



SDms: 287036

08-0063

October 6, 2000

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

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 – September 2000**

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 September 2000 Monthly Report.

Please call 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
W.A. Horne, GE
H. Inglis, EPA
J.H. Maxymillian, Maxymillian Technologies
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A.J. Thomas, Esquire, GE
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1.0 Overview:

During September 2000, GE and its contractor Maxymillian Technologies Incorporated (MTI) continued work on the Upper ½ Mile Reach Removal Action. This work included the transport of approximately 2,800 cubic yards (cy) of TSCA material (bank soils and river sediments) that had been temporarily stored in Buildings 33X and 65 to the Building 71 On-Plant Consolidation Area (OPCA). In addition, MTI completed all final grading and demobilization of equipment from the upper bank areas adjacent to Cell G-1/G-2, where a 105 ft. section of Waterloo sheetpile had been installed in August. The upstream and centerline sheetpiles were pulled and access roads/staging areas were removed. Work efforts then shifted to Cell F-2 on the south side of the river. After the upstream and downstream sheetpile walls were installed, Cell F-2 was de-watered and all water was processed through GE water handling system via the 500,000 gallon storage tank. The excavation work in Cell F-2 was then conducted and completed, and the restoration of Cell F-2 was initiated and was largely complete by the end of September.

On September 11, 2000, while additional sheetpiling was being installed in the downstream portion of Cell F-2 to temporarily divert the discharge from Outfall 13 away from the cell, a thin rainbow-colored oil sheen along with small pockets of dense non-aqueous-phase liquid (DNAPL) were observed in the downstream portion of Cell F-2. The volume of DNAPL was insufficient for sampling. GE promptly reported this observation to the National Response Center (NRC), EPA, and MDEP. The NRC issued a tracking number 541755 for this release. MDEP did not issue a tracking number. Additionally on September 13, 2000, during a period of high flow, a thin rainbow-colored oil sheen was observed in the flowing section of river (north side) adjacent to Cell F-2. GE promptly reported this observation to the NRC, EPA, and MDEP. The NRC issued a tracking number 541966 for this release. MDEP did not issue a tracking number.

Weekly status meetings were held on September 6, 13, 20, and 27.

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 September, GE Buildings 33, 33X and 65 were used as temporary storage facilities for TSCA and non-TSCA material.

As noted above, work during September included the hauling of approximately 2,800 cy of TSCA material that had been temporarily stored in Buildings 33X and

65 to the Building 71 OPCA. After that material was removed, a new temporary stockpile area for TSCA material was constructed in Building 33X.

At the beginning of September, the downstream sheetpile cutoff wall dividing Cell G-1 from Cell G-2 was lowered to allow flow on the north side of the river, and the upstream cutoff wall and center line of sheetpile were removed from Cell G-1/G-2. The final backfilling and grading were also completed along the upper bank area adjacent to Cell G-1/G-2, and the access roads and staging areas were removed from the area adjacent to Cell G-1/G-2.

The upstream and downstream cutoff sheetpile walls were then installed in Cell F-2, and that cell was dewatered (utilizing the 500,000 gallon storage tank). Excavation was then initiated in Cell F-2. This excavation was slowed by stormwater discharging directly into the cell from a newly constructed swale at the upstream end of the cell and from Outfall 13 located in the downstream part of the cell. With EPA approval, GE implemented a plan to temporarily divert these two sources away from the cell and into the river through the use of a 12" pipe at the upstream location and installation of additional sheetpiling at Outfall 13. These water diversion measures worked effectively, and excavation in Cell F-2 was completed on September 25, 2000.

Small amounts of DNAPL were observed in the downstream section of Cell F-2 and in the upstream centerline corner of the cell. All such DNAPL-impacted sediments (approximately 35 cy) were removed during the excavation. This material was stockpiled separately in Building 65, was sampled, and will be disposed of off-site.

Restoration work was initiated in Cell F-2, including the placement of fabric, sand, fabric/geogrid, and rock. This restoration work was completed in the upstream part of the cell by September 29, and the crane was relocated downstream.

Additional work during September included completion of removal of the DNAPL-impacted sediments that had previously been removed from Cell G-1/G-2 and temporarily stored in Building 65. This material was sent off-site for disposal, and the temporary storage area in Building 65 was cleaned. GE also continued to monitor coal-tar DNAPL in the 6-inch-diameter coal-tar DNAPL recovery well in former Cell C. In September, no measurable amounts of coal-tar DNAPL/water mixture were collected from that well. Monitoring for coal-tar DNAPL in that well will continue on a monthly basis.

During September, Blasland, Bouck & Lee (on GE's behalf) continued a caged mussel study to evaluate the impacts of the construction/remediation work. Cages

had been installed at three locations (four cages per location): upstream of the Newell Street bridge; downstream of the Lyman Street bridge; and upstream of the Dawes Avenue bridge. Sampling events were conducted on September 5-6 and September 18-19, 2000. During each event, a total of 8 samples were collected from the in-situ cages and submitted for analysis of PCBs and percent lipids (whole body samples minus the shell).

During September, GE participated in several meetings with EPA and the Massachusetts Executive Office of Environmental Affairs (EOEA) (on behalf of the natural resource trustees) to discuss the construction details for the "W" rock weir (habitat enhancement structure). EPA and EOEA approved GE's revised drawing for this structure (which had been submitted on August 31, 2000). The portion of this structure to be constructed in Cell F-2 will be constructed in early October as restoration efforts in that cell are being completed.

Efforts to control invasive plant species on the restored banks continued in September by completing the initial step of trimming of these plants. Subsequent discussions among GE, EPA, and EOEA resulted in agreement by all parties to include herbicide applications as part of the invasive control plan. Details of this process will be described in a letter to EOEA and EPA requesting their approval of this plan.

3.0 Number of samples collected:

Water column monitoring for total suspended solids (TSS) was conducted on a daily basis. Water column PCB samples were collected once every 2 weeks on September 14 and 27, 2000. On September 14, the difference in PCB concentrations between the upstream monitoring location and the downstream location (6 ppb) exceeded the action level of 5 ppb identified in the Work Plan. As a result, EPA and GE agreed that GE would include Dawes Avenue Bridge in the next sampling event and would expedite the analytical results. These results, which were received in early October, indicated lower levels of PCBs detected at all three locations. The TSS and PCB results received to date for the month of September are attached to this report (Tables 1A and 1B).

As noted above, the DNAPL-impacted sediments from Cell F-2 that were temporarily stockpiled in Building 65 were sampled. A summary of the analytical results from this sampling, including PCB, VOC, SVOC, and TCLP data, are attached (Tables 2 through 4). This material will be disposed of off-site in October.

In the month of September, particulate air monitoring was conducted from September 1 to September 29. PCB air monitoring was conducted on September 19-20, 2000. The results are attached to this report (Tables 5 and 6).

Table 7 includes analytical results for PCBs from the caged mussel study.

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

Tables 9 and 10 include the analytical results for PCBs, VOCs, SVOCs, metals, and TPH from the isolation material used during the restoration process.

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 September, meeting summaries from various weekly project status meetings were submitted to EPA, MDEP and EOE. Also, for work completed in August 2000, the monthly reports required by the Consent Decree and the Upper ½ Mile Reach Removal Action Work Plan were both submitted on September 8.

In addition, in September, GE submitted the following:

- Final revised survey data for the bank removal and restoration adjacent to Cells F-1 and F-2 (September 13, 2000) (later approved by EPA).
- Final revised survey data for the sediment removal and restoration work in Cell G-1/G-2 (September 13, 2000) (later approved by EPA).
- Letter of September 20, 2000, proposing the installation details of 3 monitoring wells behind the G-1/G-2 source control barrier wall, as required by EPA's conditional approval of the G-1/G-2 DNAPL remediation plan. EPA provided approval of this proposal on September 27, 2000.

- Letter of September 27, 2000, providing material specifications (gradation analysis) for the isolation material used during the restoration activities.
- Letter of September 28, 2000, asserting and presenting the basis for GE's claim of force majeure in connection with completion of this Removal Action, and submitting a revised estimated project planning timetable for this Removal Action.

6.0 Photo documentation of activities performed: See attached Figure 1

7.0 Brief description of work to be performed in October 2000:

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

- Complete all restoration work in Cell F-2, including construction of the portion of the "W" rock weir in that cell.
- Remove existing sheetpile from the upstream cutoff wall in Cell F-2.
- Install upstream and downstream cut off walls in Cell G-2 (north side) and de-water that cell.
- Complete the excavation and restoration activities in Cell G-2, including construction of the portion of the "W" rock weir in that cell.
- Perform the fall planting activities on the banks along Cells F-1, F-2, G-1, and G-2.
- Maintain temporary stockpiles of material in Buildings 33, 33X, and 65 (TSCA and non-TSCA).
- Continue monitoring coal-tar DNAPL recovery well.
- Continue caged mussel study.
- Conduct air and water column monitoring.

8.0 Attachments to this report:

- Tables 1A and 1B - Water column monitoring TSS and PCB results.
- Tables 2 through 4 - Analytical results for PCB, VOC, SVOC, and TCLP parameters from stockpiled DNAPL-impacted soil and sediment removed from Cell F-2.
- Tables 5 and 6 - Particulate and PCB air monitoring results.
- Table 7 - Results from the caged mussel study.
- Table 8 - Monitoring results from the coal-tar DNAPL recovery well.
- Tables 9 and 10 – Analytical results for PCBs, VOCs, SVOCs, metals, and TPH from isolation material.
- 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.

PRELIMINARY ANALYTICAL DATA
SUBJECT TO VERIFICATION

TABLE 1A

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH REMOVAL ACTION
MONTHLY PROGRESS REPORT: SEPTEMBER 2000

HOUSATONIC RIVER WATER COLUMN MONITORING DURING CONSTRUCTION
PCB/TSS/TURBIDITY RESULTS

Location	Date	Water Depth (ft)	Water Temp. (°C)	Flow (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	9/1/00	1.4	19	---	7	2	7	---	---	---	---
Downstream of Lyman St. Bridge	9/1/00	2.5	19	---	8	3	3	---	---	---	---
Upstream of Newell St. Bridge	9/5/00	1.9	17	---	4	2	3	---	---	---	---
Downstream of Lyman St. Bridge	9/5/00	2.8	17	---	4	2	4	---	---	---	---
Upstream of Newell St. Bridge	9/6/00	---	---	---	---	---	---	---	---	---	---
Downstream of Lyman St. Bridge	9/6/00	---	---	---	---	---	---	---	---	---	---
Upstream of Newell St. Bridge	9/7/00	---	---	---	---	---	---	---	---	---	---
Downstream of Lyman St. Bridge	9/7/00	---	---	---	---	---	---	---	---	---	---
Upstream of Newell St. Bridge	9/8/00	2.3	16	---	4	2	3	---	---	---	---
Downstream of Lyman St. Bridge	9/8/00	2.8	16	---	5	2	4	---	---	---	---
Upstream of Newell St. Bridge	9/11/00	2.3	17	---	5	2	3	---	---	---	---
Downstream of Lyman St. Bridge	9/11/00	2.6	17	---	6	2	3	---	---	---	---
Upstream of Newell St. Bridge	9/12/00	2.3	17	---	4	2	3	---	---	---	---
Downstream of Lyman St. Bridge	9/12/00	2.6	17	---	4	2	3	---	---	---	---
Upstream of Newell St. Bridge	9/13/00	2.5	18	---	24	13	20	---	---	---	---
Downstream of Lyman St. Bridge	9/13/00	3.4	18	---	28	14	28	---	---	---	---
Upstream of Newell St. Bridge	9/14/00	2.9	20	193	20	6	12	HR-9-14-00-U1	0.0615	ND (0.0250)	20.0
Downstream of Lyman St. Bridge	9/14/00	3.7	21	218	211	13	21	HR-9-14-00-D1	6.01	0.129	23.5
Upstream of Newell St. Bridge	9/15/00	2.3	19	---	6	4	10	---	---	---	---
Downstream of Lyman St. Bridge	9/15/00	2.8	19	---	7	5	6	---	---	---	---
Upstream of Newell St. Bridge	9/18/00	2.2	14	---	3	2	2	---	---	---	---
Downstream of Lyman St. Bridge	9/18/00	3.1	14	---	5	2	3	---	---	---	---
Upstream of Newell St. Bridge	9/19/00	2.0	15	---	3	2	2	---	---	---	---
Downstream of Lyman St. Bridge	9/19/00	2.9	15	---	3	2	3	---	---	---	---
Upstream of Newell St. Bridge	9/20/00	2.2	16	---	3	2	4	---	---	---	---
Downstream of Lyman St. Bridge	9/20/00	2.9	16	---	4	2	3	---	---	---	---
Upstream of Newell St. Bridge	9/21/00	2.5	18	---	8	4	6	---	---	---	---
Downstream of Lyman St. Bridge	9/21/00	3.3	18	---	7	4	7	---	---	---	---

TABLE 1A

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH REMOVAL ACTION
MONTHLY PROGRESS REPORT: SEPTEMBER 2000

HOUSATONIC RIVER WATER COLUMN MONITORING DURING CONSTRUCTION
PCB/TSS/TURBIDITY RESULTS

Location	Date	Water Depth (ft)	Water Temp. (°C)	Flow (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	9/22/00	2.4	15	119	3	2	3	---	---	---	---
Downstream of Lyman St. Bridge	9/22/00	3.2	15	124	16	2	5	---	---	---	---
Upstream of Newell St. Bridge	9/25/00	2.3	15	---	2	1	2	---	---	---	---
Downstream of Lyman St. Bridge	9/25/00	3.1	15	---	2	1	2	---	---	---	---
Upstream of Newell St. Bridge	9/26/00	2.1	15	---	3	2	3	---	---	---	---
Downstream of Lyman St. Bridge	9/26/00	2.9	15	---	3	2	2	---	---	---	---
Upstream of Newell St. Bridge	9/27/00	2.2	13	84	4	2	4	HR-9-27-00-U1	0.062 J	ND (0.50)	ND(5.0)
Downstream of Lyman St. Bridge	9/27/00	3.0	13	90	5	2	4	HR-9-27-00-D1	0.117 J	ND (0.50)	7.0
Downstream of Dawes Ave.	9/27/00	1.2	---	---	---	---	---	HR-9-27-00-DW1	ND(0.50)	ND(0.50)	ND(5.0)
Upstream of Newell St. Bridge	9/28/00	2.1	12	---	4	3	3	---	---	---	---
Downstream of Lyman St. Bridge	9/28/00	2.9	12	---	5	2	3	---	---	---	---
Upstream of Newell St. Bridge	9/29/00	2.0	9	---	5	4	4	---	---	---	---
Downstream of Lyman St. Bridge	9/29/00	2.8	9	---	5	3	4	---	---	---	---

Notes:

1. PCB and TSS samples were collected by Blasland, Bouck & Lee, Inc. and analyzed by Northeast Analytical, Inc. or CT&E Environmental Services, Inc.
2. Water 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. J - Indicates an estimated value less than the practical quantitation limit (PQL).

TABLE 1B

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH REMOVAL ACTION
MONTHLY PROGRESS REPORT: SEPTEMBER 2000

HOUSATONIC RIVER WATER COLUMN MONITORING DURING CONSTRUCTION
PCB/TSS RESULTS

(Results are presented in parts per million, ppm)

Sample ID	Location	Date Collected	Aroclor 1016, 1221, 1232, & 1248	Aroclor 1242	Aroclor 1254	Aroclor 1260	Total PCBs	TSS
HR-8-30-00-U1	Upstream of Newell St. Bridge	8/30/00	ND(0.0000250)	ND(0.0000250)	0.0000400 AF	ND(0.0000250)	0.0000400	1.50
HR-8-30-00-D1	Downstream of Lyman St. Bridge	8/30/00	ND(0.0000250)	ND(0.0000250)	0.0000616 AF	ND(0.0000250)	0.0000616	1.30
HR-8-30-00-U1(FILTERED)	Upstream of Newell St. Bridge	8/30/00	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	---
HR-8-30-00-D1(FILTERED)	Downstream of Lyman St. Bridge	8/30/00	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	---
HR-9-14-00-U1	Upstream of Newell St. Bridge	9/14/00	ND(0.0000250)	ND(0.0000250)	0.0000615 AF	ND(0.0000250)	0.0000615	20.0
HR-9-14-00-D1	Downstream of Lyman St. Bridge	9/14/00	ND(0.000250)	0.000251 PD	0.00123 AF	0.00453	0.00601	23.5
HR-9-14-00-U1(FILTERED)	Upstream of Newell St. Bridge	9/14/00	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	---
HR-9-14-00-D1(FILTERED)	Downstream of Lyman St. Bridge	9/14/00	ND(0.0000252)	0.0000350 PD	0.0000392 AF	0.0000549	0.000129	---
HR-9-27-00-U1	Upstream of Newell St. Bridge	9/27/00	ND(0.00050)	ND(0.00050)	0.000062 J	ND(0.00050)	0.000062 J	ND(5.0)
HR-9-27-00-D1	Downstream of Lyman St. Bridge	9/27/00	ND(0.00050)	ND(0.00050)	0.000064 J	0.000053 J	0.000117 J	7.0
HR-9-27-00-DW1	Downstream of Lyman St. Bridge	9/27/00	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(5.0)
HR-9-27-00-U1(FILTERED)	Upstream of Newell St. Bridge	9/27/00	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	---
HR-9-27-00-D1(FILTERED)	Downstream of Lyman St. Bridge	9/27/00	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	---
HR-9-27-00-DW1(FILTERED)	Downstream of Lyman St. Bridge	9/27/00	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	---

Notes:

1. Samples were collected by Blasland, Bouck & Lee, Inc. and submitted to Northeast Analytical Services, Inc. or CT&E Environmental 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. --- - Not analyzed.
4. AF - Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
5. PD - Aroclor 1242 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1242 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.
6. J - Indicates an estimated value less than the practical quantitation limit (PQL).

TABLE 2

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH REMOVAL ACTION
MONTHLY PROGRESS REPORT: SEPTEMBER 2000

CELL F2 SEDIMENT SAMPLING
PCB ANALYTICAL RESULTS

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

Sample ID	Date Collected	Aroclor 1016, 1221, 1232, 1242, & 1248	Aroclor 1254	Aroclor 1260	Total PCBs
CELL F2-SED-1	9/26/00	ND(5.1) [ND(23)]	38 [690]	23 [ND(23)]	61 [690]
CELL F2-SED-2	9/26/00	ND(16)	25	26	51
CELL F2-SED-3	9/26/00	ND(6.6)	25	40	65

Notes:

1. Samples were collected by Blasland, Bouck & Lee, Inc. and submitted to CT&E Environmental Services, Inc. for analysis of PCBs.
2. ND - Analyte was not detected. The value in parentheses is the associated detection limit.

TABLE 3

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH REMOVAL ACTION
MONTHLY PROGRESS REPORT: SEPTEMBER 2000

CELL F2 SEDIMENT SAMPLING
TCLP ANALYTICAL RESULTS

(Results are presented in parts per million, ppm)

Sample ID Date Collected	TCLP Maximum Concentrations	CELL F2-SED-COMP-1 9/26/00
Volatile Organics		
None Detected	--	--
Semivolatile Organics		
None Detected	--	--
Inorganics		
Barium	100	0.320

Notes:

1. Samples were collected by Blasland, Bouck & Lee, Inc. and submitted to CT&E Environmental Services, Inc. for analysis of TCLP constituents excluding herbicides and pesticides.
2. Only detected constituents are summarized.

TABLE 4

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH REMOVAL ACTION
MONTHLY PROGRESS REPORT: SEPTEMBER 2000

CELL F2 SEDIMENT SAMPLING
VOC AND SVOC ANALYTICAL RESULTS

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

Sample ID	CELL F2-SED-COMP-1
Date Collected	9/26/00
Volatile Organics	
None Detected	--
Semivolatile Organics	
None Detected	--

Notes:

1. Samples were collected by Blasland, Bouck & Lee, Inc. and submitted to CT&E Environmental Services, Inc. for analysis of volatiles and semivolatiles.
2. No volatile or semivolatile constituents were detected.

TABLE 5

**GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS**

**HOUSATONIC RIVER - UPPER 1/2 MILE REACH REMOVAL ACTION
MONTHLY PROGRESS REPORT: SEPTEMBER 2000**

AMBIENT AIR PARTICULATE MATTER MONITORING RESULTS

Date	Sampler Location	Average Site Concentration (mg/m ³)	BM1 (mg/m ³)	Average Period (Hours:Min)	Predominant Wind Direction
9/1/00	AM4 (south side of river)	0.018	0.018	9:15	SW, SSW
09/04/00 ¹	AM4 (south side of river)	NA	NA	NA	NA
9/5/00	AM4 (south side of river)	0.004	0.007	9:45	N
9/6/00	AM4 (south side of river)	0.003	0.009	10:30	Variable
9/7/00	AM4 (south side of river)	0.008	0.010	7:00 ²	SW, SSW
9/8/00	AM4 (south side of river)	0.010	0.012	10:15	SW
9/11/00	AM4 (south side of river)	0.024	0.031	11:00	SSW,S
9/12/00	AM4 (south side of river)	0.024	0.017	6:15 ³	SSW,SW
9/13/00	AM4 (south side of river)	0.009	0.007	6:15 ³	NW
9/14/00	AM4 (south side of river)	0.008	0.007	11:15	SSW,SW
09/15/00 ⁴	AM4 (south side of river)	NA	NA	NA	NA
9/18/00	AM4 (south side of river)	0.008	0.008	10:45	WSW, W
9/19/00	AM4 (south side of river)	0.012	0.016	10:30	S
9/20/00	AM4 (south side of river)	0.015	0.012	9:00	W, WSW
9/21/00	AM4 (south side of river)	0.009	0.006	10:15	W, WNW
9/22/00	AM4 (south side of river)	0.004	0.005	9:45	W
9/25/00	AM4 (south side of river)	0.005	0.006	9:45	N, NNW
09/26/00 ⁴	AM4 (south side of river)	NA	NA	NA	NA
9/27/00	AM4 (south side of river)	0.007	0.011	10:00	W
9/28/00	AM4 (south side of river)	0.006	0.005	9:15	NNW
9/29/00	AM4 (south side of river)	0.006	0.005	10:45	Variable
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 the Labor Day Holiday.² Sampling period was shortened due to instrument failure (dead battery).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**

**HOUSATONIC RIVER - UPPER 1/2 MILE REACH REMOVAL ACTION
MONTHLY PROGRESS REPORT: SEPTEMBER 2000**

AMBIENT AIR PCB MONITORING RESULTS

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
9/19 - 9/20/00	0.0113	0.0205	0.0221	0.0117	0.0155	0.0115
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 7

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH REMOVAL ACTION
MONTHLY PROGRESS REPORT: SEPTEMBER 2000

HOUSATONIC RIVER CAGED MUSSEL STUDY
PCB AND % LIPID ANALYTICAL RESULTS

(Results are presented in parts per million, ppm)

Sample ID	Location	Date Collected	Aroclor 1016, 1221, 1232, & 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs	% Lipids
LOC1-NB-G	Upstream of Newell St. Bridge	8/21/00	ND(0.0484)	ND(0.0484)	0.110 AF	0.0517 AG	0.162	0.566
LOC1-NB-H	Upstream of Newell St. Bridge	8/21/00	ND(0.0480)	ND(0.0480)	0.134 AF	ND(0.0480)	0.134	0.636
LOC1-SB-G	Upstream of Newell St. Bridge	8/21/00	ND(0.0529)	ND(0.0529)	0.119 AF	ND(0.0529)	0.119	0.502
LOC1-SB-H	Upstream of Newell St. Bridge	8/21/00	ND(0.0545)	ND(0.0545)	0.127 AF	0.0552 AG	0.182	0.564
LOC2-NB-G	Downstream of Lyman St. Bridge	8/21/00	ND(0.0546)	ND(0.0546)	0.367 AF	0.239 AG	0.606	0.595
LOC2-NB-H	Downstream of Lyman St. Bridge	8/21/00	ND(0.0523)	ND(0.0523)	0.373 AF	0.277 AG	0.650	0.682
LOC2-SB-G	Downstream of Lyman St. Bridge	8/21/00	ND(0.0555)	ND(0.0555)	0.217 AF	0.264 AG	0.481	0.427
LOC2-SB-H	Downstream of Lyman St. Bridge	8/21/00	ND(0.0532)	ND(0.0532)	0.214 AF	0.258 AG	0.472	0.378
LOC3-NB-G	Upstream of Dawes Ave. Bridge	8/21/00	ND(0.0541)	0.0940 PE	0.424 AF	0.753 AG	1.27	0.481
LOC3-NB-H	Upstream of Dawes Ave. Bridge	8/21/00	ND(0.0550)	0.0839 PE	0.356 AF	0.577 AG	1.02	0.512
LOC3-SB-G	Upstream of Dawes Ave. Bridge	8/21/00	ND(0.0547)	0.0723 PE	0.261 AF	0.436 AG	0.769	0.421
LOC3-SB-H	Upstream of Dawes Ave. Bridge	8/21/00	ND(0.0529)	0.0855 PE	0.340 AF	0.548 AG	0.974	0.391

Notes:

1. Samples were collected by Blasland, Bouck & Lee, Inc. and submitted to Northeast Analytical, Inc. for analysis as whole body composites minus the shell for PCBs and percent lipids.
2. Results are reported as received and have not been corrected for percent lipids.
3. ND(0.10) - Analyte was not detected. The value in parentheses is the associated detection limit.
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 8

**GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS**

**HOUSATONIC RIVER - UPPER 1/2 MILE REACH REMOVAL ACTION
MONTHLY PROGRESS REPORT: SEPTEMBER 2000**

DNAPL MONITORING RESULTS

Date	Depth to Water (Feet below MP)	Depth to DNAPL (Feet below MP)	Total Depth (Feet below MP)	DNAPL Thickness (Feet)	DNAPL Removal (Liters)
9/15/00	7.45	22.50	22.70	0.20	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

HOUSATONIC RIVER - UPPER 1/2 MILE REACH REMOVAL ACTION
MONTHLY PROGRESS REPORT: SEPTEMBER 2000

ISOLATION MATERIAL SOIL SAMPLING
PCB ANALYTICAL RESULTS

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

Sample ID	Date Collected	Aroclor 1016, 1221, 1232, 1242, 1248, 1254, & 1260	Total PCBs
BSG-SAND-1	9/26/00	ND(0.040)	ND(0.040)
BSG-SAND-2	9/26/00	ND(0.041) [ND(0.042)]	ND(0.041) [ND(0.042)]
BSG-SAND-3	9/26/00	ND(0.042)	ND(0.042)
BSG-SAND-1	9/28/00	ND(0.041)	ND(0.041)
BSG-SAND-2	9/28/00	ND(0.043) [ND(0.040)]	ND(0.043) [ND(0.040)]

Notes:

1. Samples of isolation material from Bushika Sand and Gravel were collected by Blasland, Bouck & Lee, Inc., and submitted to CT&E Environmental Services, 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.

TABLE 10

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH REMOVAL ACTION
MONTHLY PROGRESS REPORT: SEPTEMBER 2000

ISOLATION MATERIAL SOIL SAMPLING
NON-PCB ANALYTICAL RESULTS

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

Parameter	Sample ID: Date Collected:	BSG-SAND-1 09/28/00	BSG-SAND-2 09/28/00
Volatile Organics			
None Detected		--	--
Semivolatile Organics			
Phenol		1.3	ND(0.45)
Total Petroleum Hydrocarbons			
None Detected		--	--
Inorganics			
Arsenic		4.90	3.20
Barium		18.0	20.0
Cadmium		ND(0.190)	0.220
Chromium		3.00	3.60
Lead		3.20	3.20

Notes:

1. Samples of isolation material from Bushika Sand and Gravel were collected by Blasland, Bouck & Lee, Inc., and submitted to CT&E Environmental Services, Inc. for analysis of volatiles, semivolatiles, TPH, and metals.
2. Only detected constituents are summarized.
3. ND - Analyte was not detected. The value in parentheses is the associated detection limit.

1/2-Mile Removal Action Backfill Tracking Log

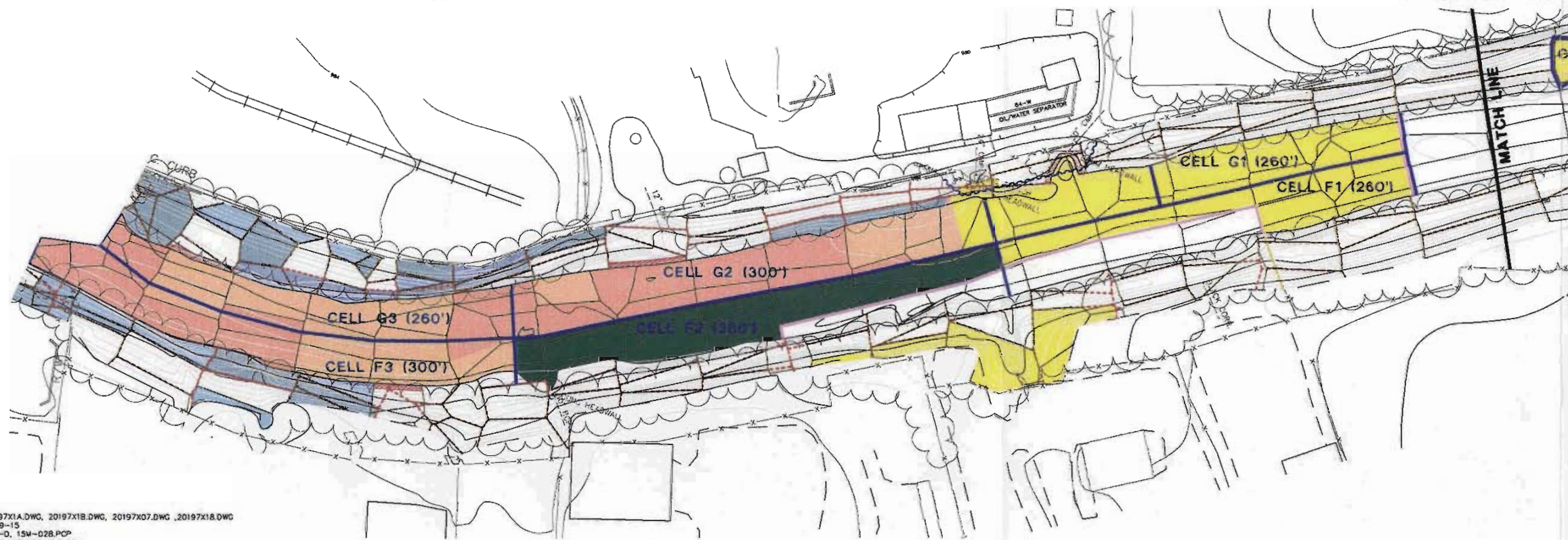
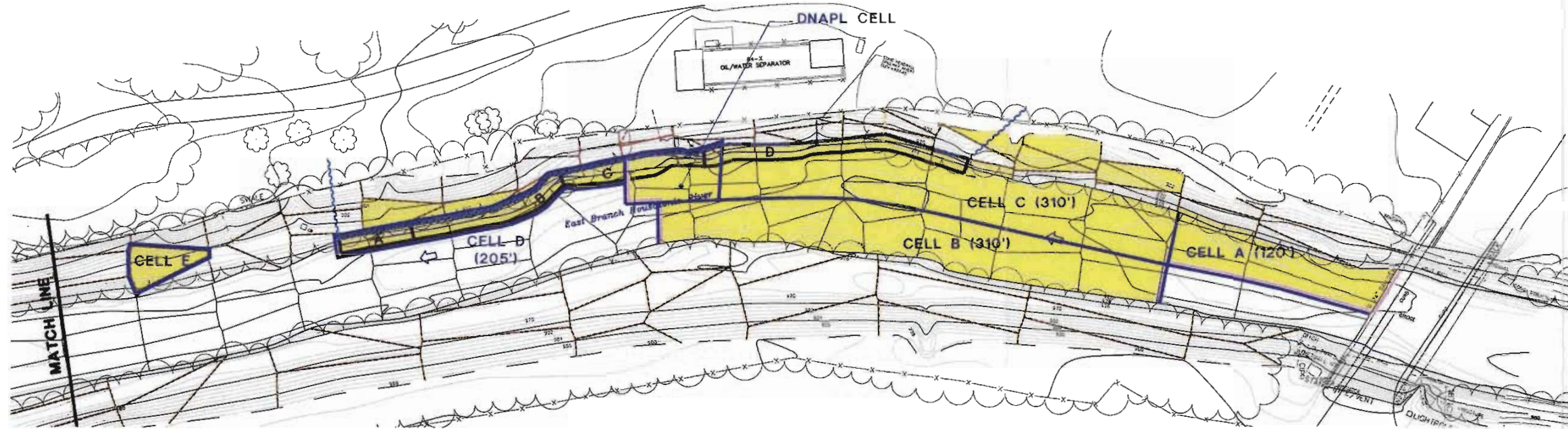
Material	Testing Required	Frequency (per cy)	Submittal from MTI		Submittal to EPA		Sample Date	Number of Samples	Quantity Approved for Placement	Quantity Placed (cy)	Comments
			No.	Date	No.	Date					
Soil Backfill/Granular Fill (Brown's Pit)	Grain Size	2000	13/13A	11/17 & 11/18/99	8	12/1/99	11/16/99	1	1000	584	Samples Collected as part of Allendale School Project
	PCBs	500	NA	NA	8A	12/15/99	12/8/99	2			
			NA	NA	14	5/31/00	5/18/00	2			
	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	12/1/99	3				
Isolation Layer (Pittsfield Sand & Gravel)	Grain Size	500	12	11/17/99	Letter	11/19/99	11/1/99	1	1000	770	Samples collected as part of off-site residential fill program
			12C	3/30/00	Letter	4/20/00	3/24/00	1			
	TOC	500	12	11/17/99	Letter	11/19/99	11/2/99	1			
			12C	3/30/00	Letter	4/20/00	3/30/00	1			
	PCBs	500	NA	NA	Letter	11/19/99	9/20/99	4			
			NA	NA	7	12/1/99	11/19/99	2			
			NA	NA	Letter	4/20/00	3/29/00	2			
	VOCs	2000	NA	NA	Letter	11/19/99	9/20/99	4			
	SVOCs	2000	NA	NA	Letter	11/19/99	9/20/99	4			
	Metals	2000	NA	NA	Letter	11/19/99	9/20/99	4			
TPH	2000	NA	NA	7	12/1/99	11/19/99	2				
Isolation Layer (Bushika Sand & Gravel)	Grain Size	500	12A	1/3/00	Letter	1/6/00	12/28/99	1	2500	2108	
			12B	1/24/00	11	2/14/00	1/19/00	1			
			12D	5/8/00	13	5/19/00	5/2/00	1			
			12E	9/11/00	14	9/27/00	9/7/00	1			
			12F	9/29/00	17	10/4/00	9/26/00	1			
			12A	1/3/00	Letter	1/6/00	12/28/99	1			
	TOC	500	12B	1/24/00	11	2/14/00	1/19/00	1			
			12D	5/8/00	13	5/19/00	5/2/00	1			
			12E	9/11/00	14	9/27/00	9/6/00	1			
			12F	9/29/00	17	10/4/00	9/26/00	1			
			NA	NA	10	1/14/00	1/5/00	2			
			NA	NA	11	2/14/00	2/2/00	2			
	PCBs	500	NA	NA	13A	6/28/00	6/2/00	2			
			NA	NA	16A	10/4/00	9/26/00	3			
			NA	NA	18A	10/5/00	9/28/00	2			
			NA	NA	18A	10/5/00	9/28/00	2			
	VOCs	2000	NA	NA	10	1/14/00	1/5/00	2			
			NA	NA	18A	10/5/00	9/28/00	2			
	SVOCs	2000	NA	NA	10	1/14/00	1/5/00	2			
			NA	NA	18A	10/5/00	9/28/00	2			
	Metals	2000	NA	NA	10	1/14/00	1/5/00	2			
			NA	NA	18A	10/5/00	9/28/00	2			
	TPH	2000	NA	NA	10	1/14/00	1/5/00	2			
			NA	NA	11	2/14/00	2/2/00	2			
NA			NA	18A	10/5/00	9/28/00	2				
NA			NA	18A	10/5/00	9/28/00	2				
Rip-Rap (9")	Grain Size	2000	15A	11/30/99	Letter	12/1/99	11/23/99	1	2000	1421	
Rip-Rap (12")	Grain Size	2000	18	1/4/00	Letter	1/6/00	12/29/99	1	2000	290	
Topsoil (Woodmont)	Organic Content	500	11/14	11/16 & 11/17/99	9	12/15/99	11/8/99	2	500	242	Samples collected as part of off-site residential fill program
	pH	500	11/14	11/16 & 11/17/99	9	12/15/99	11/8/99	2			
	PCBs	500	NA	NA	9	12/15/99	12/8/99	4			
	VOCs	2000	NA	NA	9	12/15/99	8/24/99	4			
	SVOCs	2000	NA	NA	9	12/15/99	8/24/99	4			
	Metals	2000	NA	NA	9	12/15/99	8/24/99	4			
	TPH	2000	NA	NA	9	12/15/99	12/8/99	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 (bank only)

Exhibit A - Upper 1/2 Mile Reach Removal Action

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

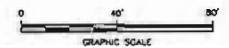


LEGEND:

- 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

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.



**½ MILE RIVER REMOVAL ACTION
MONTHLY PROGRESS REPORT
SEPTEMBER, 2000
FIGURE 1 PHOTO DOCUMENTATION**

PHOTO NUMBER: 1

PHOTO LOCATION: Cell G-1/G-2
Bank area, north side of river looking upstream.

PHOTO DESCRIPTION:
Final grading. Removal of access roads
and staging areas followed by planting

PHOTO DATE: 09/08/00



PHOTO NUMBER: 2

PHOTO LOCATION: Cell F-2 (downstream).

PHOTO DESCRIPTION:
Additional sheetpile installed to divert stormwater
Area was excavated and restored separately.

PHOTO DATE: 09/15/00



PHOTO NUMBER: 3

PHOTO LOCATION:
Cell F-2 looking upstream.

PHOTO DESCRIPTION: Cell F-2
Sediment excavation complete.

PHOTO DATE: 09/26/00

