



Site: GE-0000  
Break: 2.6  
Other: 6808

May 10, 2000



SDMS DocID 6808

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 – April 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 April 2000 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
- H. Inglis, EPA
- J.H. Maxymillian, Maxymillian Technologies
- S. Messur, BBL
- K.C. Mitkevicius, USACE
- T. O'Brien, MA EOEA
- B. Olson, EPA
- A.J. Thomas, Esquire, GE
- A. Weinberg, DEP

# 6808

## **1.0 Background:**

Work on the Upper ½-Mile Reach Removal Action through April, 2000 continued to focus on remediation and restoration of the dense non-aqueous-phase liquid (DNAPL) with coal-tar characteristics (and no PCBs) encountered in Cells C and D. Maxymillian Technologies continued working in the downstream/western section of Cell C and the upstream eastern section of Cell D. This area, referred to as the "DNAPL Cell", was isolated from the river, the restored section of Cell C, and the remaining part of Cell D. Sediment removal and restoration activities also progressed in the remaining (downstream) part of Cell D where DNAPL has not been observed.

In the beginning of April, the DNAPL remediation plan, which was conditionally approved by EPA on March 31, was initiated. Significant amounts of DNAPL and DNAPL-impacted sediments were encountered and removed. After 6-8 feet of sediment was removed in the DNAPL Cell to elevations that reached the design limits of the excavation, DNAPL was still observed. Based on the observed conditions, GE agreed to install a DNAPL collection system as required in EPA's conditional approval. After the 6-inch DNAPL recovery well and 12-inch protective casing were installed, the cell was backfilled to the original removal elevations and the structural perimeter bracing was removed. Normal restoration activities in the DNAPL Cell continued, which included grouting of the source control sheetpile and placement of filter fabric, isolation material, fabric, geogrid, and rock.

Weekly status meetings were held on April 18 and 25, in addition to many field meetings and close communication between GE and EPA during the DNAPL removal operations.

## **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 April, GE Buildings 33X and 65 were used as temporary storage facilities for TSCA and non-TSCA material. The DNAPL-impacted sediments were stored in a separate area in Bldg. 33X for a short period of time. All DNAPL impacted sediments were disposed of off-site.

The month of April began with completing the final preparation activities for the DNAPL remediation plan. Excavation began on April 5 and lasted for 5 full days. This period was longer than anticipated because more DNAPL was encountered, the dewatering locations had to be lower than the excavation depth, and significant effort was required to maintain the stability of the excavation area. Specifically, many truckloads of stone were required to resist "boiling" groundwater conditions that could have caused unsafe excavation conditions. Advancing the excavation slowly and maintaining dry conditions allowed good

visibility to locate where the DNAPL was present while maintaining a safe excavation.

After removing 250-300 cy of sediment to an elevation between 961 to 962(AMSL) DNAPL was still present. On April 11, GE in consultation with EPA decided to install a DNAPL recovery well at an elevation of 959.6. The 24 inch long well screen of this well ranged from elevations 960.6 to 962.6. Two to four feet of 1 ½ inch stone were placed throughout the entire DNAPL Cell, sloping down to the location where the recovery well was installed. Filter fabric covered all the stone and 6 inches of washed sand was placed underneath the HDPE liner. This liner installed from elevation 964.5 sloped up to elevation 965.5 along the source control sheetpile. The liner was sealed along the source control sheetpile and around the recovery pipe. A 12-inch steel protective casing was installed around the 6-inch recovery well. This recovery well system was installed at a 40-degree angle and was eventually covered by the 12-inch stone placed at a 1H : 1V slope along the source control sheetpile. Following the placement of 3 to 4 feet of isolation material the normal restoration sequence was followed. The grouting subcontractor was re-mobilized to grout the source control sheetpile and the restoration in the DNAPL Cell was completed on April 27.

The total amount of DNAPL that has been collected includes:

- Approximately 1100 gallons collected manually through April 4;
- 120 gallons that were pumped out of the new recovery well on April 20 and 21;
- 220 gallons that were pumped out of the new recovery well on April 27 and 28; and,
- An estimated 3000 gallons pumped out of the excavation into the 500,000 gallon settling tank during the sediment removal operations; and,
- An unknown amount excavated with the sediment (disposed of off-site).

Removal activities in Cell D began on April 18, and no DNAPL was observed in this area. One to two feet of additional sediment excavation in the upstream part of Cell D was completed over the first 30 feet of the cell, at which point the original removal depth was achieved (section between area B and C at elevation 969). April ended with approximately 4 more days required to complete restoration in Cell D.

Site preparation activities were initiated in the next downstream section of the river (Cell F south side and Cell G north side). Clearing of trees and brush began on April 3 and lasted through April 28, temporary access roads were constructed along the north bank starting April 21, and sheetpiling installation began on April 26. Cells F and G will be subdivided into 3 smaller section approximately 200 to 300 feet long. Cell F-1 (upstream section along the south side of the river) will be de-watered first followed by Cell G-1 (upstream section along the north side of the river)

### **3.0 Number of samples collected:**

In the month of April, particulate air monitoring was conducted from April 3 to April 28. PCB air monitoring was conducted on April 6 and 7. The results are attached to this report (Table 1B)

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 April 13 and 26, 2000. The TSS and PCB results received to date for the month of April are attached to this report (Table 1A).

The on-site representative of Berkshire Gas Company obtained two samples of DNAPL-impacted sediment and one sample of DNAPL from the DNAPL removal area, on April 6 and April 12, 2000, respectively. GE obtained split samples of each of these samples. The sediment samples were analyzed for PCBs and GE analyzed the DNAPL sample for VOCs, SVOCs and PCBs. The results are attached to this report (Table 1C)

### **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. Additionally, Exhibit B shows the area of DNAPL based on the results of the DNAPL investigation conducted by GE.

### **5.0 Identification of any reports received and prepared:**

During the month of April, meeting summaries from various status meetings were submitted to EPA, MDEP and EOE. The transmittals concerning the DNAPL remediation plan as described in section 2.0 were submitted to EPA, MDEP and EOE. For work completed in March 2000, monthly reports as required by the Consent Decree and the Upper ½ Mile Reach Removal Action Work Plan were both submitted on April 9, 2000.

In addition, in April, GE submitted responses to EPA's March 23 questions on determining flood elevations, EPA's letter regarding scheduling, and EPA's April 21, letter regarding the height of sheetpile for Cell F-1

### **6.0 Photo documentation of activities performed:** See attached Figure 1

## **7.0 Brief description of activities to be performed in May 2000:**

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

- Restoration activities in Cells C and D will be completed;
- Sheetpiling will be removed from Cell D;
- Sheetpiling installation for Cells F and G will continue;
- Removal and restoration activities in Cells F-1 will be performed;
- Removal and restoration activities in Cells G-1 will be initiated;
- Trees, shrubs, and vines in the restored bank soil removal areas (Cells A, C, D, and E) will be planted; and,
- Water column monitoring will continue and air monitoring will resume prior to beginning any further excavation in the Upper ½ Mile Reach.

## **8.0 Attachments to this report:**

- Table 1A - Particulate air monitoring results;
- Table 1B - PCB air monitoring results;
- Table 2A – Water column monitoring TSS and PCB results;
- Table 2B – Water column monitoring PCB results;
- Table 3 – Split sample results for sediment and DNAPL from DNAPL removal area.
- Table 4 - PCB testing results for backfill material
- Exhibit A - Diagram to show the locations of cells within the upstream part of the Upper ½ Mile Reach Removal Action; and
- Figure 1 - Photo documentation sheet.

**MONTH OF APRIL, 2000**

Date	Sampler Location	Average Site Concentration (mg/m <sup>3</sup> )	BM1 <sup>1</sup> (mg/m <sup>3</sup> )	Average Period (Hours:Min)	Predominant Wind Direction
04/03/2000 <sup>1</sup>	AM2 (south side of river)				
04/04/2000 <sup>1</sup>	AM2 (south side of river)				
4/5/2000	AM2 (south side of river)	0.002	0.007	9:45	W, WNW
04/06/2000 <sup>1</sup>	AM2 (south side of river)				
4/7/2000	AM2 (south side of river)	0.008	0.005	10:00	WNW
4/10/2000	AM2 (south side of river)	0.004	0.007	9:45	W
4/11/2000	AM2 (south side of river)	0.004	0.007	8:15	SSW, SW
04/12/2000 <sup>1</sup>	AM2 (south side of river)				
4/13/2000	AM2 (south side of river)	0.008	0.007	9:45	W
4/14/2000	AM2 (south side of river)	0.009	0.013	9:15	SSW, SW
04/17/2000 <sup>1</sup>	AM2 (south side of river)				
04/18/2000 <sup>1</sup>	AM2 (south side of river)				
04/19/2000 <sup>1</sup>	AM2 (south side of river)				
4/20/2000	AM2 (south side of river)	0.008	0.009	8:45	NE, E
04/21/2000 <sup>1</sup>	AM2 (south side of river)				
4/24/2000	AM2 (south side of river)	0.008	0.004	8:30	NW, NNW
4/25/2000	AM2 (south side of river)	0.006	0.009	9:00	E
4/26/2000	AM2 (south side of river)	0.007	0.005	4:15 <sup>2</sup>	NNE
04/27/2000 <sup>1</sup>	AM2 (south side of river)				
4/28/2000	AM2 (south side of river)	0.007	0.005	7:15 <sup>2</sup>	NW
Notification Level		0.120			

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

AM-2: Air monitoring location near tennis courts within Lakewood Park, southeast bank.

<sup>1</sup> Sampling was not performed due to precipitation/threat of precipitation.

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

**APRIL 2000 PCB AMBIENT AIR CONCENTRATIONS  
1/2 MILE REMOVAL ACTION  
PITTSFIELD, MASSACHUSETTS  
TABLE 1B**

<b>Date</b>	<b>BM-1 ug/m<sup>3</sup></b>	<b>AM-1 ug/m<sup>3</sup></b>	<b>AM-2 ug/m<sup>3</sup></b>	<b>AM-3 ug/m<sup>3</sup></b>	<b>AM-3 co-located ug/m<sup>3</sup></b>	<b>AM-4 ug/m<sup>3</sup></b>
04/06 - 04/07/00	0.0012	0.0008	0.0005	0.0019	0.0018	0.0014
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-1: Air monitoring location east of Bldg. 64V, near current work/staging area, northeast bank.

AM-2: Air monitoring location near tennis courts within Lakewood Park, southeast bank.

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.

TABLE 2A

GENERAL ELECTRIC COMPANY  
PITTSFIELD, MASSACHUSETTS

APRIL 2000

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

Location	Date	Water Depth (ft)	Water Temp (°C)	Flow (cfs)	Turbidity (ntu) <sup>13</sup>			Sample ID	Total PCB Concentration <sup>14</sup> (ug/l)	Filtered PCB Concentration (ug/l)	TSS (mg/l)
					High	Low	Daily Composite				
Upstream of Newell St. Bridge	4/3/2000	3.2	6.0	---	10	2	5	---	---	---	---
Downstream of Lyman St. Bridge	4/3/2000	2.0	6.0	---	5	1	4	---	---	---	---
Upstream of Newell St. Bridge	4/4/2000	3.4	11.0	---	21	16	24	---	---	---	---
Downstream of Lyman St. Bridge	4/4/2000	3.9	11.0	---	23	9	17	---	---	---	---
Upstream of Newell St. Bridge	4/5/2000	3.5	6.0	---	24	3	8	---	---	---	---
Downstream of Lyman St. Bridge	4/5/2000	3.0	6.0	---	15	3	7	---	---	---	---
Upstream of Newell St. Bridge	4/6/2000	3.2	5.0	161	13	2	4	---	---	---	---
Downstream of Lyman St. Bridge	4/6/2000	3.9	5.0	225	21	1	6	---	---	---	---
Upstream of Newell St. Bridge	4/7/2000	2.9	6.0	---	8	2	6	---	---	---	---
Downstream of Lyman St. Bridge	4/7/2000	3.6	6.0	---	5	2	4	---	---	---	---
Upstream of Newell St. Bridge	4/10/2000	3.2	5.0	---	17	3	16	---	---	---	---
Downstream of Lyman St. Bridge	4/10/2000	3.8	5.0	---	12	2	8	---	---	---	---
Upstream of Newell St. Bridge	4/11/2000	3.2	5.0	---	6	2	5	---	---	---	---
Downstream of Lyman St. Bridge	4/11/2000	3.7	5.0	---	8	2	3	---	---	---	---
Upstream of Newell St. Bridge	4/12/2000	2.8	6.0	---	3	1	3	---	---	---	---
Downstream of Lyman St. Bridge	4/12/2000	3.3	6.0	---	2	1	1	---	---	---	---
Upstream of Newell St. Bridge	4/13/2000	3.0	8.0	138	4	1	2	HR-4-13-00-U1	0.177	ND(0.0250)	ND(1.0)
Downstream of Lyman St. Bridge	4/13/2000	3.4	8.0	163	4	1	2	HR-4-13-00-D1	0.240	0.0513	ND(1.0)
Upstream of Newell St. Bridge	4/14/2000	2.9	6.0	---	2	1	1	---	---	---	---
Downstream of Lyman St. Bridge	4/14/2000	3.3	6.0	---	2	1	2	---	---	---	---
Upstream of Newell St. Bridge	4/17/2000	2.7	11.0	---	2	1	2	---	---	---	---
Downstream of Lyman St. Bridge	4/17/2000	3.2	11.0	---	3	1	2	---	---	---	---
Upstream of Newell St. Bridge	4/18/2000	2.8	7.0	---	6	1	3	---	---	---	---
Downstream of Lyman St. Bridge	4/18/2000	3.5	7.0	---	4	1	2	---	---	---	---
Upstream of Newell St. Bridge	4/19/2000	2.9	7.0	---	2	1	2	---	---	---	---
Downstream of Lyman St. Bridge	4/19/2000	3.4	7.0	---	3	1	2	---	---	---	---
Upstream of Newell St. Bridge	4/20/2000	2.6	8.0	---	2	1	2	---	---	---	---
Downstream of Lyman St. Bridge	4/20/2000	3.1	8.0	---	2	1	1	---	---	---	---



TABLE 2A

**GENERAL ELECTRIC COMPANY  
PITTSFIELD, MASSACHUSETTS**

**APRIL 2000**

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

Location	Date	Water Depth (ft)	Water Temp. (°C)	Flow (cfs)	Turbidity (ntu) <sup>13</sup>			Sample ID	Total PCB Concentration <sup>14</sup> (ug/l)	Filtered PCB Concentration (ug/l)	TSS (mg/l)
					High	Low	Daily Composite				
Upstream of Newell St. Bridge	4/21/2000	2.8	10.0	195	7	2	5	---	---	---	---
Downstream of Lyman St. Bridge	4/21/2000	3.3	10.0	217.5	5	2	4	---	---	---	---
Upstream of Newell St. Bridge	4/24/2000	3.5	6.0	---	17	2	4	---	---	---	---
Downstream of Lyman St. Bridge	4/24/2000	4.0	6.0	---	4	1	2	---	---	---	---
Upstream of Newell St. Bridge	4/25/2000	2.1	8.0	---	10	2	4	---	---	---	---
Downstream of Lyman St. Bridge	4/25/2000	2.6	8.0	---	3	1	2	---	---	---	---
Upstream of Newell St. Bridge	4/26/2000	2.6	10.0	---	8	2	2	HR-4-26-00-U1	NR	NR	NR
Downstream of Lyman St. Bridge	4/26/2000	3.1	10.0	---	7	1	2	HR-4-26-00-D1	NR	NR	NR
Upstream of Newell St. Bridge	4/27/2000	2.6	10.0	---	8	1	2	---	---	---	---
Downstream of Lyman St. Bridge	4/27/2000	3.3	10.0	---	6	1	3	---	---	---	---
Upstream of Newell St. Bridge	4/28/2000	2.2	10.0	155	9	3	6	---	---	---	---
Downstream of Lyman St. Bridge	4/28/2000	2.7	10.0	173	10	2	4	---	---	---	---

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.

TABLE 2B

GENERAL ELECTRIC COMPANY  
PITTSFIELD, MASSACHUSETTS

HOUSATONIC RIVER PCB/TSS/TURBIDITY MONITORING DURING CONSTRUCTION  
DATA RECEIVED DURING APRIL 2000  
UPPER 1/2 MILE REACH

(Results are presented in parts per million, ppm)

Sample ID	Location ID	Date Collected	Aroclor 1016, 1221, 1232, 1242, & 1248	Aroclor 1254	Aroclor 1260	Total PCBs	TSS
HR-3-28-00-U1	Upstream of Newell St. Bridge	3/28/2000	ND(0.000100)	0.000969	ND(0.000100)	0.000969	3.1
HR-3-28-00-U1 (FILTERED)	Upstream of Newell St. Bridge	3/28/2000	ND(0.0000255)	0.0000882	ND(0.0000255)	0.0000882	---
HR-3-28-00-D1	Downstream of Lyman St. Bridge	3/28/2000	ND(0.0000750)	0.000743	ND(0.0000750)	0.000743	7.2
HR-3-28-00-D1 (FILTERED)	Downstream of Lyman St. Bridge	3/28/2000	ND(0.0000250)	0.0000870	ND(0.0000250)	0.0000870	---
HR-4-13-00-U1	Upstream of Newell St. Bridge	4/13/2000	ND(0.0000250)	0.000177	ND(0.0000250)	0.000177	ND(1.0)
HR-4-13-00-U1 (FILTERED)	Upstream of Newell St. Bridge	4/13/2000	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	ND(0.0000250)	---
HR-4-13-00-D1	Downstream of Lyman St. Bridge	4/13/2000	ND(0.0000250)	0.000212	0.0000275	0.000240	ND(1.0)
HR-4-13-00-D1 (FILTERED)	Downstream of Lyman St. Bridge	4/13/2000	ND(0.0000250)	0.0000513	ND(0.0000250)	0.0000513	---

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.

TABLE 3

GENERAL ELECTRIC COMPANY  
PITTSFIELD, MASSACHUSETTS

UPPER 1/2 MILE REACH  
DNAPL REMOVAL AREA SAMPLING  
PCB, VOC AND SVOC DATA RECEIVED DURING APRIL 2000  
(Results are presented in parts per million, ppm)

Sample ID: Date Collected:	HR-DNAPL-2 04/06/00	HR-DNAPL-3 04/06/00	HR-DNAPL-4 04/12/00
<b>Volatile Organics</b>			
Benzene	NA	NA	2400
Toluene	NA	NA	8100
Ethylbenzene	NA	NA	3000
Xylenes (total)	NA	NA	6600
<b>PCBs</b>			
Aroclor-1254	ND(1.0)	ND(1.0)	ND(1.0)
Aroclor-1260	ND(1.0)	1.0	ND(1.0)
Total PCBs	ND(1.0)	1.0	ND(1.0)
<b>Semivolatile Organics</b>			
Acenaphthylene	NA	NA	16000
Fluorene	NA	NA	1000
Naphthalene	NA	NA	6800
Phenanthrene	NA	NA	3100
Pyrene	NA	NA	1800
2-Methylnaphthalene	NA	NA	2000

**Notes:**

1. Samples were collected by Blasland, Bouck & Lee, Inc. and submitted to Adirondack Environmental Services, Inc. for analysis of total PCBs, volatiles and semivolatiles.
2. Analyte was not detected. The value in parentheses is the associated detection limit.
3. NA - Not Analyzed - Analysis held at laboratory.
4. Only those constituents detected in at least one sample are summarized.
5. HR-DNAPL-2 and HR-DNAPL-3 are sediment grab samples. HR-DNAPL-4 is a DNAPL grab sample.

TABLE 4

GENERAL ELECTRIC COMPANY  
PITTSFIELD, MASSACHUSETTS

BACKFILL SOIL SAMPLING  
PCB DATA RECEIVED DURING APRIL, 2000  
UPPER 1/2 MILE REACH

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

Sample ID	Date Collected	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs
HR-BACKFILL-1	3/30/00	ND(0.0500)	ND(0.0500)	ND(0.0500)	ND(0.0500)	ND(0.0500)	ND(0.0500)	ND(0.0500)	ND(0.0500)
HR-BACKFILL-2	3/30/00	ND(0.0539) [ND(0.0512)]	ND(0.0539) [ND(0.0512)]	ND(0.0539) [ND(0.0512)]	ND(0.0539) [ND(0.0512)]	ND(0.0539) [ND(0.0512)]	ND(0.0539) [ND(0.0512)]	ND(0.0539) [ND(0.0512)]	ND(0.0539) [ND(0.0512)]

Notes:

1. Samples were collected by Blasland, Bouck & Lee, Inc. and submitted to Northeast Analytical Services, Inc. for analysis of total PCBs.
2. ND(0.10) - Analyte was not detected. The value in parentheses is the associated detection limit.
3. Blind duplicate results are presented in brackets.

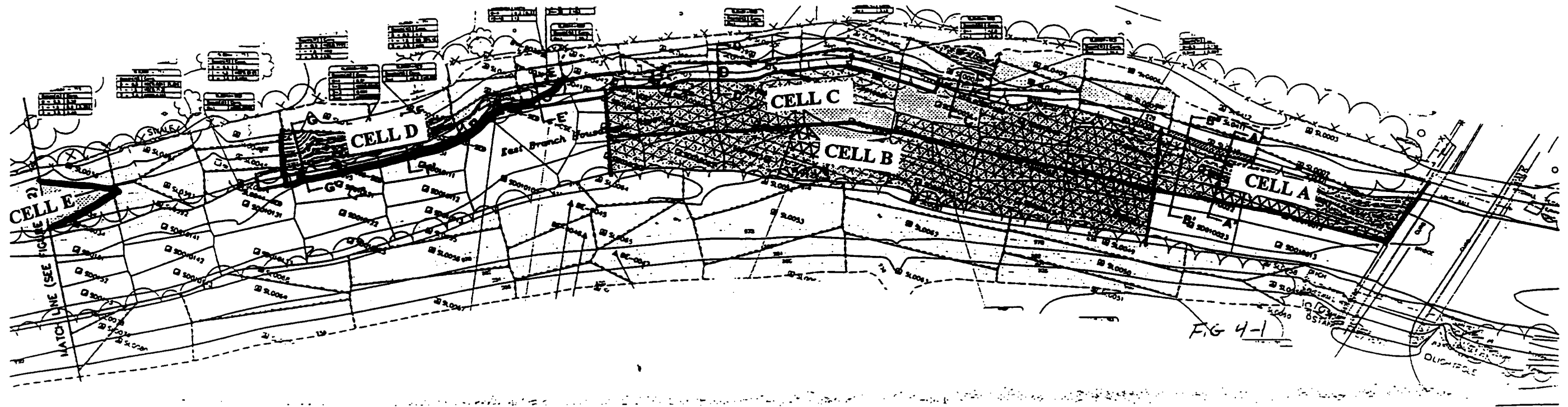
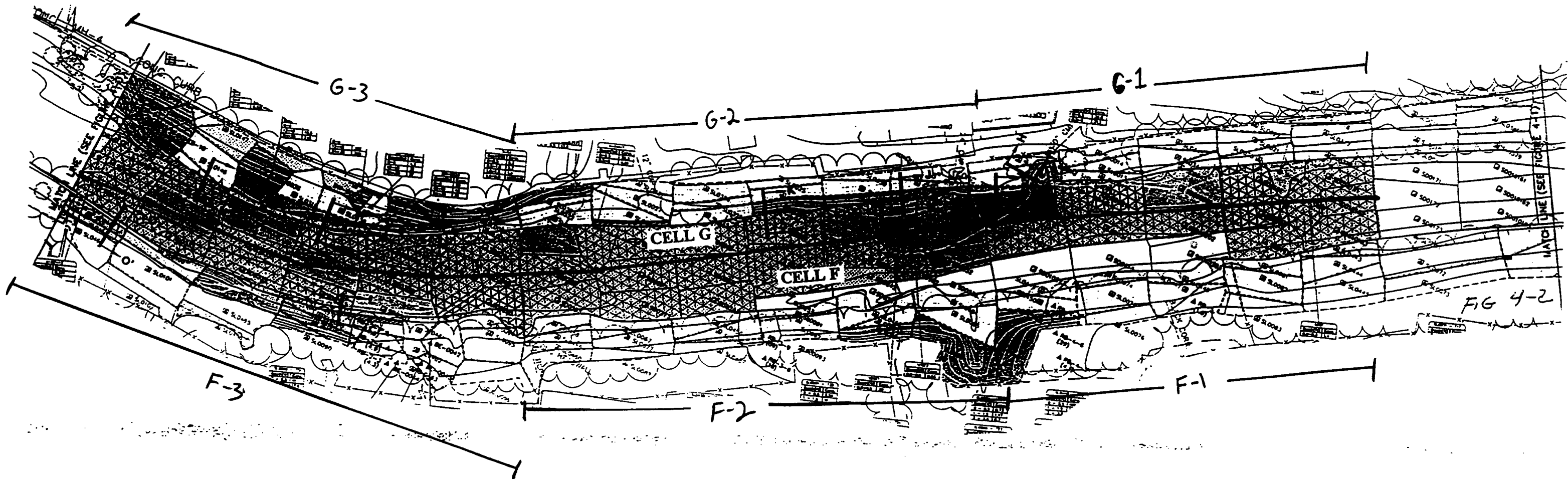


EXHIBIT A  
UPPER 1/2 MILE REACH REMOVAL ACTION



Page 1 of 2

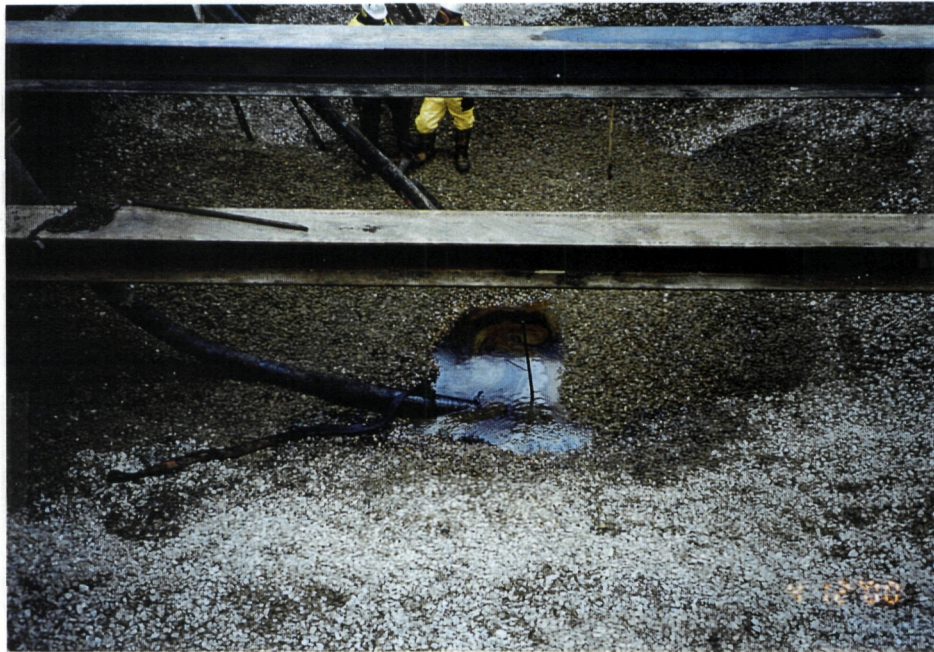
**½ MILE RIVER REMOVAL ACTION  
MONTHLY PROGRESS REPORT  
APRIL, 2000  
FIGURE 1 PHOTO DOCUMENTATION**

**PHOTO NUMBER: 1**

**PHOTO LOCATION:**  
DNAPL cell looking upstream (east).

**PHOTO DESCRIPTION:**  
DNAPL observed in the DNAPL cell.  
6" recovery well installed in the middle section

**PHOTO DATE:** 04/12/00



**PHOTO NUMBER: 2**

**PHOTO LOCATION:**  
DNAPL Cell looking upstream (east).

**PHOTO DESCRIPTION**  
Restoration: filter fabric placed over the cell  
followed by 6" sand layer and HDPE liner.

**PHOTO DATE:** 04/14/00



**PHOTO NUMBER: 3**

**PHOTO LOCATION:**  
DNAPL Cell, looking upstream (east)

**PHOTO DESCRIPTION**  
Restoration upto design removal depths.  
Perimeter bracing removed.

**PHOTO DATE:** 04/21/00



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

**PHOTO NUMBER:** 4

**PHOTO LOCATION:**  
DNAPL cell looking upstream (east).

**PHOTO DESCRIPTION:**  
Restoration: placement of final layer of rock.  
(Note new concrete headwall and 12' protective pipe casing for recovery well at left side of photo)

**PHOTO DATE:** 04/26/00



**PHOTO NUMBER:** 5

**PHOTO LOCATION:**  
Cell D looking upstream (east).

**PHOTO DESCRIPTION:** Sediment removal.  
Additional 1-2 foot of sediment removal  
in the upstream 30 feet of Cell D

**PHOTO DATE:** 04/20/00



**PHOTO NUMBER:** 6

**PHOTO LOCATION:** Cell F and G  
Next section of the river.

**PHOTO DESCRIPTION:**  
Installation of sheetpile (center of the river)

**PHOTO DATE:** 04/26/00

