SDMS: 145784

08-0071

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

June 8, 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 ½-Mile Reach of Housatonic River Removal Action
Monthly Report – May 2001

Dear Mr. Tagliaferro and Ms. Cutler:

In accordance with the approved Removal Action Work Plan – Upper ½ Mile Reach of Housatonic River, enclosed please find the May 2001 Monthly Report.

Please call me with any questions.

Yours truly,

Mark D Gardding/for ATS

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

ATS/dmn

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

1.0 Overview:

During May 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 removal and restoration activities in Cell F3. In addition, a bank inspection to identify areas of erosion, and a vegetation inspection to assess the previous plantings were performed during this month. Further, spring 2001 plantings were initiated in restored bank areas of the ½-Mile Reach.

Weekly status meetings were held on May 2, 9, 16, 23, and 29.

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 May 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. In addition, a temporary storage area was maintained in Building 65 to stockpile non-aqueous phase liguid (NAPL)-impacted sediment excavated from Cell F3 prior to off-site disposal.

On May 2, 2001, a bank inspection was conducted as part of the monitoring program to identify areas of erosion within previously restored bank areas of the ½-Mile Reach. The erosion inspection was conducted with representatives from Environmental Protection Agency (EPA), Army Corp of Engineers (ACE), Massachusetts Department of Environmental Protection (MDEP), Massachusetts Executive Office of Environmental Affairs (MEOEA), and GE in attendance. Restored bank areas were observed for signs of erosion, slope stability, and rip-rap placement along the banks in restored Cells A – G. The inspection identified 4 areas with evidence of measurable erosion and 5 other impacted areas requiring response action due to settlement or exposed Waterloo sheeting. The four areas with evidence of measurable erosion were located in Cells C/D, F, G2 and G3. The five other impacted areas were also located in the cells mentioned above. A summary report of the bank inspection and proposed response actions to address the areas of concern entitled *Erosion Inspection Following High Flow Event (Spring 2001)*, dated May 21, 2001, was submitted to EPA.

During the first week of May, soil and sediment removal activities in Cell F3 continued (from April). Sediment and soil removed from the cell was initially transported to Buildings 33 and 33X for temporary stockpiling prior to placement in the appropriate On-Plant Consolidation Area (OPCA). Upon completion of sediment removal activities, a sediment sample was collected from the base of the excavation in Cell F3 at an isolation cap monitoring location for PCB analysis to provide baseline data for the isolation cap monitoring program.

In addition, during the first week of May, work efforts on swales #12 and #13 were completed. Erosion protection measures for swale #12 included removing existing material and debris from within the swale, placing a geotextile liner over the base of the swale, and placing rip-rap over the liner and within the swale. Additional erosion protection measures for Swale #13 were accomplished by placing rip-rap around the headwall of the previously restored swale.

Bank soil removal activities in Cell F3 continued into and were completed during the second week of May. Due to observed sloughing in some areas of the Cell F3 bank, revised removal and restoration limits were developed (with EPA approval) and implemented. The removal and restoration limits were revised to provide additional floodplain volume capacity and additional bank slope stability. Following removal activities in Cell F3, a post-excavation survey was performed to confirm design removal limits and was submitted and approved by EPA and ACE.

After the removal activities were completed, restoration efforts began in the upstream river portion of Cell F3. The primary component of the river restoration was installing an isolation cap system. To begin, a geotextile layer was installed over the bottom of the excavation area. The isolation sand layer was placed over the geotextile fabric and compacted to a nominal depth of 12 to 24 inches. After the isolation sand layer was placed, a depth interval sample was collected from the isolation sand for PCB analysis to provide baseline data for the isolation cap monitoring program. 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, placing 9- to 12-inch rip-rap on top of the geogrid. This restoration process continued downstream until the entire Cell F3 riverbed was completed. To finish river restoration efforts, habitat enhancement boulders were placed at select locations (with oversight by MEOEA) in the Cell F3 river area. In addition, rip-rap was placed in a depression located outside of Cell F3 along the centerline sheetpile wall.

To begin the third week of May, restoration activities for the Cell F3 bank area were initiated. 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 survey was completed for the Cell F3 bank area and was submitted and approved by EPA and ACE. With the removal and restoration activities substantially complete for Cell F3, the cutoff sheetpile walls were removed and the cell was allowed to flood with river water.

During the fourth week of May and following restoration activities in Cell F3, installation of the spring 2001 plantings were initiated on the restored banks of Cells G2, G3, and F3. In accordance with the requirements presented in the Work Plan, both understory and canopy specimens were planted in the three cell areas. In addition, a vine patch was planted upstream near Cell C. These areas, in addition to previous planting areas, will be monitored in accordance with the requirements presented in the Work Plan. After the understory and canopy specimens were planted, a watering system was installed in the planting areas.

The month of May ended by initiating a vegetation inspection (on May 31, 2001) as part of the monitoring program for previous plantings on restored bank areas of the ½-Mile Reach. The purpose of the inspection was to monitor the status of planted specimens based on plant survival and vigor. Representatives from MEOEA, AMEC Environmental (planting inventory), and C.L. Frank (certified arborist) performed the vegetation inspection. Plant survival was assessed by performing a stem count and inventory of planted specimens. Plant vigor was assessed by a certified arborist to provide a qualitative measure of the plantings. An invasive species evaluation was also performed by the certified arborist. The findings of the inspection will be summarized and compared to the performance standards presented in the Work Plan. Additional measures associated with the restored bank vegetative plantings will be implemented as required.

During May, GE also continued weekly monitoring of the recovery and monitoring wells associated with the Cells G2 and G3 source control barrier walls. NAPL was not observed in either Cell G2 or G3 monitoring and recovery wells during this period. Monitoring of these wells will continue during the month of June.

Air monitoring for particulate matter was conducted on a daily basis. The April PCB air monitoring event was conducted on May 1 - 2, 2001. The May PCB air monitoring event will be conducted in early June during excavation activities in Cell H1. Water column (PCB and TSS) monitoring was also continued during May. In addition, a second topsoil sample (from Lahey's Gravel) was collected on May 30, 2001 for total petroleum hydrocarbon (TPH) analysis and the results will be presented in next month's report.

Finally, during May, GE collected split samples of sediment samples collected by EPA from the previously remediated Building 68 Area. Although this activity occurred within the Upper ½ Mile Reach, it was not part of the Upper ½ Mile Reach Removal Action.

3.0 Number of samples collected:

Table 1 presents the Cell F3 post-excavation sediment PCB sample results.

Table 2 presents the ambient air PCB sample results for the month of April. The May monthly PCB air monitoring event will be conducted during the first week of June and the

analytical results will be presented in next month's report.

Table 3 presents the results of the May air monitoring for particulate matter.

Table 4 presents the PCB sample results for the split samples collected by GE from EPA' sediment sampling of the Building 68 Area (not part of the Upper ½ Mile Reach Removal Action).

Water column monitoring for turbidity was conducted on a daily basis during the month of May and the results are presented in Table 5A. Water column samples were collected for total suspended solids (TSS) and PCB analysis on May 10, and May 24, 2001. The TSS and PCB results received in May are attached to this report in Tables 5A and 5B.

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

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

Three samples were collected from the installed isolation sand layer on May 10, 2001 for PCB analysis. Analytical results have not been completed to date and will be presented in next month's report.

A second topsoil sample (from Lahey's Gravel) was collected on May 30, 2001 for TPH analysis and the results will be presented in next month's report.

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 reports received and prepared:

During the month of May, meeting summaries from the weekly project status meetings were submitted to EPA, MDEP and MEOEA. Also, for work completed in April 2001, the

monthly reports required by the Consent Decree and the Upper ½-Mile Reach Removal Action Work Plan were both submitted on May 9, 2001.

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

- Letter regarding *Potential Force Majeure – Renewed Flooding in Cell F3* (May 10, 2001).
- Letter entitled *Erosion Inspection Following High-Flow Event (Spring 2001)* dated May 21, 2001.
- Letter regarding *Building 68 - May 2001 Quarterly Bank Inspection Activities* (May 22, 2001) (not part of the Upper ½ Mile Reach Removal Action).
- Revised spring 2001 planting schedule for restored bank areas.
- Meeting Summaries for weekly project status meetings.

6.0 Photo documentation of activities performed:

- See attached Figure 1.

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

For the next reporting period, the following activities are anticipated to take place:

- Complete response actions associated with the erosion of restored bank areas of the ½-Mile Reach and the Building 68 Area, as approved by EPA.
- Complete spring 2001 vegetation monitoring summary report for restored bank areas of the ½-Mile Reach and the Building 68 Area.
- Complete spring 2001 vegetative plantings associated with bank restoration activities for areas of the ½-Mile Reach.
- Complete installation of remaining Cell G2 and Cell G3 NAPL monitoring wells.
- Initiate and complete removal and restoration activities in Cell H1.
- Initiate removal activities in Cell H2.

- Maintain temporary stockpiles of material in Buildings 33, 33X, and 65 (Non-TSCA, TSCA, and NAPL-impacted, respectively).
- Complete off-site disposal of DNAPL-impacted sediment removed from Cell F3 (staged in Building 65).
- Begin transferring material stockpiled in Buildings 33, 33X, and 65 to the appropriate OPCAs.
- Continue monitoring of wells associated with the Cells G2 and G3 source control sheetpile walls.
- Continue to conduct air monitoring and water column monitoring.

8.0 Attachments to this report:

- Table 1 – Cell F3 post-excavation sediment PCB sample results.
- Table 2 – Ambient air PCB sample results.
- Table 3 – Results of the May air monitoring events for particulate matter.
- Table 4 – Split sample PCB results from EPA's sampling of the Building 68 Area.
- Table 5A – Water column monitoring results for turbidity, TSS, and PCBs.
- Table 5B – Water column monitoring results for PCBs and TSS.
- Table 6 – Results from the monitoring of the NAPL recovery and monitoring wells associated with the Cell G2 source control barrier wall.
- Table 7 – Results from the monitoring of the NAPL recovery well associated with the Cell G3 source control barrier wall.
- Exhibit A - Diagram showing the locations of cells within the Upper ½-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
CELL F3 SEDIMENT SAMPLING
DATA RECEIVED DURING MAY 2001

(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
HR-F3-SED-CAP-1	5/4/01	ND(0.460)	5.27	3.19	8.46

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 number in parentheses is the associated quantitation limit.

TABLE 2

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

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

Date	BM-1 ug/m^3	AM-3 ug/m^3	AM-3 co-located ug/m^3	AM-4 ug/m^3	AM-5 ug/m^3	AM-6 ug/m^3
05/01 - 05/02/01	0.0058	0.0137	0.0145	0.0167	0.0103	0.0091
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 fomerly 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 3

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

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

Date	Sampler Location	Average Site Concentration (mg/m^3)	BM-1 (mg/m^3)	Average Period (Hours:Min)	Predominant Wind Direction
5/1/01	AM-4 (south side of river)	0.010	0.013	9:15	WNW
5/2/01	AM-4 (south side of river)	0.018	0.020	12:30	W
5/3/01	AM-4 (south side of river)	0.027	0.067	11:15	W
5/4/01	AM-4 (south side of river)	0.039	0.031	11:45	W
5/7/01	AM-4 (south side of river)	0.003	0.007	10:15	SW
5/8/01	AM-4 (south side of river)	0.008	0.010	10:30	SSW, SW
5/9/01	AM-4 (south side of river)	0.014	0.009	11:45	W
5/10/01	AM-4 (south side of river)	0.020	0.014	10:00	WNW
5/11/01	AM-4 (south side of river)	0.015	0.015	11:30	W, WSW
5/14/01	AM-4 (south side of river)	0.016	0.009	10:00	WNW
5/15/01	AM-4 (south side of river)	0.061	0.005	10:00	N, NNW
5/16/01	AM-4 (south side of river)	0.004	0.006	10:00	ENE
5/17/01	AM-4 (south side of river)	0.014	0.013	9:30	SSW
5/18/01	AM-4 (south side of river)	0.014	0.013	10:30	SSW
5/21/01	AM-4 (south side of river)	0.005	0.008	10:00	SE, ESE
5/22/01[1]	AM-4 (south side of river)	NA	NA	NA	NA
5/23/01[1]	AM-4 (south side of river)	NA	NA	NA	NA
5/24/01[1]	AM-4 (south side of river)	NA	NA	NA	NA
5/25/01[1]	AM-4 (south side of river)	NA	NA	NA	NA
5/28/01[2]	AM-4 (south side of river)	NA	NA	NA	NA
5/29/01	AM-4 (south side of river)	0.011	0.010	6:45[3]	W, WSW, WNW
5/30/01	AM-4 (south side of river)	0.003	0.004	9:45	W, WNW
5/31/01	AM-4 (south side of river)	0.007	0.005	3:15[4]	WNW
Notification Level		0.120			

Notes

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 precipitation/threat of precipitation.

[2] Sampling was not performed due to lack of site activity on the Memorial Day holiday.

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

[4] Sampling period was shortened due to instrument failure (dead battery).

TABLE 4

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - BUILDING 68 AREA
USEPA SPLIT SAMPLING PROGRAM
PCB DATA RECEIVED DURING MAY 2001

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

Sample ID	Depth (Feet)	Date Collected	Aroclor 1016, 1221, 1232, & 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs
H1-SE001383-0-0000	0 - 0.5	5/22/01	ND(0.358)	2.07 PE	ND(0.358)	6.83 AG	8.90
H1-SE001383-0-0010	1 - 1.5	5/22/01	ND(0.253) [ND(0.0961)]	ND(0.253) [ND(0.0961)]	3.76 AF [1.51 AF]	1.33 AG [1.36 AG]	5.09 [2.87]
H1-SE001384-0-0000	0 - 0.5	5/22/01	ND(0.142)	0.348 PE	ND(0.142)	2.87 AG	3.22
H1-SE001384-0-0010	1 - 1.5	5/22/01	ND(0.250)	0.618 PE	ND(0.250)	4.36 AG	4.98
H1-SE001385-0-0000	0 - 0.5	5/22/01	ND(0.533)	1.31 PE	ND(0.533)	9.72 AG	11.0
H1-SE001385-0-0010	1 - 1.5	5/22/01	ND(0.505)	2.51 PE	ND(0.505)	7.97 AF	10.5
H1-SE001386-0-0000	0 - 0.5	5/22/01	ND(1.06)	ND(1.06)	20.5 AF	15.9 AG	36.4
H1-SE001387-0-0000	0 - 0.5	5/22/01	ND(0.345)	ND(0.345)	3.20 AF	6.20 AG	9.40
H1-SE001388-0-0000	0 - 0.5	5/22/01	ND(0.616)	ND(0.616)	6.25 AF	10.6 AG	16.9
H1-SE001389-0-0000	0 - 0.5	5/22/01	ND(0.275)	0.384 PE	ND(0.275)	4.32 AG	4.70

Notes:

1. Samples were collected by Blasland, Bouck & Lee, Inc. and submitted to Northeast Analytical Services, Inc. for analysis of PCBs.
2. ND - Analyte was not detected. The value in parentheses is the associated detection limit.
3. 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.
4. AF - Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
5. AG - Aroclor 1260 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

TABLE 5A

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MAY 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	5/1/01	2.3	9	114	4	2	2	---	---	---	---
Downstream of Lyman St. Bridge	5/1/01	3.2	9		4	3	3	---	---	---	---
Upstream of Newell St. Bridge	5/2/01	2.4	10	107	3	2	3	---	---	---	---
Downstream of Lyman St. Bridge	5/2/01	3.2	10		3	2	3	---	---	---	---
Upstream of Newell St. Bridge	5/3/01	2.0	19	75	5	3	4	---	---	---	---
Downstream of Lyman St. Bridge	5/3/01	2.8	19		3	2	2	---	---	---	---
Upstream of Newell St. Bridge	5/4/01	1.8	18	68	2	1	2	---	---	---	---
Downstream of Lyman St. Bridge	5/4/01	2.8	18		2	1	2	---	---	---	---
Upstream of Newell St. Bridge	5/7/01	1.6	9	49	3	2	3	---	---	---	---
Downstream of Lyman St. Bridge	5/7/01	2.6	9		3	2	2	---	---	---	---
Upstream of Newell St. Bridge	5/8/01	1.5	10	49	16	7	12	---	---	---	---
Downstream of Lyman St. Bridge	5/8/01	2.5	10		17	3	6	---	---	---	---
Upstream of Newell St. Bridge	5/9/01	1.6	11	48	17	7	14	---	---	---	---
Downstream of Lyman St. Bridge	5/9/01	2.6	11		34	3	9	---	---	---	---
Upstream of Newell St. Bridge	5/10/01	1.5	15	48	5	3	4	HR-5-10-01-U1	0.274	ND(0.0250)	ND(5.00)
Downstream of Lyman St. Bridge	5/10/01	2.5	15		4	2	3	HR-5-10-01-D1	0.367	0.0439	ND(4.00)
Upstream of Newell St. Bridge	5/11/01	1.5	16	45	3	2	2	---	---	---	---
Downstream of Lyman St. Bridge	5/11/01	2.5	16		3	2	2	---	---	---	---
Upstream of Newell St. Bridge	5/14/01	1.4	11	39	6	3	4	---	---	---	---
Downstream of Lyman St. Bridge	5/14/01	2.4	11		4	2	3	---	---	---	---
Upstream of Newell St. Bridge	5/15/01	1.4	14	38	6	3	6	---	---	---	---
Downstream of Lyman St. Bridge	5/15/01	2.4	14		5	3	4	---	---	---	---
Upstream of Newell St. Bridge	5/16/01	1.4	12	37	6	3	5	---	---	---	---
Downstream of Lyman St. Bridge	5/16/01	2.4	12		5	2	3	---	---	---	---
Upstream of Newell St. Bridge	5/17/01	1.4	14	37	9	4	7	---	---	---	---
Downstream of Lyman St. Bridge	5/17/01	2.4	14		4	3	3	---	---	---	---
Upstream of Newell St. Bridge	5/18/01	1.4	10	36	5	3	6	---	---	---	---
Downstream of Lyman St. Bridge	5/18/01	2.4	10		4	3	5	---	---	---	---
Upstream of Newell St. Bridge	5/21/01	1.3	15	31	12	2	4	---	---	---	---
Downstream of Lyman St. Bridge	5/21/01	2.3	15		25	2	10	---	---	---	---
Upstream of Newell St. Bridge	5/22/01	1.4	16	40	15	4	8	---	---	---	---
Downstream of Lyman St. Bridge	5/22/01	2.4	16		18	5	10	---	---	---	---

TABLE 5A

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

MAY 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	5/23/01	1.7	11	69	9	4	9	---	---	---	---
Downstream of Lyman St. Bridge	5/23/01	2.7	11		10	5	9	---	---	---	---
Upstream of Newell St. Bridge	5/24/01	2.0	15	87	11	4	8	HR-5-24-01-U1	NR	NR	NR
Downstream of Lyman St. Bridge	5/24/01	2.8	15		14	6	9	HR-5-24-01-D1	NR	NR	NR
Upstream of Newell St. Bridge	5/25/01	1.8	13	109	7	4	6	---	---	---	---
Downstream of Lyman St. Bridge	5/25/01	2.9	13		6	4	9	---	---	---	---
Upstream of Newell St. Bridge	5/29/2001	1.8	15	191	634	14	141	---	---	---	---
Downstream of Lyman St. Bridge	5/29/2001	2.8	15		8	4	10	---	---	---	---
Upstream of Newell St. Bridge	5/30/2001	2.8	14	157	7	3	6	---	---	---	---
Downstream of Lyman St. Bridge	5/30/2001	3.6	14		11	6	9	---	---	---	---
Upstream of Newell St. Bridge	5/31/2001	2.2	9	120	9	3	6	---	---	---	---
Downstream of Lyman St. Bridge	5/31/2001	3.3	9		11	6	11	---	---	---	---
Upstream of Newell St. Bridge	6/1/2001	2.0	9	103	15	4	8	---	---	---	---
Downstream of Lyman St. Bridge	6/1/2001	3.1	9		69	4	17	---	---	---	---

Notes:

1. PCB and TSS samples were collected by Blasland, Bouck & Lee, Inc. and analyzed by Northeast Analytical, Inc. or on 9/27/00 CT&E Environmental Services 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 5B

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER - UPPER 1/2 MILE REACH
HOUSATONIC RIVER PCB/TSS MONITORING DURING CONSTRUCTION
DATA RECEIVED DURING MAY 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-4-26-01-U1	Upstream of Newell St. Bridge	4/26/01	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	3.30
HR-4-26-01-D1	Downstream of Lyman St. Bridge	4/26/01	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	3.50
HR-4-26-01-U1 (FILTERED)	Upstream of Newell St. Bridge	4/26/01	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	---
HR-4-26-01-D1 (FILTERED)	Downstream of Lyman St. Bridge	4/26/01	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	---
HR-5-10-01-U1	Upstream of Newell St. Bridge	5/10/01	ND(0.0000250)	0.000106 AF	0.000168	0.000274	ND(5.00)
HR-5-10-01-D1	Downstream of Lyman St. Bridge	5/10/01	ND(0.0000250)	0.000141 AF	0.000226	0.000367	ND(4.00)
HR-5-10-01-U1 (FILTERED)	Upstream of Newell St. Bridge	5/10/01	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	---
HR-5-10-01-D1 (FILTERED)	Downstream of Lyman St. Bridge	5/10/01	ND(0.0000250)	ND(0.0000250)	0.0000439	0.0000439	---

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. --- - Not analyzed.
4. AF - Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

TABLE 6

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

UPPER 1/2-MILE REACH OF HOUSATONIC RIVER

CELL G-2 MONITORING RESULTS - MAY 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)	Corrected Groundwater Elevation (Feet AMSL)	NAPL Removal (Liters)
HR-G2-MW-1	05/07/01	982.60	10.36	---	18.27	0.00	972.24	0.00
HR-G2-MW-1	05/14/01	982.60	10.63	---	18.28	0.00	971.97	0.00
HR-G2-MW-1	05/21/01	982.60	10.75	---	18.28	0.00	971.85	0.00
HR-G2-MW-1	05/29/01	982.60	9.59	---	18.28	0.00	973.01	0.00
HR-G2-MW-2	05/07/01	981.39	8.41	---	17.68	0.00	972.98	0.00
HR-G2-MW-2	05/14/01	981.39	8.82	---	17.68	0.00	972.57	0.00
HR-G2-MW-2	05/21/01	981.39	8.99	---	17.68	0.00	972.40	0.00
HR-G2-MW-2	05/29/01	981.39	7.67	---	17.68	0.00	973.72	0.00
HR-G2-RW-1	5/7/01	976.88	6.01	---	18.68	0.00	970.87	0.00
HR-G2-RW-1	5/14/01	976.88	6.36	---	18.69	0.00	970.52	0.00
HR-G2-RW-1	5/21/01	976.88	6.50	---	18.74	0.00	970.38	0.00
HR-G2-RW-1	5/29/01	976.88	5.06	---	18.73	0.00	971.82	0.00

Notes:

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

TABLE 7

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

UPPER 1/2-MILE REACH OF HOUSATONIC RIVER

CELL G-3 MONITORING RESULTS - MAY 2001

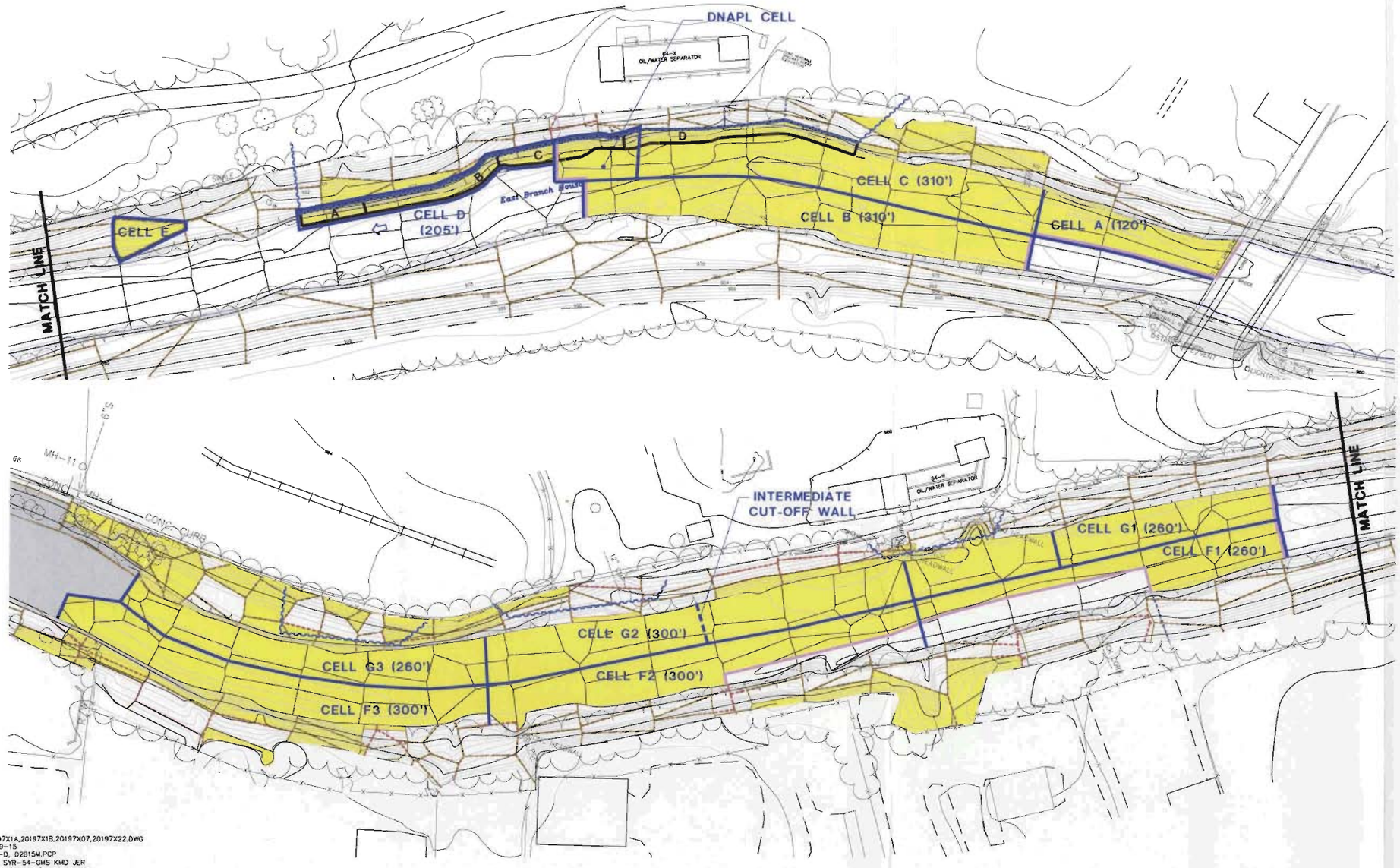
Well I.D.	Date	Measuring Point Elevation (Feet AMSL)	Depth to Water (Feet below MP)	Depth to NAPL (Feet below MP)	Total Depth (Feet below MP)	NAPL Thickness (Feet)	Groundwater Elevation (Feet AMSL)	NAPL Removal (Liters)
HR-G3-RW-1	5/7/01	977.78	4.92	---	8.85	0.00	972.86	0.00
HR-G3-RW-1	5/14/01	977.78	5.35	---	8.80	0.00	972.43	0.00
HR-G3-RW-1	5/21/01	977.78	5.56	---	8.82	0.00	972.22	0.00
HR-G3-RW-1	5/29/01	977.78	4.34	---	8.81	0.00	973.44	0.00

Notes:

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

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.

0 40' 80'
GRAPHIC SCALE

X: 20197X1A,20197X1B,20197X07,20197X22.DWG
LMAN: 9-15
P: 15M-D, D2815M.PCP
6/8/01 SYR-54-GMS KMD JER
20197030/CELLG2/20197G11.DWG

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

EXHIBIT B

General Elec ıpany
Pittsfield, M. ısetts

Revision Date: June 1, 2001

1/2-Mile Removal Action Backfill Tracking Log

Material	Testing Required	Frequency (per ___ cy)	Submittal from MTI No.	Submittal from MTI Date	Submittal to EPA No.	Submittal to EPA Date	Sample Date	Number of Samples	Quantity Approved for Placement	Quantity Placed (cy)	Comments
Soil Backfill/Granular Fill (Brown's Pit)	Grain Size	2000	13/13A	11/17 & 11/18/99	8	12/01/99	11/16/99	1	1500	1314	
	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			
	VOCs	2000	NA	NA	8A	12/15/99	7/21-7/28/99	6			Samples Collected as part of Allendale School Project
	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	12	11/17/99	Letter	11/19/99	11/01/99	1	1000	770	
			12C	03/30/00	Letter	04/20/00	03/24/00	1			
	TOC	500	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			Samples collected as part of off-site residential fill program
			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			Samples collected as part of off-site residential fill program
	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 (Bushika Sand & Gravel)	Grain Size	500	12A	01/03/00	Letter	01/06/00	12/28/99	1	3500	2937	
			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			
	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			
	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			
	VOCs	2000	NA	NA	10	01/14/00	01/05/00	2			
			NA	NA	18A	10/05/00	09/28/00	2			
	SVOCs	2000	NA	NA	10	01/14/00	01/05/00	2			
			NA	NA	18A	10/05/00	09/28/00	2			
	Metals	2000	NA	NA	10	01/14/00	01/05/00	2			-
			NA	NA	18A	10/05/00	09/28/00	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			
Rip-Rap (9")	Grain Size	2000	15A	11/30/99	Letter	12/01/99	11/23/99	1	4000	2299	
			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	438	
Topsoil (Woodmont)	TOC	500	11/14	11/16 & 11/17/99	9	12/15/99	11/08/99	2	500	400	
	pH	500	11/14	11/16 & 11/17/99	9	12/15/99	11/08/99	2	500		
	PCBs	500	NA	NA	9	12/15/99	12/08/99	4	500		*Samples collected as part of off-site residential fill program
	VOCs	2000	NA	NA	9	12/15/99	08/24/99	4	2000		"
	SVOCs	2000	NA	NA	9	12/15/99	08/24/99	4	2000		"
	Metals	2000	NA	NA	9	12/15/99	08/24/99	4	2000		"
	TPH	2000	NA	NA	9	12/15/99	12/08/99	2	2000		"
(Lahey's)	TOC	500	11A	05/09/01	23	05/15/01	04/30/01	1	0	0	
	pH	500	11A	05/09/01	23	05/15/01	04/30/01	1	0		
	PCBs	500	NA	NA	23	05/15/01	04/11/01	3	0		
	VOCs	2000	NA	NA	23	05/15/01	04/11/01	3	0		
	SVOCs	2000	NA	NA	23	05/15/01	04/11/01	3	0		
	Metals	2000	NA	NA	23	05/15/01	04/11/01	3	0		
	TPH	2000	NA	NA	23	05/15/01	04/11/01	3	0		

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, F-2, and G.
NA = Not Applicable

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

PHOTO NO. 1

LOCATION: Cell G3/Building 68 Area

DESCRIPTION: Bank washout due to April flood.

DATE: April 30, 2001

PHOTO NO. 2

LOCATION: Cell F3 (Upstream)

DESCRIPTION: River restoration activities.

DATE: May 11, 2001

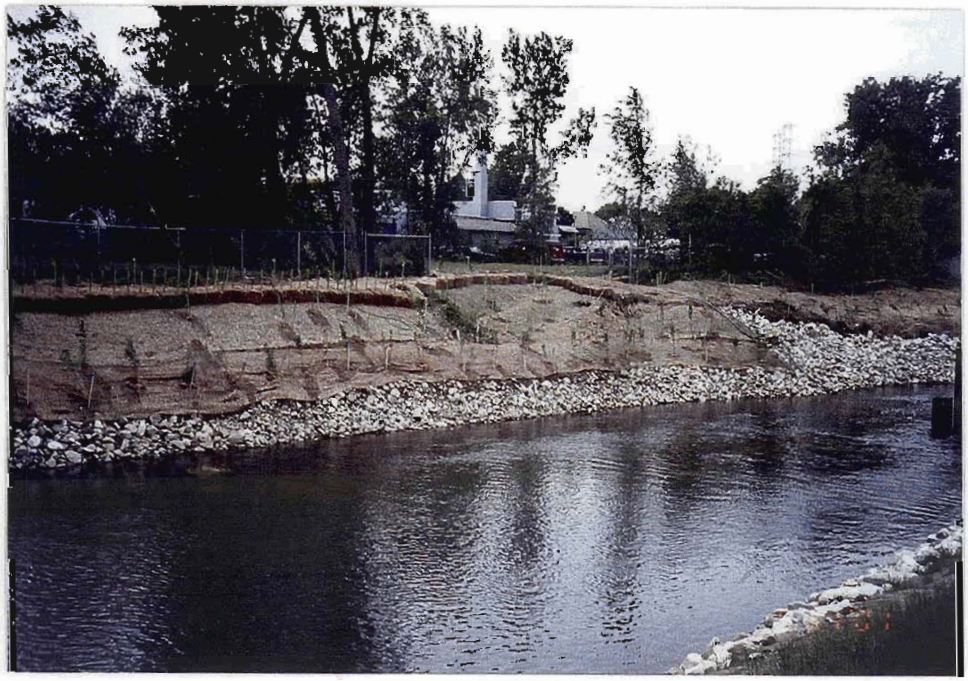


PHOTO NO. 3

LOCATION: Cell F3

DESCRIPTION: Restored bank and Spring 2001 plantings.

DATE: May 31, 2001