

**United States Environmental Protection Agency
EPA New England
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May 14, 2003

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Mayor Hathaway, City of Pittsfield
Commissioner of Public Works and Utilities, City of Pittsfield
Public Information Repositories

RE: April 2003 Monthly Report
1.5 Mile Reach Removal Action
GE-Pittsfield/Housatonic River Site

Enclosed please find the April 2003 Monthly Report for the 1.5 Mile Reach Removal Action. In accordance with the Consent Decree for the GE-Pittsfield/Housatonic River Site, the United States Environmental Protection Agency (EPA) is performing the 1.5 Mile Reach Removal Action, with General Electric funding a portion of the project through a cost sharing formula.

The EPA has entered into an agreement with the United States Army Corps of Engineers (USACE) to assist in the design and construction of the Removal Action. The USACE subsequently awarded a design-construct contract to Weston Solutions, Inc. (Weston). Weston, with several subcontractors, will be performing the design and construction activities for the 1.5 Mile Reach Removal Action.

If you have any questions, please contact me at (413) 236-0969.

Sincerely,

Dean Tagliaferro
1.5 Mile Reach Removal Action Project Manager

1. Overview

During April 2003, EPA, the United States Army Corps of Engineers (USACE), the USACE's contractor, Weston Solutions, Inc. and Weston's subcontractors continued remediation activities on the 1.5 Mile Reach Removal Action. The primary work included soil and sediment excavation activities in Cells 10A, 11 and 12 and the backfilling of the riverbanks and riverbed in Cells 10, 10A and 12. Installation of the topsoil, herbaceous seed mix and erosion control blankets above elevation 975 was completed in Cells 2, 3, 4, 5, 9 and 12. In addition, a transfer of TSCA and non-TSCA materials from the stockpile management areas and/or excavation cells to the GE On Plant Consolidation Areas (OPCAs) was performed.

2. Chronological description of tasks performed

Refer to Figure 1 for an orientation of the sheetpile cells and their respective locations.

By the end of March 2003, Cell 10 was divided into sub-cells 10 and 10A. Excavation activities were completed in the Cell 10 riverbed and riverbanks. During the first week of April, backfilling activities were completed in the Cell 10 riverbed and riverbank up to elevation 975. Common fill, Filter Layer A and 12-inch riprap were placed on the riverbed as well as two habitat enhancement structures (2-foot boulders) and a wing deflector. Common fill, Filter Layer A, Filter Layer B and 18-inch riprap were placed on the riverbank up to elevation 975. Common fill was placed above elevation 975; the topsoil will be placed at a later date. A drainage swale was constructed on the riverbank of Cell 10 using geotextile fabric, Filter Layer A and B and 9-inch riprap. The backfill verification survey was completed for Cell 10 riverbed and riverbank below elevation 975.

Dewatering of Cell 10A was initiated by pumping water greater than 6 inches in depth directly back to the river. Once the water depth reached 6 inches it was pumped to the water treatment system. Sumps and swales were installed to help in the dewatering process. Excavation of the non-TSCA material was completed in Cell 10A. There was no TSCA material in Cell 10A. The non-TSCA material was transported to the Building 65 stockpile management area (see Table 1 for a daily summary of material transported to the stockpile management areas in the month of April).

The post-excavation survey was performed in Cell 10A to confirm that the required excavation depths were achieved. A review of the survey information indicated that a small amount of additional excavation was required. Also, setting of the backfill grades was initiated in Cell 10A.

Other activities during the first week of April included initiation of installation of the centerline sheetpile wall between Cells 11 and 12. The original design assumed that remediation by the sheetpile containment cell method would terminate at the end of Phase I, which is approximately 770 feet upstream of the Elm Street Bridge. This was based on pre-construction riverbed borings that indicated shallow depth to bedrock that would prohibit the installation of sheetpile to

acceptable embedment depths. At this point remediation was to be performed using the temporary dam and gravity bypass system. To determine if the sheetpile containment cell method could be extended beyond the end of Phase I, a probing investigation for potential embedment depths was completed. This investigation indicated that the sheetpile containment cell method could be extended an additional 400 feet downstream. The temporary dam location will remain at the original design location (approximately 770 feet upstream of the Elm Street Bridge).

During the second week of April, approximately 10 cy of additional non-TSCA material was excavated out of Cell 10A and transported to the Building 65 stockpile management area. This completed the excavation of Cell 10A. The surveyors also finished setting backfill grades for Cell 10A. Riverbed and riverbank backfill activities were completed. Common fill, Filter Layer A, 9-inch riprap and one habitat enhancement structure were placed on the riverbed and common fill, Filter Layer A, Filter Layer B and 18-inch riprap were placed on the riverbank up to elevation 975. The original design for the riverbank above 975 required a vegetated geogrid because the projected post remediation slopes were steeper than 2H:1V and the required stable slope without bioengineering is 2H:1V or flatter. However the actual survey indicated a 2H:1V slope would be achieved so the vegetated geogrid was eliminated and the riverbank was restored with a Common Fill layer. The topsoil will be placed at a later date. Following completion of backfilling and the backfill verification survey, water was pumped over the sheetpile wall back to the river until the final survey was approved.

Upon approval of backfill grades in Cells 10 and 10A, the upstream sheetpile cutoff walls in both cells were removed and the Cell 10A downstream cutoff wall was driven to mudline allowing both cells to flood and allowing the river to flow through the east side of the river channel.

Also, during the second week of April, the installation of the Cell 12 centerline was completed. Due to the fact that the sheetpiling method was still attainable past the end of Phase I, the length of Cell 12 was extended by approximately 100 feet into the Phase II (eventually the sheetpile method would be extended an additional 300 feet). Cell 12 was isolated by pulling the upstream sheetpile wall up and by installing a downstream cutoff wall. Dewatering of Cell 12 started by pumping water greater than 6 inches in depth directly back to the river.

During the third week of April, dewatering of Cell 12 continued by pumping water greater than 6 inches in depth directly back to the river. Once the water depth reached 6 inches it was pumped to the water treatment system. Sumps and swales were installed to help in the dewatering process.

Excavation and transport of TSCA and non-TSCA materials was completed in Cell 12 (see Table 2 for a summary of the quantities of sediment and soils excavated to date). As a result of the March 29 high river flow (approximately 2,100 cfs) significant scouring of the riverbed occurred in the upstream portion of the cell. In some areas the depth of the scour exceeded the proposed excavation depths. Therefore no sediment excavation was necessary in the upstream portion of the cell. Based on the pre-excavation survey, which was performed prior to March 29, and a subsequent pre-excavation survey performed after the high flow event, it was estimated that 670 cy of sediment material scoured. Additional excavation was performed at the end of Phase I to allow for the installation of the proposed temporary dam. Some of the non-TSCA material was

transported directly to Hill 78 OPCA, and the remainder was transported to the Building 65 and/or Building 68 stockpile management areas. Some of the TSCA material was transported directly to Building 71 OPCA, and the remainder was transported to the Building 63 stockpile management area.

The Cell 12 post-excavation verification survey was completed and approved backfill grades were staked out by the surveyors. The riverbed backfill activities were initiated. The temporary dam overcut area was backfilled with two 6-inch thick filter layers and 9-inch riprap. In the Phase I portion of the cell, approximately 185 feet in length, the riverbed was backfilled with Filter Layer A. The first 35 feet of the riverbed was backfilled with 12-inch riprap and the next 150 feet to the end of Phase I with 9-inch riprap.

Other activities included removal of Cell 9/10 centerline sheetpile wall and continuation of installation of the centerline into Cells 11 and 12A.

During the fourth week of April, the backfill activities were continued and completed in both the Phase I and Phase II portions of Cell 12. The Phase I portion of the riverbed was completed with the installation of a wing deflector. The Phase I riverbank was backfilled with Common Fill, Filter Layer A, Filter Layer B and 18-inch riprap up to elevation 975 and Common Fill, topsoil, herbaceous seed mix and biodegradable erosion control blankets were placed above elevation 975. The design for Phase II backfilling required different Filter Layers. Common Fill (Filter Grade) replaced Filter Layer A, and a Filter Stone material consisting of graded gravel replaced Filter B. This gravel filter layer will be referred to as "Filter Stone". The Phase II riverbed was backfilled with 6 inches minimum of Common Fill Filter Grade, and 6 inches of Filter Stone. The first 50 feet downstream of Phase I was backfilled with 12-inch riprap and the remaining 50 feet was backfilled with 9-inch riprap. One habitat enhancement structure was installed. The riverbank up to elevation 975 was backfilled with 6 inches minimum of Common Fill Filter Grade, 6 inches of Filter Stone, and 24 inches of 18-inch riprap. The riverbank above elevation 975 was backfilled with Common Fill, topsoil, herbaceous seed mix and biodegradable erosion control blankets.

Upon completion of the backfilling activities the surveyors completed a backfill verification survey. The final backfill grades were approved, the Cell 12 upstream and downstream cutoff walls were removed and the cell was flooded.

Also, during the fourth week of April the surveyors staked out the backfill grades for topsoil in Cells 2, 3, 4, 5 and 9. The cells were then backfilled with topsoil, herbaceous seed mix and erosion control blankets. Upon completion of the backfilling activities, the final verification survey was completed. Cell 9 also required additional common fill due to a washout of this material during the March 29 high flow event. Also, minor re-grading and additional topsoil placement was performed in Cell 6 and 6A to repair erosion and settlement that occurred over the winter months.

During the fifth week of April, the centerline for Cell 11 was completed. The cell was isolated by pulling up the upstream cutoff wall from mudline to grade and installation of a downstream cutoff wall. Dewatering of Cell 11 was completed by pumping water greater than 6 inches in depth directly back to the river. Once the water depth reached 6 inches it was pumped to the

water treatment system. Sumps and swales were installed to help in the dewatering process. The surveyors established the excavation limits in Cell 11 and the TSCA material excavation was initiated. The TSCA material was transported to the Building 63 stockpile management area.

Other activities during the last week in April included continuation of the required repairs to Cell 6 and 6A topsoil and erosion control blankets. Upon completion of the required repairs, the surveyors completed a final verification survey to ensure the backfill grades were met. Also, the Cell 11A/12A centerline sheetpile wall was completed and installation of the downstream cutoff wall for Cell 11A was initiated.

An inspection of Cell 1 after the March 29 high flow event revealed significant erosion immediately downstream of the Lyman Street Bridge. The cause of the erosion appeared to be a plugged storm drain outfall pipe. Material covering the pipe was removed and the pipe was repaired and extended. The lower portion of the riverbank was then restored with Common Fill, Filter Layer B and 18-inch riprap. The upper portion was restored with Common Fill, topsoil, herbaceous seed and erosion control blankets.

During the month of April, the water treatment system treated water from Cells 10, 10A, 11 and 12. Sampling of the water treatment system for parameters included in the NPDES exclusion permit was performed on April 24, 2003. Air monitoring for particulate matter (PM10 sampling) and surface water turbidity monitoring was performed on a daily basis. The monthly PCB air monitoring event was performed on April 30, 2003. Surface water sampling for total suspended solids (TSS) and PCBs was performed on April 8 and April 23, 2003. Sampling of Common Fill for chemical parameters was performed on April 2, 14, 23 and 30, 2003; sampling for Filter Layer A for chemical parameters was performed on April 2 and 23, 2003; sampling for Common Fill Filter Grade for chemical parameters was performed on April 24, 2003; and topsoil sampling for chemical parameters was performed on April 24 and 29, 2003.

Geotechnical samples were collected for Common Fill, Filter Layer A, Filter Layer B, Common Fill Filter Grade, Filter Stone, topsoil, and 9-inch, 12-inch and 18-inch riprap. Visual inspections of the 9-inch, 12-inch and 18-inch riprap were performed. The results of the geotechnical testing and the visual inspections are not included in the monthly reports but are contained in other submittals and are available upon request.

Stockpile management area activities continued throughout the month of April. Daily inspections, and operation and maintenance activities were performed within Buildings 63, 65 and 68. This included the collection of accumulated water that drained from the stockpiles and transportation of that water to the on-site water treatment system. Decontamination of equipment was conducted prior to moving it between TSCA and non-TSCA staging areas. Necessary repairs to the ramp in Building 65 were completed.

The transfer of TSCA materials from the Building 63 stockpile management area and the Cell 12 excavation to the Building 71 OPCA was performed on April 7, 8, 14, 17 and 18, 2003. The non-TSCA materials from the Building 65 and Building 68 stockpile management areas and Cell 12 were transported to the Hill 78 OPCA from April 9 to 11 and from April 15 to 18, 2003. Paint filter tests were collected at a frequency of 1 per 100 cubic yards (cy) of material loaded

(see Table 3 for a summary of material transported to the OPCAs in April 2003 and Table 4 for a summary of material transported to the OPCAs for the project through April 2003).

Traffic control was conducted on Lyman Street throughout the month of April.

The vibration monitoring activities were started at the two structures (the Laundromat and the manual car wash) on Parcel I8-23-6 . (See Figure 1 for the locations of the Vibration Monitors)

An extension of the access road was constructed on Parcel I8-24-1.

The siphon structures and the abandoned underground sewer line that is located under the riverbed in Cells 9 and 10 were filled with flowable fill.

Access road maintenance activities required due to the heavy usage over the last seven months of construction activities, the winter sanding of the roads and the spring thaw continued. Unsuitable road material was removed and transported to the Building 65 stockpile management area. Also, the paved access roads, Lyman Street and the Lyman Street parking lot were swept regularly by a street sweeper. Potholes on Hathaway Street, Lyman Street and paved access roads were repaired.

For the month of April a total of twenty seven (270 cy) of non-TSCA material were generated during these miscellaneous site preparation and maintenance activities.

Hay bails and filter fabric around catch basins on GE property were replaced and maintained as necessary. Dust control procedures continued for access roads, parking areas, and material storage areas. A water sprinkling system was installed in the GE parking lot and the back of Parcel I9-4-201 to assist in the access road dust control. Staged backfill materials were covered to prevent generation of dust.

3. Sampling/test results received

PCB sample results for the water treatment system sampling program were received for samples collected on April 24, 2003 (Table 5). Non-PCB analytical results were received for the samples collected on March 27, 2003 (Table 5a). Analytical results for backfill materials are summarized in Table 6. This includes the sampling results for Filter Layer A samples collected on April 02, 2003; Common Fill samples collected on April 02 and April 14, 2003. Results for Common Fill samples collected on April 23 and April 30; Filter Layer A sample collected on April 23; Common Fill Filter Grade collected on April 24 and topsoil sample collected on April 29 are not yet available. The results of the daily particulate air monitoring program are summarized in Table 7. Table 8 is a summary of daily turbidity monitoring results. Results for PCB and TSS samples and water column monitoring data collected on March 19, March 27, and April 8, 2003 are presented in Table 9. PCB and TSS results for water monitoring samples collected on April 23, 2003 are not available yet. A summary of samples collected for the air sampling conducted on March 28 and April 30, 2003 are provided in Table 10; however, the PCB data for samples

collected on April 30, 2003 is not available yet. Table 11 contains PCB data associated with equipment confirmatory wipe samples.

4. Diagrams associated with the tasks performed

Figure 1 is a map of Phase I and the beginning of Phase II and includes layout of all excavation cells, lot parcel identification numbers, water monitoring locations, PCB air sampling locations, vibration monitoring locations, access road locations, fence line location, the water treatment system pad location, the effluent discharge location, and the utility trench location.

5. Reports received and prepared

Weston received a vibration monitoring summary report for the period of March 29 to April 30 from Geosonics, Inc. During this period, two seismographs were set up on Parcel I8-23-6, one unit monitoring the Laundromat structure and the other unit monitoring the manual car wash structure. Both of the units were set up to collect data on continuous seismic mode. Activities occurring near the two monitoring locations during this period included normal background activities, sheet pile driving, and general construction activities. The maximum ground vibration level measured (outside of the times when the unit was disturbed for maintenance) reached 0.44 inches per second (ips). This level represents 22% of the state's recommended limit of 2.0 ips. All readings during this period complied with State Regulations.

On April 24, 2003, USEPA sent a letter to Weston Solutions, Inc. concerning the *NPDES Permit Exclusion* Sampling Requirements. This letter revises the on-site water treatment system monitoring frequencies and parameters. The influent, intermediate and effluent sampling will be performed on monthly basis for PCBs only; the sampling for metals will be reduced from monthly to quarterly; and sampling for thallium, volatile organic compounds, semi-volatile organic compounds and TPHs will be discontinued. Based on site-specific conditions, such as the presence of NAPL, additional parameters may be tested for. This letter is not included in the monthly report; however, it was distributed to the public information repositories and is available upon request.

6. Photo documentation of activities performed

See attached photos.

Brief description of work to be performed in May 2003

- Complete excavation and backfill activities in Cell 11, including the installation of the sheetpile retaining wall.
- Complete the excavation activities in Cell 11A.
- Transfer TSCA materials from Building 63 to the Building 71 OPCA.
- Transfer non-TSCA materials from Buildings 65 and 68 to the Hill 78 OPCA.
- Continue the installation of topsoil, herbaceous seed mix and the erosion control blankets in Cells 8 and 10.
- Perform the tree and shrub planting in Phase I.
- Install a temporary fence on Parcels I8-23-2, I8-23-3, and I8-23-4.
- Mobilize an excavator with cutting shears and cut up all excavated tree stumps into pieces suitable for placement in the OPCA.
- Complete the removal of the abandoned siphon structures in Cells 9 and 10.
- Perform settlement and conditions monitoring on selected structures and buildings adjacent to the construction areas in the Phase II area upstream and immediately downstream of the Elm Street Bridge.
- Continue stockpile management activities at Buildings 63, 65 and 68.
- Continue operation of water treatment system.
- Continue daily air and turbidity monitoring.
- Continue PCB air sampling (once a month), water column sampling (twice a month), water treatment system sampling (monthly) and backfill material sampling (as needed).
- Continue vibration monitoring of 2 structures located on Parcel I8-23-6.

7. Attachments to this report

Table 1. Quantity of Bank and Sediment Material Generated During the Month of April

Table 2. Quantity of Bank and Sediment Material Excavated to Date

Table 3. Quantity of Material Transferred to OPCAs During the Month of April

Table 4. Quantity of Material Transferred to OPCAs to Date

Table 5. NPDES PCB Sampling Results for Water Treatment System

Table 5a. NPDES non-PCB Sampling Results for Water Treatment System

Table 6. Backfill Material Testing Results

Table 7. Daily Air Monitoring Results

Table 8. Daily Water Column Turbidity Monitoring Results

Table 9. Summary of Turbidity, PCB, and TSS Water Column Monitoring Results

Table 10. PCB Air Sampling Results

Table 11. Equipment Confirmatory Wipe Sample Results

Figure 1- Phase I Site Plan

Photodocumentation