



SDMS: 287 040

08-0067

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

February 9, 2001

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

Ms. Susan Steenstrup
Department of Environmental Protection
436 Dwight Street
Springfield, MA 01103

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

Dear Mr. Tagliaferro and Ms. Steenstrup:

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

Please call with any questions.

Yours truly,

William A. Home / for

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
W.A. Home, GE
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1.0 Overview:

During January 2001, GE and its contractor Maxymillian Technologies Incorporated (MTI) continued work on the Upper ½ Mile Reach Removal Action. This work included activities in Cells G-2, G-3 and H-1. In Cell G-2, GE completed the remediation work to address the coal-tar-related non-aqueous-phase liquid (NAPL) in the downstream part of the cell. This work included: excavation of NAPL-impacted sediment, implementation of the NAPL contingency plan, grouting of the permanent source control (Waterloo) sheetpile barrier, and restoration (sediment and bank) of the cell.

Work in Cell G-3 included removing significant ice and snow from the cell. GE completed the design of its remediation proposal to address the dense non-aqueous-phase liquid (DNAPL) in Cell G-3 (including a permanent source control sheetpile barrier) and submitted that proposal to EPA on January 4, 2001. On January 18, EPA provided conditional approval of that proposal, which required GE to extend the length of the source control sheetpile barrier by 35 linear feet (LF). As the month ended, preparation activities to install the source control sheetpile wall were completed and delivery of the sheetpile was scheduled for early February.

Simultaneously, GE began preparation for and installation of the temporary cutoff sheetpiling for Cell H-1 on the south side of the river. During sheetpile installation, an oil sheen on the water surface was observed and reported to EPA, MDEP, and the National Response Center (NRC) on January 15, 2001. Oil absorbent booms and pads were deployed around the sheen area, and after 24 hours, the sheen dissipated and has not reappeared.

Weekly status meetings were held on January 3, 10, 17, 24, and 31. No work took place on January 1, 2001.

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. In the month of January 2001, GE Buildings 33-north, 33X and 65 were used as temporary storage facilities for TSCA and non-TSCA material. In addition, a new temporary storage area was constructed and maintained in Building 65 to stockpile potentially NAPL-impacted sediment excavated from Cells G-2 prior to off-site disposal.

In early January, after the Cell G-2 source control wall had been installed and the project site had been plowed out from a 14-inch snowstorm, the sheetpile joints were flushed and the top of the wall was cut at the design elevation. NAPL-impacted sediment excavation activities began and were completed on January 11, 2001.

Approximately 300 cubic yards (cy) of NAPL-impacted material were transferred to Bldg. 65, stockpiled in a separate area, and sampled/characterized for off-site disposal. Upon reaching the EPA-approved NAPL removal limit (elevation 965) and excavating approximately 2 feet deeper (elevation 963), minor amounts of NAPL and NAPL-related sheens remained. EPA, GE, and the U.S. Army Corps of Engineers agreed that the NAPL contingency plan should be implemented, which included installing a 6" recovery well protected by a 12" (pipe) outer casing. This plan was revised based on actual field conditions and submitted to EPA for approval on January 15, 2001. EPA approved this revised plan on January 18. After backfilling the removal area to elevation 967 (as required by the Waterloo barrier installation procedures), mobilizing the grouting subcontractor, removing four obstructions between the sheetpiles, and constructing heated tents, the sheetpile joints were then flushed and sealed by January 19.

The Cell G-2 NAPL contingency plan also required that an HDPE liner system be installed on top of the stone backfill over the entire removal area. The perimeter of the HDPE liner and area around the 12" outer casing of the recovery well were sealed with a grout keyway. Sediment and bank restoration efforts (including placement of fabric, sand, fabric/geotextile, and rock) were completed. These activities also included constructing the north half of the "W" rock weir and swale No. 5. Once the final restored elevations were recorded and approved by the EPA, dewatering efforts in that part of the cell were discontinued on January 30, 2001.

On January 4, GE submitted the design details for a remediation proposal to address DNAPL in Cell G-3 and on January 18 EPA provided conditional approval of this proposal. This conditional approval required extending the limits of the proposed permanent source control sheetpile barrier by 35 LF (15 LF upstream and 20 LF downstream). Based on that letter, GE revised the design drawings and placed the order for this permanent sheetpile wall. (The anticipated delivery date is February 7, 2001.)

Work in Cell H-1 included mobilizing a second crane to the site to install the temporary sheetpiling along the south side of the river. After completing the removal of large trees in that area, the sheetpile installation began. During installation of the centerline sheetpile, a sheen on the water surface was observed. GE reported this sheen to EPA, MDEP and the NRC on January 15, 2001, and then deployed and maintained oil absorbent pads and booms around the Cell H-1 sheen area. The NRC issued release tracking number 553614; MDEP did not issue a release tracking number. Subsequent daily observations indicated that the sheen dissipated and did not reappear. By the end of January, approximately 275 LF (out of 305 LF) of sheetpile had been installed in Cell H-1.

GE also continued to monitor for coal-tar DNAPL in the 6-inch-diameter coal-tar DNAPL recovery well in former Cell C. In January, no measurable amounts of coal-tar

DNAPL/water mixture were collected from that well. Monitoring of coal-tar DNAPL at this well will continue. Additionally, GE monitored the recovery well in the downstream part of Cell G-2. No NAPL was detected in this well and monitoring will continue in the month of February.

In January, GE performed four monitoring events at the first two monitoring wells associated with the Cell G-1 source control barrier. The third (downstream) and final monitoring well was also installed.

Air monitoring for particulate matter was conducted daily and a PCB air monitoring event was conducted on January 8, 2001, during excavation of Cell G-2. Water column (PCB and TSS) monitoring also continued in January. Temporary stockpiles of material were maintained in Buildings 33, 33X, and 65 (TSCA and non-TSCA).

3.0 Number of samples collected:

Water column monitoring for total suspended solids (TSS) was conducted on a daily basis. Water column samples were collected for PCB analysis on January 4, 18, and 31, 2001. The TSS and PCB results received in January are attached to this report in Tables 1A and 1B.

Table 2 presents a summary of analytical results, including PCBs, VOCs, and SVOCs from the NAPL oil sample collected in Cell G-2.

Table 3 presents a summary of analytical results for VOCs and SVOCs from NAPL-saturated sediment collected during the excavation in Cell G-2.

Table 4 presents a summary of analytical results for PCBs from sediment (from Cell G-2) stockpiled in Bldg. 65.

Table 5 presents a summary of analytical results for VOCs and SVOCs from sediment (from Cell G-2) stockpiled in Bldg. 65.

In the month of January, particulate air monitoring was conducted from January 1 through January 31, 2001. PCB air monitoring was conducted on January 8-9, 2001. The results are attached to this report in Tables 6 and 7.

Table 8 includes the results from monthly monitoring of the coal-tar DNAPL recovery well in former Cell C.

Table 9 includes the results from the initial monitoring of the NAPL recovery well

in Cell G-2.

Table 10 presents the results from two of the three monitoring wells associated with the Cell G-1 source control sheetpile wall.

4.0 Diagrams associated with the tasks performed:

A diagram labeled as Exhibit A shows the location of the Cells (A, B, C, D, E, F, and G) 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 any reports received and prepared:

During the month of January, meeting summaries from various weekly project status meetings were submitted to EPA, MDEP and the Massachusetts Executive Office of Environmental Affairs. Also, for work completed in December 2000, the monthly reports required by the Consent Decree and the Upper 1/2 Mile Reach Removal Action Work Plan were both submitted on January 9, 2001.

In addition, during January, GE submitted the following:

- Report presenting the results of the Cell G-3 DNAPL investigation and proposal to address the DNAPL in Cell G-3 (January 4, 2001).
- Material submittal 20A, on January 9, 2001, presenting analytical results for PCBs from the isolation material (2500-3000 cy).
- Letter of January 15, 2001, presenting a revised NAPL contingency plan for Cell G-2 based on actual conditions. (EPA approval was received on January 18.)
- Survey chart showing excavated elevations in Cell G-2, including new shots along the centerline sheetpiles (January 17 and 18, 2001).
- Final restored river sediment elevations from the downstream part of Cell G-2 (January 29, 2001) and bank elevations (January 31, 2001).

6.0 Photo documentation of activities performed: See attached Figure 1

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

Throughout the upcoming weeks in the month of February, the following activities are anticipated to take place:

- Remove all temporary sheetpile from Cell G-2
- Complete all sediment and bank excavation in Cell G-3.
- Install an additional 10 feet of temporary sheetpile on the bank side of the downstream cutoff wall for Cell G-3 where erosion from the December 17-18, 2000 flood occurred.
- Complete installation of a source control barrier system for Cell G-3.
- Complete flushing and grouting of Cell G-3 source control sheetpile joints and the pressure grouting along the bank side of the sheetpile wall.
- Possibly complete installation of the cutoff sheetpile for Cell H-1 (south side of river).
- Maintain temporary stockpiles of material in Buildings 33, 33X, and 65 (TSCA and non-TSCA).
- Continue monitoring coal-tar DNAPL recovery well in former Cell C.
- Continue monitoring coal-tar NAPL recovery well in former Cell G-2.
- Continue observing the three monitoring wells associated with the Cell G-1 source control barrier.
- Conduct air and water column monitoring.

8.0 Attachments to this report:

- Table 1A and 1B - Water column monitoring TSS and PCB results.
- Table 2 - Analytical results for DNAPL oil collected from Cell G-2.

- Table 3 - Analytical results from sediment collected in Cell G-2.
- Table 4 – PCB analytical results from the sediment stockpile in Bldg. 65.
- Table 5 – Non-PCB analytical results from the sediment stockpile in Bldg. 65.
- Tables 6 and 7 – PCB and particulate air monitoring results.
- Table 8 - Monitoring results from the coal-tar DNAPL recovery well in former Cell C/D.
- Table 9 - Monitoring results from the coal-tar NAPL recovery well in Cell G-2.
- Table 10 - Cell G-1 monitoring well results.
- Exhibit A - Diagram to show the locations of cells within the upstream part of the Upper ½ Mile Reach Removal Action.
- Exhibit B – Backfill quantity summary chart.
- Figure 1 - Photo documentation.

TABLE 1A

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

JANUARY 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 ¹⁶ (cfs)	Turbidity (ntu) ¹³			Sample ID	Total PCB Concentration ¹⁴ (ug/l)	Filtered PCB Concentration (ug/l)	TSS (mg/l)
					High	Low	Daily Composite				
Upstream of Newell St. Bridge	1/2/2001	---	---	68	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/2/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/3/2001	---	---	56	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/3/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/4/2001	---	---	58	NS	NS	NS	HR-1-4-01-U1	ND(0.0250)[ND(0.0250)]	ND(0.0250)[ND(0.0250)]	1.51 [1.94]
Downstream of Lyman St. Bridge	1/4/2001	---	---		NS	NS	NS	HR-1-4-01-D1	ND(0.0250)	ND(0.0250)	1.10
Upstream of Newell St. Bridge	1/5/2001	---	---	56	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/5/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/8/2001	---	---	48	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/8/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/9/2001	---	---	49	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/9/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/10/2001	---	---	46	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/10/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/11/2001	---	---	48	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/11/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/12/2001	---	---	45	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/12/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/15/2001	---	---	42	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/15/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/16/2001	---	---	43	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/16/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/17/2001	---	---	43	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/17/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/18/2001	---	---	42	NS	NS	NS	HR-1-18-01-U1	ND(0.0250)	ND(0.0250)	4.40
Downstream of Lyman St. Bridge	1/18/2001	---	---		NS	NS	NS	HR-1-18-01-D1	ND(0.0250)	ND(0.0250)	4.40
Upstream of Newell St. Bridge	1/19/2001	---	---	42	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/19/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/22/2001	---	---	46	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/22/2001	---	---		NS	NS	NS	---	---	---	---

TABLE 1A

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

JANUARY 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 ¹⁶ (cfs)	Turbidity (ntu) ¹³			Sample ID	Total PCB Concentration ¹⁴ (ug/l)	Filtered PCB Concentration (ug/l)	TSS (mg/l)
					High	Low	Daily Composite				
Upstream of Newell St. Bridge	1/23/2001	---	---	37	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/23/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/24/2001	---	---	52	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/24/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/25/2001	---	---	78	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/25/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/26/2001	---	---	80	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/26/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/29/2001	---	---	41	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/29/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/30/2001	---	---	52	NS	NS	NS	---	---	---	---
Downstream of Lyman St. Bridge	1/30/2001	---	---		NS	NS	NS	---	---	---	---
Upstream of Newell St. Bridge	1/31/2001	---	---	90	NS	NS	NS	HR-1-31-01-U1	NR	NR	NR
Downstream of Lyman St. Bridge	1/31/2001	---	---		NS	NS	NS	HR-1-31-01-D1	NR	NR	NR

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. [] - Duplicate sample result
13. Turbidity Action Level = Turbidity downstream ≤ Turbidity upstream + 50 ntu
14. PCB Action Level = PCBs downstream ≤ PCBs upstream + 5 ug/l
15. NS - Not sampled due to frozen river conditions or high flow.
16. 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 1B

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

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

(Results are presented in parts per million, ppm)

Sample ID	Location	Date Collected	Aroclor 1016, 1221, 1232, 1242, 1248, 1254, & 1260	Total PCBs	TSS
HR-1-4-01-U1	Upstream of Newell St. Bridge	1/4/2001	ND(0.0250)[ND(0.0250)]	ND(0.0250)[ND(0.0250)]	1.51 [1.94]
HR-1-4-01-D1	Downstream of Lyman St. Bridge	1/4/2001	ND(0.0250)	ND(0.0250)	1.10
HR-1-4-01-U1 (FILTERED)	Upstream of Newell St. Bridge	1/4/2001	ND(0.0250)[ND(0.0250)]	ND(0.0250)[ND(0.0250)]	---
HR-1-4-01-D1 (FILTERED)	Downstream of Lyman St. Bridge	1/4/2001	ND(0.0250)	ND(0.0250)	---
HR-1-18-01-U1	Upstream of Newell St. Bridge	1/18/2001	ND(0.0250)	ND(0.0250)	4.40
HR-1-18-01-D1	Downstream of Lyman St. Bridge	1/18/2001	ND(0.0250)	ND(0.0250)	4.40
HR-1-18-01-U1 (FILTERED)	Upstream of Newell St. Bridge	1/18/2001	ND(0.0250)	ND(0.0250)	---
HR-1-18-01-D1 (FILTERED)	Downstream of Lyman St. Bridge	1/18/2001	ND(0.0250)	ND(0.0250)	---

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(0.0250) - Analyte was not detected. The value in parentheses is the associated detection limit.
3. --- - Not analyzed.
4. Blind duplicate results are presented in brackets.

TABLE 2

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH
CELL G2 OIL SAMPLING
SAMPLE DATA RECEIVED DURING JANUARY 2001

(Results are presented in parts per million, ppm)

Parameter	Sample ID: Date Collected:	HR-G2-OIL-1 01/09/01
Volatile Organics		
None Detected		--
PCBs		
None Detected		ND(1.00)
Semivolatile Organics		
2-Chloronaphthalene		ND(95.4) J
2-Methylnaphthalene		307
Acenaphthene		571
Acenaphthylene		120
Anthracene		441
Benzo(a)anthracene		160
Benzo(a)pyrene		115
Benzo(b)fluoranthene		ND(95.4) J
Benzo(g,h,i)perylene		ND(95.4) J
Benzo(k)fluoranthene		ND(95.4) J
Chrysene		127
Dibenzofuran		ND(95.4) J
Fluoranthene		338
Fluorene		462
Indeno(1,2,3-cd)pyrene		ND(95.4) J
Naphthalene		147
Phenanthrene		1240 D
Pyrene		707
Conventional Parameters		
Density		NR
Viscosity		NR

Notes:

1. Sample was collected by Blasland, Bouck & Lee, Inc. and submitted to Northeast Analytical, Inc. for analysis of PCBs, volatiles and semivolatiles and to Adirondack Environmental Services, Inc. for analysis of density and viscosity.
2. ND - Analyte was not detected. The value in parentheses is the associated detection limit.
3. J - Indicates an estimated value less than the practical quantitation limit (PQL).
4. D - Compound quantitated using a secondary dilution.
5. NR - Not yet received from laboratory.

TABLE 3

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH
CELL G2 SEDIMENT/SHEEN SAMPLING
NON-PCB SAMPLE DATA RECEIVED DURING JANUARY 2001

(Results are presented in dry weight parts per million, ppm)

Parameter	Sample ID: Sample Depth(Feet): Date Collected:	SED 01-G2 1-2 01/11/01
Volatile Organics		
Acetone		0.190 JB
Semivolatile Organics		
2-Methylnaphthalene		1.71
Acenaphthene		2.02
Acenaphthylene		0.300 J
Anthracene		1.25
Benzo(a)anthracene		0.470
Benzo(a)pyrene		0.311 J
Benzo(b)fluoranthene		0.272 J
Benzo(k)fluoranthene		0.107 J
Chrysene		0.385 J
Dibenzofuran		0.110 J
Fluoranthene		1.55
Fluorene		1.38
Naphthalene		0.157 J
Phenanthrene		4.32
Pyrene		2.35

Notes:

1. Sample was collected by Blasland, Bouck & Lee, Inc. and submitted to Northeast Analytical, Inc. for analysis of volatiles and semivolatiles.
2. Only detected constituents are summarized.
3. J - Indicates an estimated value less than the practical quantitation limit (PQL).
4. B - Analyte was also detected in the associated method blank.

TABLE 4

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH
CELL G2 SEDIMENT PILE SAMPLING IN BUILDING 65
PCB SAMPLE DATA RECEIVED DURING JANUARY 2001

(Results are presented in dry weight parts per million, ppm)

Sample ID	Date Collected	Aroclor-1016, -1221 -1232, -1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Total PCBs
HR-G2-SEDPile-C1	1/18/2001	ND(1.15) [ND(0.580)]	3.99 PE [2.69 PE]	ND(1.15) [ND(0.580)]	16.0 AG [12.5 AG]	20.0 [15.2]
HR-G2-SEDPile-C2	1/18/2001	ND(0.0556)	ND(0.0556)	ND(0.0556)	0.0952 AG	0.0952
HR-G2-SEDPile-C3	1/18/2001	ND(0.159)	ND(0.159)	ND(0.159)	1.61 AG	1.61
HR-G2-SEDPile-C4	1/18/2001	ND(0.344)	3.59 PE	ND(0.344)	5.15 AG	8.74
HR-G2-SEDPile-C5	1/18/2001	ND(0.173)	0.262 PE	ND(0.173)	1.60 AG	1.86
HR-G2-SEDPile-C6	1/18/2001	ND(1.14)	ND(1.14)	ND(1.14)	19.8 AG	19.8
HR-G2-SEDPile-C7	1/18/2001	ND(0.517)	1.70 PE	ND(0.517)	8.40 AG	10.1
HR-G2-SEDPile-C8	1/18/2001	ND(0.208)	0.464 PE	ND(0.208)	3.34 AG	3.80
HR-G2-SEDPile-C9	1/18/2001	ND(0.107)	0.371 PE	ND(0.107)	1.09 AG	1.46
HR-G2-SEDPile-C10	1/18/2001	ND(0.0529)	ND(0.0529)	ND(0.0529)	0.139 AG	0.139
HR-G2-SEDPile-C11	1/18/2001	ND(0.0531)	ND(0.0531)	ND(0.0531)	ND(0.0531)	ND(0.0531)
HR-G2-SEDPile-C12	1/18/2001	ND(0.0706)	ND(0.0706)	1.67 AF	1.32 AG	2.99
HR-G2-SEDPile-C13	1/18/2001	ND(0.354)	1.63 PE	ND(0.354)	3.09 AG	4.72
HR-G2-SEDPile-C14	1/18/2001	ND(0.0715)	ND(0.0715)	ND(0.0715)	0.128 AG	0.128
HR-G2-SEDPile-C15	1/18/2001	ND(0.0549)	0.187 PE	ND(0.0549)	0.454 AG	0.641

Notes:

1. Samples were collected by Blasland, Bouck & Lee, Inc. and submitted to Northeast Analytical, Inc. for analysis of PCBs.
2. ND - Analyte was not detected. The value in parentheses is the associated detection limit.
3. Duplicate results are presented in brackets.
4. PE - Aroclor 1248 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1248 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.
5. AF - Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
6. AG - Aroclor 1260 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

Table 5

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH
CELL G2 SEDIMENT PILE SAMPLING IN BUILDING 65
NON-PCB SAMPLE DATA RECEIVED DURING JANUARY 2001

(Results are presented in dry weight parts per million, ppm)

Parameter	Sample ID: Date Collected:	HR-G2-SEDPile-C16 01/18/01
Volatile Organics		
Acetone		0.300 JB
Semivolatile Organics		
2-Methylnaphthalene		13.2
Acenaphthene		10.2
Acenaphthylene		1.46 J
Anthracene		6.01
Benzo(a)anthracene		2.42 J
Benzo(a)pyrene		1.63 J
Benzo(b)fluoranthene		1.51 J
Benzo(g,h,i)perylene		0.756 J
Benzo(k)fluoranthene		0.577 J
Chrysene		2.01 J
Dibenzofuran		0.501 J
Fluoranthene		5.09
Fluorene		6.16
Naphthalene		2.79 J
Phenanthrene		21.1
Pyrene		13.1

Notes:

1. Sample was collected by Blasland, Bouck & Lee, Inc. and submitted to Northeast Analytical, Inc. for analysis of volatiles and semivolatiles.
2. Only detected constituents are summarized.
3. J - Indicates an estimated value less than the practical quantitation limit (PQL).
4. B - Analyte was also detected in the associated method blank.

TABLE 6

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

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

Date	Sampler Location	Average Site Concentration (mg/m ³)	BM-1 (mg/m ³)	Average Period (Hours:Min)	Predominant Wind Direction
1/1/01 ¹	AM-4 (south side of river)	NA	NA	NA	NA
1/2/2001	AM-4 (south side of river)	0.014	0.009	9:45	WNW
1/3/2001	AM-4 (south side of river)	0.010	0.012	6:00 ²	WNW
1/4/2001	AM-4 (south side of river)	0.019	0.019	9:30	W
1/5/01 ³	AM-4 (south side of river)	NA	NA	NA	NA
1/8/2001	AM-4 (south side of river)	0.039	0.042	10:30	SSW
1/9/01 ³	AM-4 (south side of river)	NA	NA	NA	NA
1/10/2001	AM-4 (south side of river)	0.005	0.008	9:30	W, NW
1/11/2001	AM-4 (south side of river)	0.026	0.029	9:15	WNW
1/12/2001	AM-4 (south side of river)	0.007	0.007	9:45	WNW
1/15/01 ³	AM-4 (south side of river)	NA	NA	NA	NA
1/16/01 ³	AM-4 (south side of river)	NA	NA	NA	NA
1/17/2001	AM-4 (south side of river)	0.009	0.010	10:15	WNW
1/18/2001	AM-4 (south side of river)	0.024	0.033	9:00	SSW
1/19/01 ³	AM-4 (south side of river)	NA	NA	NA	NA
1/22/2001	AM-4 (south side of river)	0.016	0.020	9:30	W, WNW
1/23/2001	AM-4 (south side of river)	0.039	0.049	9:00	SSW
1/24/2001	AM-4 (south side of river)	0.031	0.031	10:00	WNW
1/25/2001	AM-4 (south side of river)	0.030	0.023	9:15	WNW
1/26/2001	AM-4 (south side of river)	0.020	0.016	9:45	WNW
1/29/2001	AM-4 (south side of river)	0.016	0.013	6:30 ⁴	W
1/30/01 ³	AM-4 (south side of river)	NA	NA	NA	NA
1/31/01 ³	AM-4 (south side of river)	NA	NA	NA	NA
Notification Level		0.120			

Notes:

NA - Not Available

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

AM-4: Air monitoring location behind the former F.W. Webb building on Newell Street.

¹ Sampling was not performed due to lack of site activity on New Year's Day.

² Sampling period was shortened due to precipitation/threat of precipitation.

³ Sampling was not performed due to precipitation/threat of precipitation.

⁴ Sampling period was shortened due to instrument failure.

TABLE 7

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

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

Date	BM-1 ug/m3	AM-3 ug/m3	AM-3 co-located ug/m3	AM-4 ug/m3	AM-5 ug/m3	AM-6 ug/m3
01/08 - 01/09/01	0.001	0.001	0.0013	0.0009	0.0006	0.0009
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-3: Air monitoring location north bank, north of Bldg. 64W. This location is also a co-located site.

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.

TABLE 8

**GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS**

UPPER 1/2-MILE REACH OF HOUSATONIC RIVER

CELL C/D DNAPL MONITORING RESULTS - JANUARY 2001

Date	Depth to Water (Feet below MP)	Depth to DNAPL (Feet below MP)	Total Depth (Feet below MP)	DNAPL Thickness (Feet)	DNAPL Removal (Liters)
1/15/2001	7.70	22.65	22.70	0.05	0.00

Notes:

1. Measurement collected from coal tar DNAPL recovery well installed near oil/water separator 64X.
2. DNAPL - Dense Non-Aqueous Phase Liquid.
3. DNAPL removal is not conducted if the observed DNAPL thickness is less than 0.25 feet.

TABLE 9

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

UPPER 1/2-MILE REACH OF HOUSATONIC RIVER

CELL G-2 MONITORING RESULTS FROM NAPL RECOVERY WELL - JANUARY 2001

Well I.D.	Date	Depth to Water (Feet below MP)	Depth to NAPL (Feet below MP)	Total Depth (Feet below MP)	NAPL Thickness (Feet)	NAPL Removal (Liters)
HR-G2-RW-1	1/26/2001	14.09	N/A	18.8	N/A	N/A
HR-G2-RW-1	1/29/2001	14.83	N/A	18.8	N/A	N/A

Notes:

1. NAPL - Non-Aqueous Phase Liquid.
2. MP - Measuring Point

TABLE 10

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

UPPER 1/2-MILE REACH OF HOUSATONIC RIVER

CELL G-1 MONITORING RESULTS - JANUARY 2001

Well I.D.	Date	Depth to Water (Feet below MP)	Depth to NAPL (Feet below MP)	Total Depth (Feet below MP)	NAPL Thickness (Feet)	NAPL Removal (Liters)
HR-G1-MW-1	1/12/2001	10.66	---	20.35	0.00	0.00
HR-G1-MW-1	1/19/2001	10.75	---	20.35	0.00	0.00
HR-G1-MW-1	1/24/2001	10.70	---	20.36	0.00	0.00
HR-G1-MW-1	1/29/2001	10.65	---	20.32	0.00	0.00
HR-G1-MW-2	1/12/2001	8.45	---	28.52	0.00	0.00
HR-G1-MW-2	1/19/2001	8.53	---	28.51	0.00	0.00
HR-G1-MW-2	1/24/2001	8.54	---	28.53	0.00	0.00
HR-G1-MW-2	1/29/2001	8.46	---	28.53	0.00	0.00

Notes:

1. NAPL - Non-Aqueous Phase Liquid.
2. MP - Measuring Point

1/2-Mile Removal Action Backfill Tracking Log

Material	Testing Required	Frequency (per cy)	Submittal from MTI		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	12/1/1999	11/16/1999	1	1000	584	Samples Collected as part of Allendale School Project				
	PCBs	500	NA	NA	8A	12/15/1999	12/8/1999	2							
	VOCs	2000	NA	NA	14	5/31/2000	5/18/2000	2							
	SVOCs	2000	NA	NA	8A	12/15/1999	7/21-7/28/99	6							
	Metals	2000	NA	NA	8A	12/15/1999	7/21-7/28/99	6							
	TPH	2000	NA	NA	8A	12/15/1999	12/1/1999	3							
Isolation Layer (Pittsfield Sand & Gravel)	Grain Size	500	12	11/17/1999	Letter	11/19/1999	11/1/1999	1	1000	770					
			12C	3/30/2000	Letter	4/20/2000	3/24/2000	1							
	TOC	500	12	11/17/1999	Letter	11/19/1999	11/2/1999	1							
			12C	3/30/2000	Letter	4/20/2000	3/30/2000	1							
	PCBs	500	NA	NA	Letter	11/19/1999	9/20/1999	4				Samples collected as part of off-site residential fill program			
			NA	NA	7	12/1/1999	11/19/1999	2							
			NA	NA	Letter	4/20/2000	3/29/2000	2							
	VOCs	2000	NA	NA	Letter	11/19/1999	9/20/1999	4				Samples collected as part of off-site residential fill program			
	SVOCs	2000	NA	NA	Letter	11/19/1999	9/20/1999	4							
	Metals	2000	NA	NA	Letter	11/19/1999	9/20/1999	4							
TPH	2000	NA	NA	7	12/1/1999	11/19/1999	2								
Isolation Layer (Bushika Sand & Gravel)	Grain Size	500	12A	1/3/2000	Letter	1/6/2000	12/28/1999	1	3000	2327					
			12B	1/24/2000	11	2/14/2000	1/19/2000	1							
			12D	5/8/2000	13	5/19/2000	5/2/2000	1							
			12E	9/11/2000	14	9/27/2000	9/7/2000	1							
			12F	9/29/2000	17	10/4/2000	9/26/2000	1							
			12G	11/30/2000	20	12/6/2000	10/20/2000	1							
	TOC	500	12A	1/3/2000	Letter	1/6/2000	12/28/1999	1							
			12B	1/24/2000	11	2/14/2000	1/19/2000	1							
			12D	5/8/2000	13	5/19/2000	5/2/2000	1							
			12E	9/11/2000	14	9/27/2000	9/6/2000	1							
			12F	9/29/2000	17	10/4/2000	9/26/2000	1							
			12G	11/30/2000	20	12/6/2000	10/20/2000	1							
	PCBs	500	NA	NA	10	1/14/2000	1/5/2000	2							
			NA	NA	11	2/14/2000	2/2/2000	2							
			NA	NA	13A	6/28/2000	6/2/2000	2							
			NA	NA	16A	10/4/2000	9/26/2000	3							
			NA	NA	18A	10/5/2000	9/28/2000	2							
			NA	NA	20A	1/9/2001	12/5/2000	2							
	VOCs	2000	NA	NA	10	1/14/2000	1/5/2000	2							
			NA	NA	18A	10/5/2000	9/28/2000	2							
	SVOCs	2000	NA	NA	10	1/14/2000	1/5/2000	2							
			NA	NA	18A	10/5/2000	9/28/2000	2							
	Metals	2000	NA	NA	10	1/14/2000	1/5/2000	2							
			NA	NA	18A	10/5/2000	9/28/2000	2							
	TPH	2000	NA	NA	10	1/14/2000	1/5/2000	2							
			NA	NA	11	2/14/2000	2/2/2000	2							
			NA	NA	18A	10/5/2000	9/28/2000	2							
	Rip-Rap (9")	Grain Size	2000	15A	11/30/1999	Letter	12/1/1999	11/23/1999				1	4000	1742	
				15B	10/4/2000	19	10/11/2000	9/28/2000				1			
	Rip-Rap (12")	Grain Size	2000	18	1/4/2000	Letter	1/6/2000	12/29/1999				1	2000	299	
Topsoil (Woodmont)	Organic Content	500	11/14	11/16 & 11/17/99	9	12/15/1999	11/8/1999	2	500	242	Samples collected as part of off-site residential fill program				
	pH	500	11/14	11/16 & 11/17/99	9	12/15/1999	11/8/1999	2							
	PCBs	500	NA	NA	9	12/15/1999	12/8/1999	4							
	VOCs	2000	NA	NA	9	12/15/1999	8/24/1999	4							
	SVOCs	2000	NA	NA	9	12/15/1999	8/24/1999	4							
	Metals	2000	NA	NA	9	12/15/1999	8/24/1999	4							
	TPH	2000	NA	NA	9	12/15/1999	12/8/1999	2							

Notes:

Granular Fill and Soil Backfill have been combined as the same material
Quantities placed include Cells A, B, C, D, DNAPL, E, F-1, G-1, G-2 (upstream), and F-2

1/2-Mile Removal Action Backfill Tracking Log

Material	Testing Required	Frequency (per cy)	Submittal from MTI		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	12/1/1999	11/16/1999	1	1000	584	Samples Collected as part of Allendale School Project	
	PCBs	500	NA	NA	8A	12/15/1999	12/8/1999	2				
			NA	NA	14	5/31/2000	5/18/2000	2				
	VOCs	2000	NA	NA	8A	12/15/1999	7/21-7/28/99	6				
	SVOCs	2000	NA	NA	8A	12/15/1999	7/21-7/28/99	6				
	Metals	2000	NA	NA	8A	12/15/1999	7/21-7/28/99	6				
TPH	2000	NA	NA	8A	12/15/1999	12/1/1999	3					
Isolation Layer (Pittsfield Sand & Gravel)	Grain Size	500	12	11/17/1999	Letter	11/19/1999	11/1/1999	1	1000	770		
			12C	3/30/2000	Letter	4/20/2000	3/24/2000	1				
	TOC	500	12	11/17/1999	Letter	11/19/1999	11/2/1999	1				
			12C	3/30/2000	Letter	4/20/2000	3/30/2000	1				
	PCBs	500	NA	NA	Letter	11/19/1999	9/20/1999	4				Samples collected as part of off-site residential fill program
			NA	NA	7	12/1/1999	11/19/1999	2				
			NA	NA	Letter	4/20/2000	3/29/2000	2				
	VOCs	2000	NA	NA	Letter	11/19/1999	9/20/1999	4				Samples collected as part of off-site residential fill program
	SVOCs	2000	NA	NA	Letter	11/19/1999	9/20/1999	4				
	Metals	2000	NA	NA	Letter	11/19/1999	9/20/1999	4				
TPH	2000	NA	NA	7	12/1/1999	11/19/1999	2					
Isolation Layer (Bushika Sand & Gravel)	Grain Size	500	12A	1/3/2000	Letter	1/6/2000	12/28/1999	1	3000	2327		
			12B	1/24/2000	11	2/14/2000	1/19/2000	1				
			12D	5/8/2000	13	5/19/2000	5/2/2000	1				
			12E	9/11/2000	14	9/27/2000	9/7/2000	1				
			12F	9/29/2000	17	10/4/2000	9/26/2000	1				
			12G	11/30/2000	20	12/6/2000	10/20/2000	1				
	TOC	500	12A	1/3/2000	Letter	1/6/2000	12/28/1999	1				
			12B	1/24/2000	11	2/14/2000	1/19/2000	1				
			12D	5/8/2000	13	5/19/2000	5/2/2000	1				
			12E	9/11/2000	14	9/27/2000	9/6/2000	1				
			12F	9/29/2000	17	10/4/2000	9/26/2000	1				
			12G	11/30/2000	20	12/6/2000	10/20/2000	1				
	PCBs	500	NA	NA	10	1/14/2000	1/5/2000	2				
			NA	NA	11	2/14/2000	2/2/2000	2				
			NA	NA	13A	6/28/2000	6/2/2000	2				
			NA	NA	16A	10/4/2000	9/26/2000	3				
			NA	NA	18A	10/5/2000	9/28/2000	2				
			NA	NA	20A	1/9/2001	12/5/2000	2				
	VOCs	2000	NA	NA	10	1/14/2000	1/5/2000	2				
			NA	NA	18A	10/5/2000	9/28/2000	2				
	SVOCs	2000	NA	NA	10	1/14/2000	1/5/2000	2				
			NA	NA	18A	10/5/2000	9/28/2000	2				
	Metals	2000	NA	NA	10	1/14/2000	1/5/2000	2				
			NA	NA	18A	10/5/2000	9/28/2000	2				
	TPH	2000	NA	NA	10	1/14/2000	1/5/2000	2				
			NA	NA	11	2/14/2000	2/2/2000	2				
			NA	NA	18A	10/5/2000	9/28/2000	2				
			NA	NA	18A	10/5/2000	9/28/2000	2				
Rip-Rap (9")	Grain Size	2000	15A	11/30/1999	Letter	12/1/1999	11/23/1999	1	4000	1742		
			15B	10/4/2000	19	10/11/2000	9/28/2000	1				
Rip-Rap (12")	Grain Size	2000	18	1/4/2000	Letter	1/6/2000	12/29/1999	1	2000	299		
Topsoil (Woodmont)	Organic Content	500	11/14	11/16 & 11/17/99	9	12/15/1999	11/8/1999	2	500	242	Samples collected as part of off-site residential fill program	
	pH	500	11/14	11/16 & 11/17/99	9	12/15/1999	11/8/1999	2				
	PCBs	500	NA	NA	9	12/15/1999	12/8/1999	4				
	VOCs	2000	NA	NA	9	12/15/1999	8/24/1999	4				
	SVOCs	2000	NA	NA	9	12/15/1999	8/24/1999	4				
	Metals	2000	NA	NA	9	12/15/1999	8/24/1999	4				
	TPH	2000	NA	NA	9	12/15/1999	12/8/1999	2				

Notes:
Granular Fill and Soil Backfill have been combined as the same material
Quantities placed include Cells A, B, C, D, DNAPL, E, F-1, G-1, G-2 (upstream), and F-2

**½ MILE RIVER REMOVAL ACTION
MONTHLY PROGRESS REPORT
JANUARY, 2001
FIGURE 1 PHOTO DOCUMENTATION**

PHOTO NUMBER: 1

PHOTO LOCATION: Downstream part of Cell G-2.

PHOTO DESCRIPTION: Excavation of NAPL impacted sediment (close-up).

PHOTO DATE: January 9, 2001



PHOTO NUMBER: 2

PHOTO LOCATION: Downstream part of Cell G-2, looking upstream (east)

PHOTO DESCRIPTION: Installation of NAPL contingency plan, including recovery Well and HDPE liner.

PHOTO DATE: January 23, 2001



PHOTO NUMBER: 3

PHOTO LOCATION: Downstream part of Cell G-2 looking downstream (west).

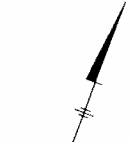
PHOTO DESCRIPTION: Restoration in Cell G-2 (bank and sediment) is complete.

PHOTO DATE: January 30, 2001



Exhibit A - Upper 1/2 Mile Reach Removal Action

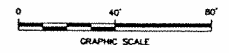
Sediment and Bank Soil Removal Areas (Cells A-G)



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.



DRAFT

X: 20197X1A,20197X1B,20197X07,20197X22.DWG
 LMAN: 9-15
 P: 154-D, D2815M.PCP
 2/6/01 SYR-54-GMS, JER KMD
 20197030/CELLG2/20197G11.DWG