



SDMS 160186

08-0035

Corporate Environmental Programs
General Electric Company
100 Woodlawn Avenue, Pittsfield, MA 01201

August 9, 2001

Mr. Dean Tagliaferro
US Environmental Protection Agency
One Congress Street, Suite 1100
Boston, MA 02114-2023

Ms. J. Lyn Cutler
Department of Environmental Protection
436 Dwight Street
Springfield, MA 01103

**Re: Upper 1/2-Mile Reach of Housatonic River Removal Action
Monthly Report - July 2001**

Dear Mr. Tagliaferro and Ms. Cutler:

In accordance with the approved Removal Action Work Plan - Upper 1/2 Mile Reach of Housatonic River, enclosed please find the July 2001 Monthly Report.

Please call me with any questions.

Yours truly,

Andrew T. Silfer, P.E.
Senior Technical Manager

cc: J.R. Bieke, Esquire, Shea & Gardner
M.T. Carroll, GE
T. Conway, EPA
R. Goff, ACE
H. Inglis, EPA
J.H. Maxymillian, Maxymillian Technologies
B.T. McKinsey, BBL
S. Messur, BBL
K.C. Mitkevicius, USACE
T. O'Brien, MA EOEA
B. Olson, EPA
R. McLaren, Esquire, GE
A. Weinberg, DEP
R. Howell, EPA

1.0 Overview:

During July 2001, General Electric Company (GE) and its contractor Maxymillian Technologies Incorporated (MTI) continued work on the Upper ½ Mile Reach Removal Action. The primary work included completing the removal and restoration activities in Cell H2, completing the TSCA- and non-TSCA material transfer to the OPCAs, and completing the 4-week baseline monitoring program for the monitoring wells associated with the Cells G2 and G3 source control barrier walls. In addition, GE initiated activities associated with supplemental sediment removal activities in the Building 68 Area. These additional Building 68 Area activities are reported herein for completeness but are not part of the Upper ½ Mile Reach Removal Action.

Weekly status meetings were held on July 3, 9, 16, 24, and 30.

2.0 Chronological description of the tasks performed:

Refer to the diagram (Exhibit A) referenced in Section 4.0 and attached to this report for an orientation of the sheetpile cells and their respective locations. During the month of July 2001, GE Buildings 33-north, 33X and 65 were used as temporary storage facilities for Toxic Substances Control Act (TSCA) material and non-TSCA material prior to transport to the On-Plant Consolidation Areas (OPCAs). In addition, a temporary storage area was maintained in Building 65 to stockpile non-aqueous-phase liquid (NAPL)-impacted sediment excavated from Cell H2 prior to off-site disposal.

Although not part of the Upper ½-Mile Reach Removal Action activities required under the Consent Decree, a quarterly bank inspection for the Building 68 Area was performed on July 2, 2001. The inspection was performed to confirm the integrity and verify the effectiveness of the rip-rap stabilization along the banks and to visually inspect the banks for signs of erosion. Observations made during the inspection include settling of rip-rap along the toe of the bank, exposed sheeting at the base of Outfall 1, and a depressed area on the bank at the east end of Building 68. Response actions to address these observations will be conducted following completion of the additional sediment removal activities at the Building 68 Area.

During the first week of July, Cell H2 bank soil and river sediment removal activities were completed. TSCA-sediment and soil removed from the cell was transported by truck on GE-owned property to Building 33X for temporary stockpiling prior to transfer to the Building 71 OPCA. Non-TSCA material removed from the cell was transported by truck (with bills of lading) over public roads to Building 33-north for temporary stockpiling prior to transfer to the Hill 78 OPCA. In addition, the dense non-aqueous phase liquid (DNAPL) encountered (on June 29, 2001) in Cell H2 was addressed. Response actions included an excavation of the affected sediment from that cell. With U.S. Environmental Protection Agency (EPA) approval and oversight, that excavation involved the removal of approximately 62 cubic yards (cy) of NAPL-impacted sediment and, based on visual

observation, the DNAPL was successfully removed from the river bottom. The excavated sediment was transported to the Building 65 containment area for staging prior to being characterized for disposal purposes. Following removal activities in Cell H2, post-excavation surveys were completed to confirm removal limits (including the DNAPL areas). After the surveys were complete, restoration activities were initiated in Cell H2.

The first week of July ended with completing the soil/sediment transfer to the Hill 78 OPCA. Non-TSCA material stockpiled in Building 33-north was transported via truck to the Hill 78 OPCA for final disposition. The soil/sediment was subjected to a paint filter test prior to transfer to confirm that the material did not contain excess water. The material was loaded into poly-lined trucks and covered with poly-sheets for transportation to the OPCA.

The Cell H2 restoration work tasks for river and bank areas were continued and completed during the second week of July. The primary component of the river restoration was installing an isolation cap system. A geotextile layer was installed over the bottom of the excavation area. The isolation sand layer was then placed over the geotextile fabric to a nominal depth of 12 to 24 inches. Following placement of the isolation sand layer, another layer of geotextile and a layer of geogrid were installed. The stone armor layer was then installed, which consisted of placing 12-inch rip-rap on top of the geogrid. (This armor stone layer consisted of 12-inch rip-rap instead of 9-inch rip-rap, with EPA concurrence, in anticipation of diverting the river over this restored area to implement additional removal activities at the Building 68 Area.) This restoration process continued downstream until the entire Cell H2 riverbed was completed. To complete the river restoration, one habitat enhancement boulder was placed at a select location in the Cell H2 river area (with oversight by the Massachusetts Executive Office of Environment Affairs [EOEA]).

Bank restoration activities for Cell H2 included placing rip-rap, backfilling excavation areas, and placing topsoil and grass seed. Rip-rap was placed at the toe-of-the-bank to revised design elevations and at 1:1 bank slope areas. Further up the bank above the rip-rap, the excavation areas were backfilled with soil and compacted. A 6-inch layer of topsoil was placed over the backfill, followed by placement of grass seed and erosion mats to complete the bank restoration activities. A post-restoration final survey was then completed for Cell H2.

Also during the second week of July, restoration efforts were completed for Erosion Areas 1 and 2 identified during the spring 2001 bank inspection. Work efforts for Erosion Area 1 included the installation of a bar screen over the inlet of the upstream culvert, installing a rip-rap lined swale from the outlet of the culvert to the catch basin, installing a check dam at the downstream end of the catch basin, filling the swale with gravel from the check dam to the concrete headwall at the fenceline, and removing approximately 5 cy of gravel that had eroded into the river. Erosion Area 2 was restored by placing 9-inch rip-rap to fill and stabilize the void area near the fenceline. Material

excavated from this area (in an attempt to locate an underground drainage pipe) was transported to Building 33 (non-TSCA) for stockpiling prior to placement in the OPCA.

In addition, GE initiated transfer of excavated TSCA material temporarily staged in GE-owned buildings during the second week of July. The transfer was completed during the third week of July. TSCA material stockpiled in Building 33-X was transported via truck to the Building 71 OPCA for final disposition. The soil/sediment was subjected to a paint filter test to confirm that the material did not contain excess water prior to transfer. Poly-lined trucks (with poly-sheets over the material) transported the soil to the Building 71 OPCA.

During the third week of July, clearing activities were started at Cells I and J bank areas. Trees and brush were removed to allow access to the river area and to conduct removal activities on the bank. Material removed from this area was stockpiled on site to be chipped before being disposed off-site as a non-regulated material.

In addition, work tasks associated with the Building 68 Area supplemental removal activities were initiated during the third week of July pursuant to a supplemental sediment removal proposal that had been submitted by GE to EPA on July 10 and was conditionally approved by EPA on July 17. (This work is not part of the Upper 1/2-Mile Reach Removal Action required under the Consent Decree, but is being conducted voluntarily by GE at EPA's request.). Work efforts began with removal Cell 68R1 by constructing a dewatering pad (for the excavated sediment) on the south side of the river. A 60-mil poly-liner was placed over concrete berms and filled with a drainage layer of sand to form the dewatering pad. In addition, upstream and downstream cutoff sheetpile walls were placed, driven, and connected to the existing centerline wall to create Cell 68R1 (on the south side of the river).

During the fourth week of July, Building 68 Area supplemental removal activities continued. Cell 68R1 was initially dewatered by pumping the cell water over the cutoff wall and into the river. Once the water level was six inches above the top of the sediment, the cell water was then pumped to the on-site water treatment system. Following dewatering of the cell, a baseline survey was performed to record existing elevations. Sediment removal activities were completed from the south side of the river using a horizontal-cut clam-shell bucket attached to the arm of an excavator. Sediment was removed to the top of the existing armor stone protective cap. The removed sediment was placed in the dewatering pad to decant excess water. The decanted sediment was then loaded into trucks for transportation to the Building 33 stockpile area. Following removal of the sediment, a post-removal survey was performed to document the extent of removal. Restoration work efforts focused on the undercut bank area and included installing a layer of geotextile and geogrid, and installing rip-rap over the geogrid to backfill the undercut bank area. Following restoration activities, a post-restoration survey was completed to record the final restored bank elevations.

Also during the fourth week of July, samples were collected for PCB analysis from the soil backfill and the isolation layer sand source. The results will be presented in next month's report. The month ended with initiating installation of the cutoff sheetpile walls at the upstream and downstream locations of the Building 68 Area to form Cell 68R2.

During July, GE also continued weekly monitoring and completed the 4-week baseline program for the recovery and monitoring wells associated with the Cells G2 and G3 source control barrier walls. Monitoring of these wells will continue during the month of August.

Air monitoring for particulate matter was conducted on a daily basis and the July PCB air monitoring event was conducted on July 25 during removal activities in Cell 68R1 (part of the additional removal activities associated with the Building 68 Area). Water column (PCB and TSS) monitoring was also continued during removal activities in the month of July.

3.0 Sampling/test results received:

Table 1 presents the supplemental TOC analytical results for the isolation sand.

Table 2 presents the analytical results for the Cell H2 DNAPL.

Tables 3A and 3B present the daily water column monitoring results for turbidity and the results of the water column samples collected for total suspended solids (TSS) and PCB analysis.

Table 4 presents the ambient air PCB sample results for the PCB monitoring event conducted during July.

Table 5 presents the results of the July air monitoring for particulate matter.

Table 6 presents monitoring data from wells associated with the Cell G2 sheetpile containment barrier.

Table 7 presents monitoring data from wells associated with Cell G3 the sheetpile containment barrier.

Table 8 presents analytical data for wipe samples from decontaminated equipment.

4.0 Diagrams associated with the tasks performed:

A figure labeled as Exhibit A shows the location of the Cells (68R1, 68R2, H, I, and J) and is attached to this report for reference.

A summary chart (Exhibit B) has been developed to assist in tracking the analytical and physical testing requirements of the various sources of backfill (e.g., isolation material, soil back fill, riprap rock, etc.). Exhibit B includes the volume of backfill materials used, the analytical and physical testing frequencies required by the Work Plan, and the testing that has been performed to date.

5.0 Identification of reports received and prepared:

During the month of July, meeting summaries from the weekly project status meetings were submitted. Also, for work completed in June 2001, the monthly reports required by the Consent Decree and the Upper ½-Mile Reach Removal Action Work Plan were both submitted.

In addition, during July, GE submitted the following documents:

- Letter regarding Supplemental Sediment Removal in Building 68 Area, dated July 10, 2001.
- Letter regarding Preliminary Evaluation of Changes in Flood Storage Capacity and Flood Evaluation, dated July 13, 2001.
- Letter regarding Results of Spring 2001 Planting Monitoring Event and Proposed Maintenance Plan, dated July 13, 2001.
- Letter regarding Building 68 May 2001 Bank Inspection Activities – Monitoring of Plantings, dated July 13, 2001.
- Letter regarding Building 68 July 2001 Quarterly Bank Inspection Activities, dated July 13, 2001.
- Letter regarding Temporary Storage of Excavated ½ Mile Reach Material, dated July 13, 2001.
- Letter regarding Cell G2 and Cell G3 Monitoring Results and Proposed Modification to Baseline Monitoring Program for Plant Site 1 Groundwater Management Area (GMA 1), dated July 30, 2001.

6.0 Photo documentation of activities performed:

- See attached Figure 1.

7.0 Brief description of work to be performed in August 2001:

For the next reporting period, the following activities are anticipated to be performed:

- Complete the surface sediment removal and restoration activities in Cell 68R2. (Note: This work is not part of the Upper 1/2 Mile Reach Removal Action required under the Consent Decree, but is being conducted voluntarily by GE at EPA's request.).
- Complete removal and restoration activities in Cell H3.
- Complete relocation of the Lyman Street water line.
- Potentially initiate removal and restoration activities in Cell J1.
- Maintain temporary stockpiles of material in Buildings 33-north, 33X, and 65 (non-TSCA, TSCA, and NAPL-impacted material, respectively).
- Complete off-site disposal of DNAPL-impacted sediment removed from Cell H2 (which is temporarily stored in Building 65).
- Continue monitoring of wells associated with the Cells G2 and G3 source control sheetpile walls.
- Continue to conduct air monitoring and water column monitoring associated with response activities for the Upper 1/2-Mile Reach.

8.0 Attachments to this report:

- Table 1 – TOC analytical results for the isolation sand.
- Table 2 – Analytical results for Cell H2 DNAPL.
- Table 3A – Water column monitoring results for turbidity, TSS, and PCBs.
- Table 3B – Water column monitoring results for PCBs and TSS.
- Table 4 – July ambient air PCB sample results.
- Table 5 – Results of the July air monitoring for particulate matter.
- Table 6 – Results from the monitoring of the NAPL recovery/monitoring wells associated with the Cell G2 source control barrier wall.

- Table 7 – Results from the monitoring of the NAPL recovery/monitoring wells associated with the Cell G3 source control barrier wall.
- Table 8 – Wipe sample results for decontaminated equipment.
- Exhibit A – Figure showing the progress of work within the Upper 1/2-Mile Reach.
- Exhibit B – Backfill quantity and sample summary chart.
- Figure 1 - Photo documentation.

TABLE 1

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER UPPER 1/2 MILE REACH
ISOLATION LAYER BACKFILL SAMPLING
DATA RECEIVED DURING JULY 2001

Sample ID	Date Collected	TOC
BS&G Bank Sand	6/12/2001	6870
BS&G Bank Sand	6/20/2001	13400

Notes:

1. Samples were collected Maxymillian Technologies, Inc. and submitted to Spectrum Analytical for analysis of total organic carbon (TOC).
2. ND - Analyte was not detected. The number in parentheses is the associated quantitation limit.
3. Sample collected on 6/12/01 was inadvertently omitted from the June 2001 Monthly CD report.

TABLE 2

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER UPPER 1/2 MILE REACH
CELL H2 - OIL SAMPLING
DATA RECEIVED DURING JULY 2001

(Results are presented in parts per million, ppm)

Sample ID	Date Collected	Aroclor 1016, 1221, 1232, 1242, 1248, & 1254	Aroclor 1260	Total PCBs
HR-H2-OIL-1	6/28/2001	ND(30000)	596000	596000

Notes:

1. Sample was collected by Blasland, Bouck & Lee, Inc. and submitted to Northeast Analytical, Inc. for analysis of PCBs.
2. ND - Analyte was not detected. The number in parentheses is the associated quantitation limit.

TABLE 3A

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

JULY 2001

UPPER 1/2 MILE REACH REMOVAL ACTION
HOUSATONIC RIVER PCB/TSS/TURBIDITY MONITORING DURING CONSTRUCTION

Location	Date	Water Depth (ft)	Water Temp. (°C)	Estimated Flow ¹⁴ (cfs)	Turbidity (ntu) ¹²			Sample ID	Total PCB Concentration ¹³ (ug/l)	Filtered PCB Concentration (ug/l)	TSS (mg/l)
					High	Low	Daily Composite				
Upstream of Newell St. Bridge	7/2/01	1.8	19		5	3	4	---	---	---	---
Downstream of Lyman St. Bridge	7/2/01	2.9	19	62	8	4	8	---	---	---	---
Upstream of Newell St. Bridge	7/3/01	1.6	18		8	3	4	HR-7-3-01-U1	0.172	ND(0.0250)	7.60
Downstream of Lyman St. Bridge	7/3/01	2.6	18	47	20	3	6	HR-7-3-01-D1	0.229	ND(0.0250)	7.30
Upstream of Newell St. Bridge	7/5/01	1.5	20		6	4	5	---	---	---	---
Downstream of Lyman St. Bridge	7/5/01	2.5	20	36	4	3	5	---	---	---	---
Upstream of Newell St. Bridge	7/6/01	1.9	15		9	5	9	---	---	---	---
Downstream of Lyman St. Bridge	7/6/01	3.0	15	71	20	8	18	---	---	---	---
Upstream of Newell St. Bridge	7/9/01	1.5	14		7	2	4	---	---	---	---
Downstream of Lyman St. Bridge	7/9/01	2.6	14	45	12	4	7	---	---	---	---
Upstream of Newell St. Bridge	7/10/01	1.6	16		352	3	38	---	---	---	---
Downstream of Lyman St. Bridge	7/10/01	2.6	16	41	345	3	52	---	---	---	---
Upstream of Newell St. Bridge	7/11/01	2.4	15		49	13	23	---	---	---	---
Downstream of Lyman St. Bridge	7/11/01	3.4	15	138	76	26	54	---	---	---	---
Upstream of Newell St. Bridge	7/12/01	1.9	15		8	5	7	---	---	---	---
Downstream of Lyman St. Bridge	7/12/01	3.0	15	69	21	12	19	---	---	---	---
Upstream of Newell St. Bridge	7/13/01	1.5	18		4	3	4	---	---	---	---
Downstream of Lyman St. Bridge	7/13/01	2.7	18	47	13	4	10	---	---	---	---
Upstream of Newell St. Bridge	7/16/01	1.3	18		7	2	4	---	---	---	---
Downstream of Lyman St. Bridge	7/16/01	2.5	18	31	14	3	13	---	---	---	---
Upstream of Newell St. Bridge	7/17/01	1.4	19		---	---	---	---	---	---	---
Downstream of Lyman St. Bridge	7/17/01	2.6	19	42	14	5	9	---	---	---	---
Upstream of Newell St. Bridge	7/18/01	1.4	18		6	3	5	---	---	---	---
Downstream of Lyman St. Bridge	7/18/01	2.6	18	42	9	3	6	---	---	---	---
Upstream of Newell St. Bridge	7/19/01	1.3	19		5	3	4	HR-7-19-01-U1	NR	NR	NR
Downstream of Lyman St. Bridge	7/19/01	2.5	19	35	5	3	4	HR-7-19-01-D1	NR	NR	NR
Upstream of Newell St. Bridge	7/20/01	1.3	19		7	3	4	---	---	---	---
Downstream of Lyman St. Bridge	7/20/01	2.5	19	35	7	4	7	---	---	---	---
Upstream of Newell St. Bridge	7/23/01	1.3	21		5	3	4	---	---	---	---
Downstream of Lyman St. Bridge	7/23/01	2.5	21	29	---	---	---	---	---	---	---
Upstream of Newell St. Bridge	7/24/01	1.2	22		6	3	5	---	---	---	---
Downstream of Lyman St. Bridge	7/24/01	2.3	22	22	11	4	6	---	---	---	---

TABLE 3A

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

JULY 2001

UPPER 1/2 MILE REACH REMOVAL ACTION
HOUSATONIC RIVER PCB/TSS/TURBIDITY MONITORING DURING CONSTRUCTION

Location	Date	Water Depth (ft)	Water Temp. (°C)	Estimated Flow ¹⁴ (cfs)	Turbidity (ntu) ¹²			Sample ID	Total PCB Concentration ¹³ (ug/l)	Filtered PCB Concentration (ug/l)	TSS (mg/l)
					High	Low	Daily Composite				
Upstream of Newell St. Bridge	7/25/01	1.2	25		18	3	6	---	---	---	---
Downstream of Lyman St. Bridge	7/25/01	2.3	25	26	13	3	6	---	---	---	---
Upstream of Newell St. Bridge	7/26/01	1.9	22		14	8	13	---	---	---	---
Downstream of Lyman St. Bridge	7/26/01	3.0	22	62	24	13	27	---	---	---	---
Upstream of Newell St. Bridge	7/27/01	1.6	19		6	3	4	---	---	---	---
Downstream of Lyman St. Bridge	7/27/01	2.6	19	46	7	3	5	---	---	---	---
Upstream of Newell St. Bridge	7/30/01	1.3	19		20	3	7	---	---	---	---
Downstream of Lyman St. Bridge	7/30/01	2.3	19	22	15	4	7	---	---	---	---
Upstream of Newell St. Bridge	7/31/01	1.3	19		10	4	7	---	---	---	---
Downstream of Lyman St. Bridge	7/31/01	2.3	19	19	8	4	8	---	---	---	---

Notes:

1. PCB and TSS samples were collected by Blasland, Bouck & Lee, Inc. and analyzed by Northeast Analytical, Inc.
2. Water depth taken at sampling point (i.e. middle of river).
3. ft - Feet
4. °C - degrees Celsius
5. cfs - cubic feet per second
6. ntu - nephelometric turbidity units
7. --- - No data obtained
8. ND(0.25) - Compound was analyzed for but not detected at the quantitation limit indicated in parentheses.
9. NR - Not yet reported
10. ug/l - micrograms per liter
11. mg/l - milligrams per liter
12. Turbidity Action Level = Turbidity downstream ≤ Turbidity upstream + 50 ntu
13. PCB Action Level = PCBs downstream ≤ PCBs upstream + 5 ug/l
14. Flow data was obtained from the USGS Station 01197000 in Coltsville, MA at approximately midday. (Flow data is provisional and may be subject to revision).

TABLE 3B

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH
HOUSATONIC RIVER PCB/TSS MONITORING DURING CONSTRUCTION
DATA RECEIVED DURING JULY 2001

(Results are presented in parts per million, ppm)

Sample ID	Location	Date Collected	Aroclor 1016, 1221, 1232, 1242, & 1248	Aroclor 1254	Aroclor 1260	Total PCBs	TSS
HR-6-21-01-U1	Upstream of Newell St. Bridge	6/21/2001	ND(0.0000250)	0.0000362 AF	ND(0.0000250)	0.0000362	2.70
HR-6-21-01-D1	Downstream of Lyman St. Bridge	6/21/2001	ND(0.0000250)	0.0000429 AF	0.0000577	0.000101	3.47
HR-6-21-01-U1 (FILTERED)	Upstream of Newell St. Bridge	6/21/2001	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	---
HR-6-21-01-D1 (FILTERED)	Downstream of Lyman St. Bridge	6/21/2001	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	---
HR-7-3-01-U1	Upstream of Newell St. Bridge	7/3/2001	ND(0.0000250)	0.000102 AF	0.0000700	0.000172	7.60
HR-7-3-01-D1	Downstream of Lyman St. Bridge	7/3/2001	ND(0.0000250)	0.000134 AF	0.0000953	0.000229	7.30
HR-7-3-01-U1 (FILTERED)	Upstream of Newell St. Bridge	7/3/2001	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	---
HR-7-3-01-D1 (FILTERED)	Downstream of Lyman St. Bridge	7/3/2001	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	---

Notes:

1. Samples were collected by Blasland, Bouck & Lee, Inc. and submitted to Northeast Analytical Services, Inc. for analysis of filtered and unfiltered PCBs and Total Suspended Solids (TSS).
2. ND(0.10) - Analyte was not detected. The value in parentheses is the associated detection limit.
3. AF - Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
4. --- - Not analyzed.

TABLE 4

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH
AMBIENT AIR PCB DATA RECEIVED DURING JULY 2001

Date	BM-1 ug/m ³	AM-4 ug/m ³	AM-5 ug/m ³	AM-5 co-located ug/m ³	AM-6 ug/m ³	AM-7 ug/m ³
07/25 - 07/26/01	0.0042	0.0165	0.0123	0.0142	0.0113	0.0056
Notification Level	0.05	0.05	0.05	0.05	0.05	0.05

Notes:

BM-1: Background monitoring location west of Bldg. 42.

AM-4: Air monitoring location south bank, at 261 Newell St. behind building formerly known as F.W. Webb.

AM-5: Air monitoring location north bank, east of Bldg. 63.

AM-6: Air monitoring location south bank, north edge of GE Newell St. parking area.

AM-7: Air monitoring location north bank, south end of GE Lyman St. Parking Lot.

TABLE 5

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH
AMBIENT AIR PARTICULATE MATTER DATA RECEIVED DURING JULY 2001

Date	Sampler Location	Average Site Concentration (mg/m ³)	BM-1 (mg/m ³)	Average Period (Hours:Min)	Predominant Wind Direction
7/2/2001	AM-6 (south side of river)	0.006	NA ¹	9:45	WNW, NW
7/3/2001	AM-6 (south side of river)	0.006	0.053	9:00	SW
7/4/01 ²	AM-6 (south side of river)	NA	NA	NA	NA
7/5/2001	AM-6 (south side of river)	0.018	0.022	4:45 ³	NW
7/6/2001	AM-6 (south side of river)	0.010	0.007	9:30	WNW
7/9/2001	AM-6 (south side of river)	0.089	0.028	9:45	W, WNW
7/10/2001	AM-6 (south side of river)	0.016	0.017	9:00	WSW
7/11/01 ⁴	AM-6 (south side of river)	NA	NA	NA	NA
7/12/2001	AM-6 (south side of river)	0.008	0.007	10:15	WNW, W
7/13/2001	AM-6 (south side of river)	0.004	0.007	9:45	W, WNW
7/16/2001	AM-6 (south side of river)	0.007	0.010	10:15	WNW
7/17/01 ⁴	AM-6 (south side of river)	NA	NA	NA	NA
7/18/2001	AM-6 (south side of river)	0.011	0.013	9:00	Variable
7/19/2001	AM-6 (south side of river)	0.010	0.014	10:00	E
7/20/2001	AM-6 (south side of river)	0.012	0.016	9:45	NNW
7/23/2001	AM-6 (south side of river)	0.029	0.031	10:00	SW
7/24/2001	AM-6 (south side of river)	0.049	0.042	10:30	SW
7/25/2001	AM-6 (south side of river)	0.030	0.024	9:30	WNW
7/26/01 ⁴	AM-6 (south side of river)	NA	NA	NA	NA
7/27/2001	AM-6 (south side of river)	0.004	0.007	11:15	N, NNE
Notification Level		0.120			

NA - Not Available

BM-1: Background monitoring location west of Bldg. 42.

AM-6: Air monitoring location in the GE parking lot located off of Newell Street.

¹ Background monitoring was not performed due to site access problem (gate would not open).

² Sampling was not performed due to lack of site activity on the July 4th holiday.

³ Sampling period was shortened due to precipitation/threat of precipitation.

⁴ Sampling was not performed due to precipitation/threat of precipitation.

TABLE 6

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

UPPER 1/2-MILE REACH OF HOUSATONIC RIVER

CELL G-2 MONITORING RESULTS - JULY 2001

Well I.D.	Date	Measuring Point Elevation (Feet AMSL)	Depth to Water (Feet below MP) ⁴	Depth to NAPL (Feet below MP)	Total Depth (Feet below MP)	NAPL Thickness (Feet)	Groundwater Elevation (Feet AMSL) ⁴	NAPL Removal (Liters)
ES2-2A	7/2/2001	979.54	7.05	---	17.16	0.00	972.49	0.00
ES2-2A	7/9/2001	979.54	7.21	---	17.15	0.00	972.33	0.00
ES2-2A	7/16/2001	979.54	7.30	---	17.17	0.00	972.24	0.00
ES2-2A	7/23/2001	979.54	7.45	---	17.30	0.00	972.09	0.00
ES2-2A	7/30/2001	979.54	7.51	---	17.36	0.00	972.03	0.00
ES2-7	7/2/2001	980.03	7.03	---	42.69	0.00	973.00	0.00
ES2-7	7/9/2001	980.03	7.23	---	42.70	0.00	972.80	0.00
ES2-7	7/16/2001	980.03	7.34	---	42.69	0.00	972.69	0.00
ES2-7	7/23/2001	980.03	7.47	---	42.69	0.00	972.56	0.00
ES2-7	7/30/2001	980.03	7.56	---	42.70	0.00	972.47	0.00
HR-G2-MW-1	7/2/2001	982.60	10.80	---	18.27	0.00	971.80	0.00
HR-G2-MW-1	7/9/2001	982.60	10.98	---	18.27	0.00	971.62	0.00
HR-G2-MW-1	7/16/2001	982.60	11.09	---	18.27	0.00	971.51	0.00
HR-G2-MW-1	7/23/2001	982.60	11.23	---	18.28	0.00	971.37	0.00
HR-G2-MW-2	7/2/2001	981.39	8.72	---	17.68	0.00	972.67	0.00
HR-G2-MW-2	7/9/2001	981.39	8.90	---	17.68	0.00	972.49	0.00
HR-G2-MW-2	7/16/2001	981.39	9.03	---	17.68	0.00	972.36	0.00
HR-G2-MW-2	7/23/2001	981.39	9.26	---	17.68	0.00	972.13	0.00
HR-G2-MW-3	7/2/2001	987.14	14.80	---	22.02	0.00	972.34	0.00
HR-G2-MW-3	7/9/2001	987.14	15.01	---	22.01	0.00	972.13	0.00
HR-G2-MW-3	7/16/2001	987.14	15.12	---	22.02	0.00	972.02	0.00
HR-G2-MW-3	7/23/2001	987.14	15.26	---	22.02	0.00	971.88	0.00

TABLE 6

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

UPPER 1/2-MILE REACH OF HOUSATONIC RIVER

CELL G-2 MONITORING RESULTS - JULY 2001

Well I.D.	Date	Measuring Point Elevation (Feet AMSL)	Depth to Water (Feet below MP) ⁴	Depth to NAPL (Feet below MP)	Total Depth (Feet below MP)	NAPL Thickness (Feet)	Groundwater Elevation (Feet AMSL) ⁴	NAPL Removal (Liters)
HR-G2-RW-1	7/2/2001	976.88	6.46	---	18.72	0.00	972.05	0.00
HR-G2-RW-1	7/9/2001	976.88	6.79	6.78	18.72	0.01	971.82	0.00
HR-G2-RW-1	7/16/2001	976.88	6.94	---	18.72	0.00	971.70	0.00
HR-G2-RW-1	7/23/2001	976.88	7.10	---	18.72	0.00	971.58	0.00

Notes:

1. NAPL = Non-Aqueous Phase Liquid.
2. MP = Measuring Point
3. Feet AMSL = Feet Above Mean Sea Level
4. Well HR-G2-RW-1 is constructed at an angle of 41.67 degrees from vertical. Depth to water data reflect measurements collected along the angled well casing. Groundwater elevations are corrected to account for the angle of the well casing.
5. Water table elevations for wells containing LNAPL were computed as follows:

$$\text{Water Table Elevation} = \text{Measuring Point Elevation} - \text{Depth to Water} + (\text{LNAPL Thickness} \times \text{Specific Density of LNAPL})$$
 Specific Density of LNAPL estimated at 0.93.

TABLE 7

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

UPPER 1/2-MILE REACH OF HOUSATONIC RIVER

CELL G-3 MONITORING RESULTS - JULY 2001

Well I.D.	Date	Measuring Point Elevation (Feet AMSL)	Depth to Water (Feet below MP)	Depth to NAPL (Feet below MP)	Total Depth (Feet below MP)	NAPL Thickness (Feet)	Groundwater Elevation (Feet AMSL)	NAPL Removal (Liters)
HR-G3-MW-1	7/2/2001	987.18	14.99	---	17.75	0.00	972.19	0.00
HR-G3-MW-1	7/9/2001	987.18	15.21	---	17.75	0.00	971.97	0.00
HR-G3-MW-1	7/16/2001	987.18	15.37	---	17.75	0.00	971.81	0.00
HR-G3-MW-1	7/23/2001	987.18	15.45	---	17.75	0.00	971.73	0.00
HR-G3-MW-2	7/2/2001	987.88	15.54	---	17.74	0.00	972.34	0.00
HR-G3-MW-2	7/9/2001	987.88	15.74	---	17.74	0.00	972.14	0.00
HR-G3-MW-2	7/16/2001	987.88	15.86	---	17.74	0.00	972.02	0.00
HR-G3-MW-2	7/23/2001	987.88	16.04	---	17.74	0.00	971.84	0.00
HR-G3-RW-1	7/2/2001	977.78	5.69	---	8.74	0.00	972.09	0.00
HR-G3-RW-1	7/9/2001	977.78	5.48	---	8.73	0.00	972.30	0.00
HR-G3-RW-1	7/16/2001	977.78	5.62	---	8.65	0.00	972.16	0.00
HR-G3-RW-1	7/23/2001	977.78	5.79	---	8.66	0.00	971.99	0.00

Notes:

1. NAPL = Non-Aqueous Phase Liquid.
2. MP = Measuring Point
3. Feet AMSL = Feet Above Mean Sea Level

TABLE 8

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER UPPER 1/2 MILE REACH
CATERPILLAR 330 BUCKET WIPE SAMPLING
DATA RECEIVED DURING JULY 2001

(Results are presented in $\mu\text{g}/100\text{cm}^2$)

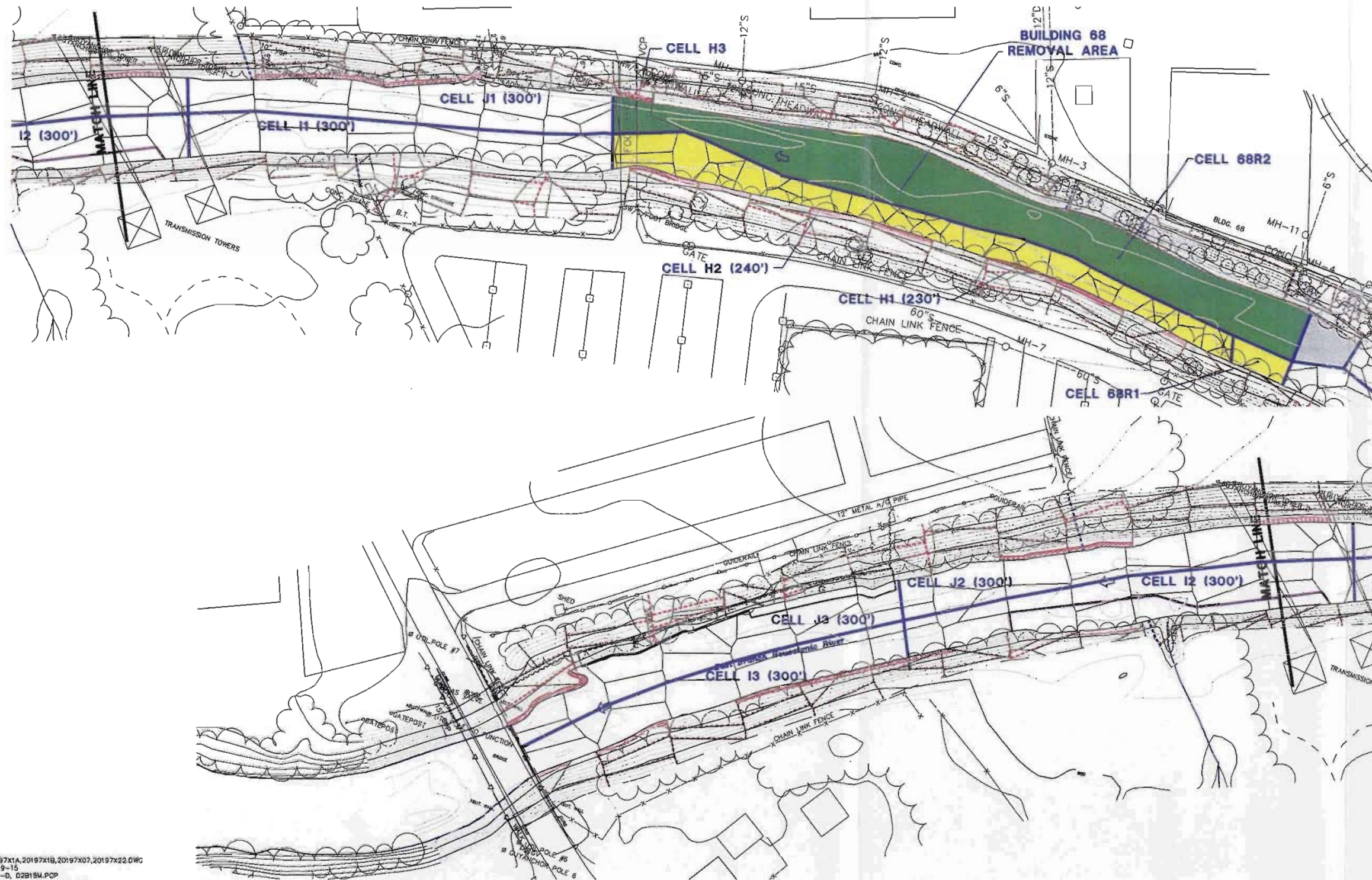
Sample ID	Date Collected	Total PCBs
CAT330B-1R	7/13/2001	ND(1.50)
CAT330B-2R	7/13/2001	ND(1.50)
CAT330B-3R	7/13/2001	ND(1.50)

Notes:

1. Samples were collected and analyzed for total PCBs by Maxymillian Technologies, Inc..
2. ND - Analyte was not detected. The number in parentheses is the associated quantitation limit.

Exhibit A - Upper 1/2 Mile Reach Removal Action

Sediment and Bank Soil Removal Areas (Cells H-J)



LEGEND:

- 1.5 FEET SEDIMENT REMOVAL DEPTH
- 2 FEET SEDIMENT REMOVAL DEPTH
- 2.5 FEET SEDIMENT REMOVAL DEPTH
- 1 FOOT BANK SOIL REMOVAL DEPTH
- 2 FEET BANK SOIL REMOVAL DEPTH
- 3 FEET BANK SOIL REMOVAL DEPTH
- UPPER 1/2-MILE REMOVAL AREAS COMPLETED
- UPPER 1/2-MILE REMOVAL AREAS IN PROGRESS
- AREA SUBJECT TO BANK STABILIZATION ACTIVITIES
- EXISTING CONTAINMENT BARRIER LOCATION
- 0'-1' BANK SOIL POLYGON
- 1'-3' BANK SOIL POLYGON
- TOP OF BANK
- BANK SOIL AREA BOUNDARY
- CAP AND ARMOR TIE-IN BUFFER
- REMOVAL CELL

A B C ADDITIONAL EXCAVATION TO OCCUR IN CONJUNCTION WITH SOURCE CONTROL ACTIVITIES

- NOTES:**
1. MAPPING IS BEST AVAILABLE INFORMATION AS OF 12/10/98 BASED ON MAPPING PROVIDED BY LOCKWOOD MAPPING, INC. PREPARED FROM 1990 AERIAL PHOTOGRAPHY; DATA PROVIDED BY GENERAL ELECTRIC; AND BLASLAND AND BOUCK, P.C. CONSTRUCTION PLANS, RIVERBANK AND RIVER BED TOPOGRAPHIC INFORMATION PROVIDED BBL FROM OCTOBER 12-23, 1998 FIELD SURVEY.
 2. COORDINATE GRID BASED ON 1927 STATE PLAN COORDINATES.
 3. ELEVATION DATUM REFERENCED TO NGVD 1929.
 4. CELL LOCATIONS AND DISTANCES ARE APPROXIMATE.



X: 20197X1A, 20197X1B, 20197X07, 20197X22.DWG
 LMAN: 9-15
 P: 15M-D, D2B15U.PCP
 7/30/01 SYR-54-QMS LAF DJP
 20197030/CELL02/20197011.DWG

1/2-Mile Removal Action Backfill Tracking Log

Material	Testing Required	Frequency (per cy)	Submittal from MTL		Submittal to EPA		Sample Date	Number of Samples	Quantity Approved for Placement	Quantity Placed (cy)	Comments				
			No.	Date	No.	Date									
Soil Backfill/Granular Fill (Brown's Pit)	Grain Size	2000	13/13A	11/17 & 11/18/99	8	12/01/99	11/18/99	1	1500	1829	Samples Collected as part of Allendale School Project				
	PCBs	500	NA	NA	8A	12/15/99	12/08/99	2							
			NA	NA	14	05/31/00	05/18/00	2							
			NA	NA	22	03/14/01	02/28/01	2							
			NA	NA	TBD	TBD	07/23/01	2							
			NA	NA	8A	12/15/99	7/21-7/28/99	6							
	VOCs	2000	NA	NA	8A	12/15/99	7/21-7/28/99	6							
	SVOCs	2000	NA	NA	8A	12/15/99	7/21-7/28/99	6							
	Metals	2000	NA	NA	8A	12/15/99	7/21-7/28/99	6							
TPH	2000	NA	NA	8A	12/15/99	12/01/99	3								
Isolation Layer (Pittsfield Sand & Gravel)	Grain Size	500	12C	11/17/99	Letter	11/19/99	11/01/99	1	1000	770	Samples collected as part of off-site residential fill program				
	TOC	500	12C	03/30/00	Letter	04/20/00	03/24/00	1							
			12	11/17/99	Letter	11/19/99	11/02/99	1							
			12C	03/30/00	Letter	04/20/00	03/30/00	1							
	PCBs	500	NA	NA	Letter	11/19/99	09/20/99	4							
			NA	NA	7	12/01/99	11/19/99	2							
			NA	NA	Letter	04/20/00	03/29/00	2							
	VOCs	2000	NA	NA	Letter	11/19/99	09/20/99	4							
	SVOCs	2000	NA	NA	Letter	11/19/99	09/20/99	4							
	Metals	2000	NA	NA	Letter	11/19/99	09/20/99	4							
TPH	2000	NA	NA	7	12/01/99	11/19/99	2								
Isolation Layer (Bushhika Sand & Gravel)	Grain Size	500	12A	01/03/00	Letter	01/06/00	12/28/99	1	3500	3700					
			12B	01/24/00	11	02/14/00	01/19/00	1							
			12D	05/08/00	13	05/19/00	05/02/00	1							
			12E	09/11/00	14	09/27/00	09/07/00	1							
			12F	09/29/00	17	10/04/00	09/26/00	1							
			12G	11/30/00	20	12/06/00	10/20/00	1							
			12H	03/08/01	21	03/14/01	03/05/01	1							
			12I	06/19/01	Letter	06/27/01	06/12/01	1							
			12J	07/05/01	Letter	07/09/01	06/20/01	1							
			TOC	500	12A	01/03/00	Letter	01/06/00				12/28/99	1		
	12B	01/24/00			11	02/14/00	01/19/00	1							
	12D	05/08/00			13	05/19/00	05/02/00	1							
	12E	09/11/00			14	09/27/00	09/06/00	1							
	12F	09/29/00			17	10/04/00	09/26/00	1							
	12G	11/30/00			20	12/06/00	10/20/00	1							
	12H	03/08/01			21	03/14/01	03/05/01	1							
	12I	06/19/01			Letter	06/27/01	06/12/01	1							
	12J	07/05/01			Letter	07/09/01	06/20/01	1							
	PCBs	500			NA	NA	10	01/14/00				01/05/00	2		
			NA	NA	11	02/14/00	02/02/00	2							
			NA	NA	13A	06/28/00	06/02/00	2							
			NA	NA	16A	10/04/00	09/26/00	3							
			NA	NA	18A	10/05/00	09/28/00	2							
			NA	NA	20A	01/09/01	12/05/00	2							
			NA	NA	21A	04/04/01	03/19/01	2							
			NA	NA	TBD	TBD	07/23/01	2							
			NA	NA	10	01/14/00	01/05/00	2							
			NA	NA	18A	10/05/00	09/28/00	2							
	VOCs	2000	NA	NA	10	01/14/00	01/05/00	2							
	SVOCs	2000	NA	NA	10	01/14/00	01/05/00	2							
	Metals	2000	NA	NA	10	01/14/00	01/05/00	2							
	TPH	2000	NA	NA	10	01/14/00	01/05/00	2							
			NA	NA	11	02/14/00	02/02/00	2							
			NA	NA	18A	10/05/00	09/28/00	2							
			NA	NA	18A	10/05/00	09/28/00	2							
	Rip-Rap (9")	Grain Size	2000	15A	11/30/99	Letter	12/01/99	11/23/99				1	4000	2614	
				15B	10/04/00	19	10/11/00	09/28/00				1			
	Rip-Rap (12")	Grain Size	2000	18	01/04/00	Letter	01/06/00	12/29/99				1	2000	945	
				TOC	500	11/14	11/16 & 11/17/99	9				12/15/99			
	Topsoil (Woodmont)	pH	500	11/14	11/16 & 11/17/99	9	12/15/99	11/08/99				2	500	509	*Samples collected as part of off-site residential fill program
PCBs		500	NA	NA	9	12/15/99	12/08/99	4							
VOCs		2000	NA	NA	9	12/15/99	08/24/99	4							
SVOCs		2000	NA	NA	9	12/15/99	08/24/99	4							
Metals		2000	NA	NA	9	12/15/99	08/24/99	4							
TPH		2000	NA	NA	9	12/15/99	12/08/99	2							
TOC		500	11A	05/09/01	23	05/15/01	04/30/01	1	500	26					
pH		500	11A	05/09/01	23	05/15/01	04/30/01	1							
PCBs		500	NA	NA	23	05/15/01	04/11/01	3							
VOCs	2000	NA	NA	23	05/15/01	04/11/01	3								
SVOCs	2000	NA	NA	23	05/15/01	04/11/01	3								
Metals	2000	NA	NA	23	05/15/01	04/11/01	3								
TPH	2000	NA	NA	23	05/15/01	04/11/01	3								

Notes:
Granular Fill and Soil Backfill have been combined as the same material
Quantities placed include Cells A, B, C, D, DNAPL, E, F1, F2, F3, G1, G2, G3, H1 and H2.
NA = Not Applicable
TBD = To be determined

**½-MILE RIVER REMOVAL ACTION
MONTHLY PROGRESS REPORT
JULY 2001
FIGURE 1: PHOTO DOCUMENTATION**

PHOTO NO. 1

LOCATION: Cell H2

DESCRIPTION: Removal activities with clamshell bucket.

DATE: July 3, 2001.



PHOTO NO. 2

LOCATION: Hill 78 OPCA

DESCRIPTION: Consolidated material from the ½ Mile Reach.

DATE: July 10, 2001.



PHOTO NO. 3

LOCATION: Cell 68R1

DESCRIPTION: Rip-rap at toe-of-bank in restored cell.

DATE: July 26, 2001.

