which was terminated at two-and-a-half feet due to a subsurface concrete pad. In addition, 15 soil borings were advanced into the soil beneath the asphalt parking lot and one soil boring was advanced into the base of the railroad embankment. Eight monitoring wells and two piezometers were also installed during this sampling event. A total of 15 subsurface soil samples and ten groundwater samples were collected.

Of the 66 soil samples collected during the test pit excavations, 18 samples exceeded a PCB concentration of 50 mg/kg. Three of these 18 samples exceeded 1,000 mg/kg, with the highest concentration of 4,900 mg/kg in a sample collected from 18 – 24 inches bgs. Eighteen of the 66 samples were surface samples (0" – 6"). Three of the 18 surface samples exceeded a PCB concentration of 50 mg/kg, the highest concentration identified was 230 mg/kg. Six of the soil samples exhibited concentrations of lead ranging from 2,410 mg/kg to 7,770 mg/kg.

From the 15 soil borings, 13 soil samples were collected from the 10-15 foot interval and two soil samples were collected from the 15-20 foot interval. Two of the 13 soil samples collected from the 10-15 foot interval exceeded 50 mg/kg, i.e., 160 mg/kg and 89 mg/kg. The other eleven samples collected from the 10-15 foot interval ranged from non-detect to 25 mg/kg. The two samples collected from the 15-20 foot interval exhibited PCB concentrations of 1.4 mg/kg and 39 mg/kg.

Ten groundwater samples were collected from the monitoring wells and piezometers. Three of the ten samples identified PCB concentrations ranging from 1.4 µg/L to 8.7 µg/L. Of the remaining seven groundwater samples, PCB concentrations were either less than 1.0 µg/L or not detected.

During the week of September 14, 2009, the ERRS contractor subcontracted drilling services to confirm vertical boundaries of PCB concentrations to 1.0 mg/kg or less. The locations selected for the soil borings were based upon previous soil boring results where PCBs were identified in concentration above 1.0 mg/kg. Six soil borings were advanced, via four-inch diameter hollow stem augers, into a clay layer that was previously identified at approximately 15 fbg as well as into a sand layer immediately beneath the clay, at approximately 20 - 22 fbg. A total of nine representative soil samples were collected from both the clay and sand layers utilizing split-spoon samplers. PCBs were not detected in eight of the nine samples. The one sample with PCBs contained a concentration of 0.17 mg/kg (14 -16 foot interval).

Results from the removal assessment activities indicate that the estimated area that requires PCB remediation is 30,000 square feet. PCB concentrations of 50 mg/kg or greater are located within the upper five feet of soil. Concentrations of PCBs less than or equal to 1.0 mg/kg are generally at 15 feet except for a 1,250 square foot area where it's at 20 feet. The oil sheen encompasses an area approximately 5,000 square feet and groundwater is encountered consistently at ten fbg. A frequent observance of a sheen on the surface water of Schemerhorn Creek indicates that oily material is seeping from the embankment.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

The purpose of this removal action is to mitigate the threat of direct contact posed to Quality workers, the public and the environment by soils at the Site that are grossly contaminated with hazardous substances including PCBs and lead. The action will also serve to limit the potential of off-site migration from air entrained PCB soil particles and dust particulates impacting down wind receptors.

In an effort to comply with Toxic Substances Control Act (TSCA) requirements, the proposed action will include: a risk assessment; after on-site treatment, installation of a cap per TSCA specification; a deed restriction; and a public comment period.

The goal of this action is to remove or stabilize all PCB contaminated soil within the area of concern to limits where residual PCB contamination is equal to or below 1 mg/kg. Upon approval of this Action Memorandum, EPA will initiate the removal action as follows:

- design and install sheet piling walls along the western property and along the western creek ban;
- removal, and off-site disposal of PCB contaminated soil from the top five feet below the parking lot;
- conduct field demonstration tests to determine most effective design mix;
- in-situ treat PCB contaminated soil by stabilizing/solidifying an estimated 5,500 cubic yards (5-20');
- backfill with clean material;
- replace the span across Schemerhorn Creek; and
- repave (cap as per TSCA) the parking/storage lot.

2.1.2 Response Actions to Date

During the week of February 1st, The ERRS contractor, Aecom, completed the excavation and removal of soil and debris from beneath the parking/storage lot. Sixty-one loads (2,135 tons) of non-TSCA soil were shipped off-site for disposal, bringing the total to 225 loads (7,865 tons). Backfilling within non-soil mixing areas, with post excavation sample results of less than 1 ppm, began on February 4th.

Also during the week of February 1st, the Region 6 cross-over contractor, Shaw Environmental, mobilized an RM and FCA. Subcontracts for backfilling and for soil mixing were finalized.

During the week of February 8th, Aecom completed backfilling and compaction of two-thousand yards of fill as well as decontaminating rental equipment. Aecom demobilized personnel on February 13th.

During the week of February 15th, Shaw Environmental assumed site operations. The soil mixing subcontractor, Geo-Con, mobilized on February 15th and by Wednesday, had setup their cement silo, grout mixing equipment and began conducting field demonstrations. The field demonstration will consist of seven test panels (12' x 15' x 10-15') of varying grout percentages. Results from this demonstration determined the proper "design mix" for attaining the specifications of compressive strength and permeability which was determined to be 5.75%.

After receiving favorable laboratory results from their field demonstration tests, the soil mixing subcontractor, Geo-Con, began full operations on Monday, February 22nd. At the end of operations on February 24th, 38 of the 120 panels had been completed. Shaw Environmental received and reviewed four bids for restoration, i.e., backfilling, guiderails and asphalt paving. Shaw also received and reviewed four bids for replacing the bridge.

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

EPA has sent CERCLA 104 (e) information request letters to several parties including: D&H Railway, General Electric Corporation, the City of Schenectady, National Grid, NYSE&G and Westinghouse. It has also interviewed Jonathan Buff (son of Marvin Buff, owner of Buff & Buff, Inc.).

2.1.4 Progress Metrics

N/A

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

In-situ soil mixing is expected to be completed during the week of March 1st. Installation of a temporary dam structure in Schemerhorn Creek is scheduled for the week of March 1st. A 12-in pump will be utilized to divert water around the dammed section of Schemerhorn Creek. An extended reach excavator will remove contaminated sediments that will be incorporated within the soil mixing operation. Removal and mixing of sediments will be completed by the March 6th. Backfill/restoration operations will begin during the week of March 8th. Bridge replacement operations are also expected to commence during the week of March 8th.

2.2.1.2 Next Steps

Once backfilling/restoration activities are completed, the final tasks will be to replace the asphalt parking/storage lot and install fencing along the Quality/railroad property.

2.2.2 Issues

None

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

2.5.1 Safety Officer

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer

Kristen Skopeck, Public Affairs Specialist
Hudson River Field Office

2.7.2 Community Involvement Coordinator

Kristen Skopeck, Public Affairs Specialist
Hudson River Field Office

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.