Attachment C

Corrections to the
Loeffel Site Environs
Remedial Investigation
Phase II Report

Table 6
(Cont'd)
General Electric Company - Albany, New York
Loeffel Site Environs Phase II RI Report

Tributary T11A - Summary of Field Data and Analytical Results
[Concentrations are presented in milligrams per kilogram (mg/kg) dry weight]

Location	Sample Depth Interval (in)	Sediment Classification	Unified Soil Classification System	Total Aroclors[3]
T-39-2	0-3	4	Fine-grained	13
	3-12			1.3
T-39-5	0-11	4	Fine-grained	35
T-40-2	0-3	3	Coarse-grained	6.1
	3-12			8.4 [6.5]
T-41-4	0-6	3	Coarse-grained	5.3
T-46-1	0-4.5	4	Fine-grained	7.6
T-49-3	0-2.5	2	Coarse-grained	1.5

Notes:

1. All samples were collected by BBL on November 25 and 27, 1996, and submitted to Inchcape Testing Services for PCB analysis. See Table 5 for additional description information.
2. Duplicate results are presented in brackets.
3. All detections quantified as Aroclor 1260, except T-8-6 (0-15.5") and T-10-5 (0-8.5"), which are quantified a Aroclor 1260 and Aroclor 1248.

Table 6
General Electric Company - Albany, New York
Loeffel Site Environs Phase II RI Report

Tributary T11A - Summary of Field Data and Analytical Results
[Concentrations are presented in milligrams per kilogram (mg/kg) dry weight]

Location	Sample Depth Interval (in)	Sediment Classification	Unified Soil Classification System	Total Aroclors[3]
T-2-5	0-20.5	4	Fine-grained	160
T-4-1	0-9.5	3	Coarse-grained	7.1
T-7-2	0-7	3	Coarse-grained	0.59
T-8-6	0-15.5	4	Fine-grained	3.2
T-10-2	0-4.5	2	Coarse-grained	4.1
T-10-5	0-8.5	3	Coarse-grained	5.5
T-11-4	0-9.5	4	Fine-grained	46
T-14-4	0-2.5	3	Coarse-grained	62
T-14-5	0-8.5	4	Fine-grained	4.1
T-16-4	0-2.5	2	Coarse-grained	1.9
T-18-3	0-3	2	Coarse-grained	3.0
	3-12			2.1
T-19-5	0-12	3	Coarse-grained	8.0
T-22-2	0-4.5	4	Fine-grained	26
T-23-5	0-6	4	Fine-grained	23
T-24-2	0-3	3	Coarse-grained	8.6
	3-12			5.8
T-27-5	0-7	5	Fine-grained	27
T-28-3	0-2.5	3	Coarse-grained	50
T-28-6	0-14.5	5	Fine-grained	59 [55]
T-29-5	0-3	3	Coarse-grained	12
	3-15.5			2
T-30-3	0-3	4	Fine-grained	36 [25]
	3-12			25
T-30-4	0-8.5	5	Fine-grained	0.18
T-31-5	0-11	4	Fine-grained	0.19
T-33-2	0-2.5	2	Coarse-grained	2.6
T-35-2	0-8.5	3	Coarse-grained	21
T-36-1	0-2.5	2	Coarse-grained	16
T-38-5	0-6	4	Fine-grained	10

Table 6
(Cont'd)
General Electric Company - Albany, New York
Loeffel Site Environs Phase II RI Report

Tributary T11A - Summary of Field Data and Analytical Results
[Concentrations are presented in milligrams per kilogram (mg/kg) dry weight]

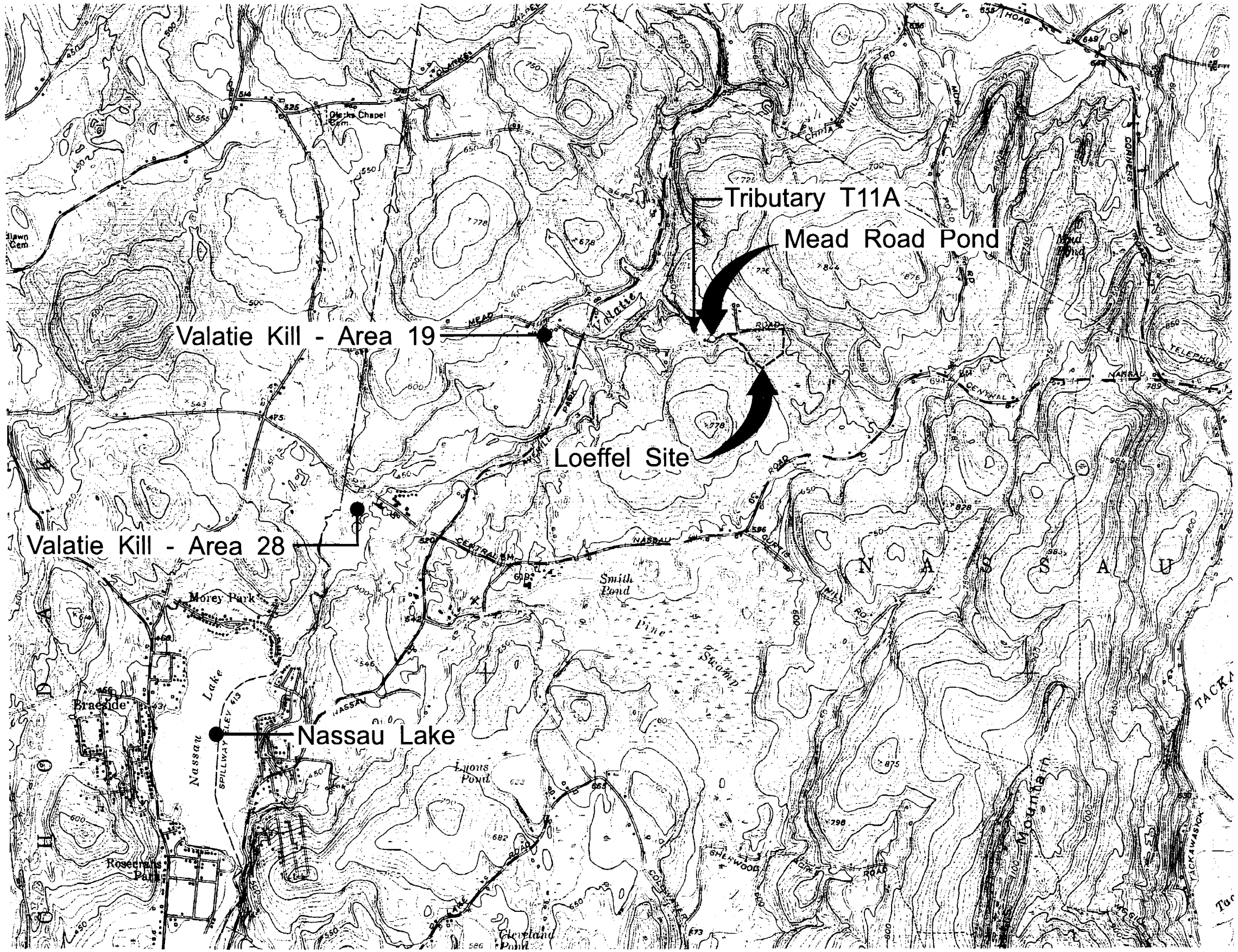
Location	Sample Depth Interval (in)	Sediment Classification	Unified Soil Classification System	Total Aroclors[3]
T-39-2	0-3	4	Fine-grained	13
	3-12			1.3
T-39-5	0-11	4	Fine-grained	35
T-40-2	0-3	3	Coarse-grained	6.1
	3-12			8.4 [6.5]
T-41-4	0-6	3	Coarse-grained	5.3
T-46-1	0-4.5	4	Fine-grained	7.6
T-49-3	0-2.5	2	Coarse-grained	1.5

Notes:

1. All samples were collected by BBL on November 25 and 27, 1996, and submitted to Inchcape Testing Services for PCB analysis. See Table 5 for additional description information.
2. Duplicate results are presented in brackets.
3. All detections quantified as Aroclor 1260, except T-8-6 (0-15.5") and T-10-5 (0-8.5"), which are quantified as Aroclor 1260 and Aroclor 1248.

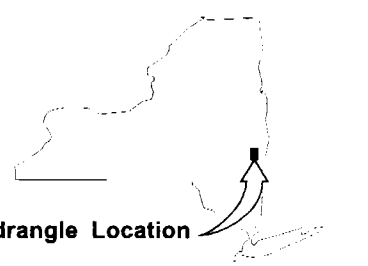
Attachment C

Corrections to the
Loeffel Site Environs
Remedial Investigation
Phase II Report



NOTES:

1. All locations and features are approximate.
2. Water area locations are refered to by their "Surface Water Common Name" and/or their "NYS Water Index Number".



Quadrangle Location

2000' 0 2000'

APPROX. SCALE: 1" = 2000 FEET

Reference: Base map source: USGS 7.5 Min. Topo. Quad., Nassau, N.Y. 1953.

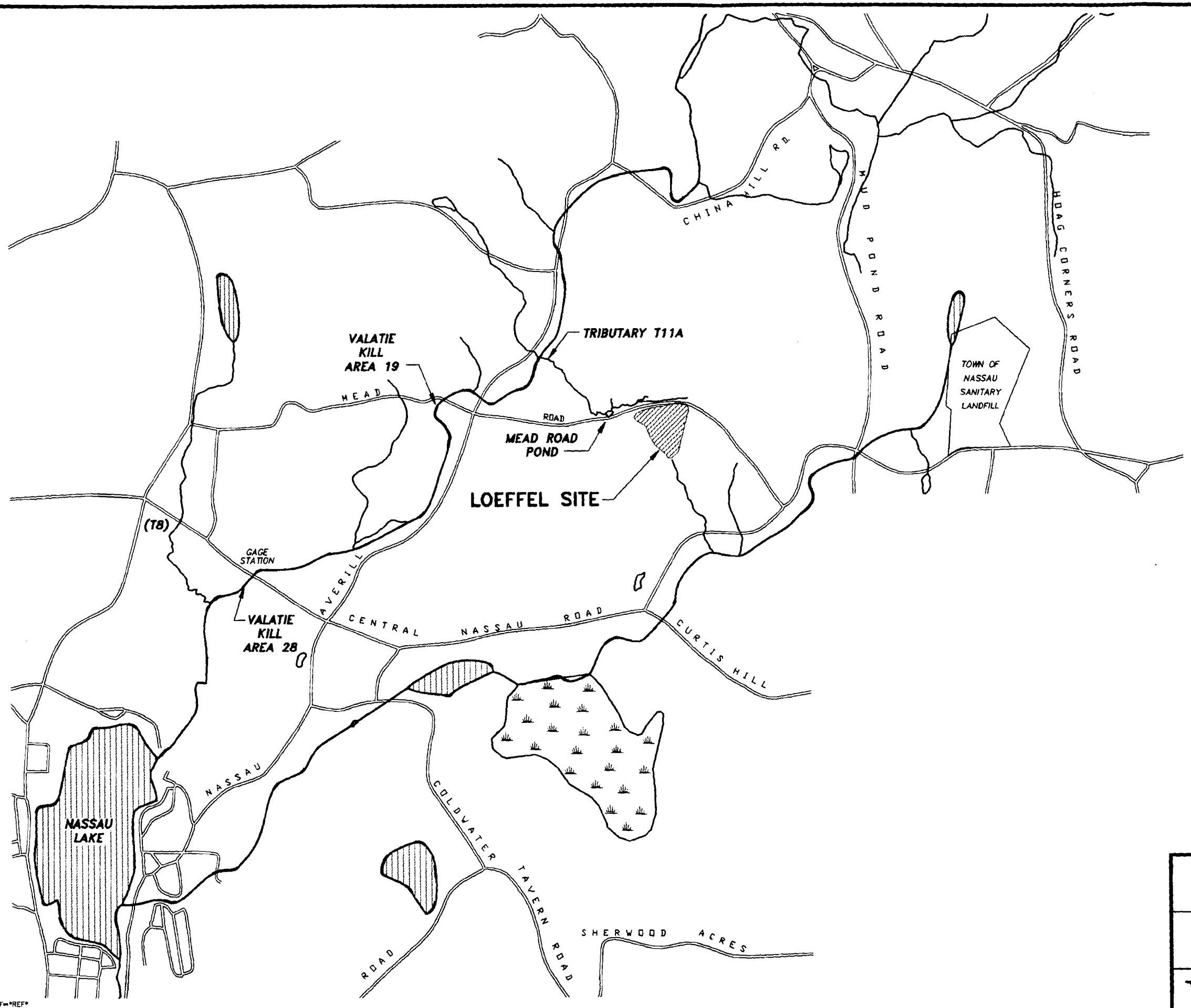
10/97 SYR-D54-DJH
10073010/10073n01.cdr

GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

SITE LOCATION MAP

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

FIGURE 1



2000' 0 2000'

APPROXIMATE SCALE:

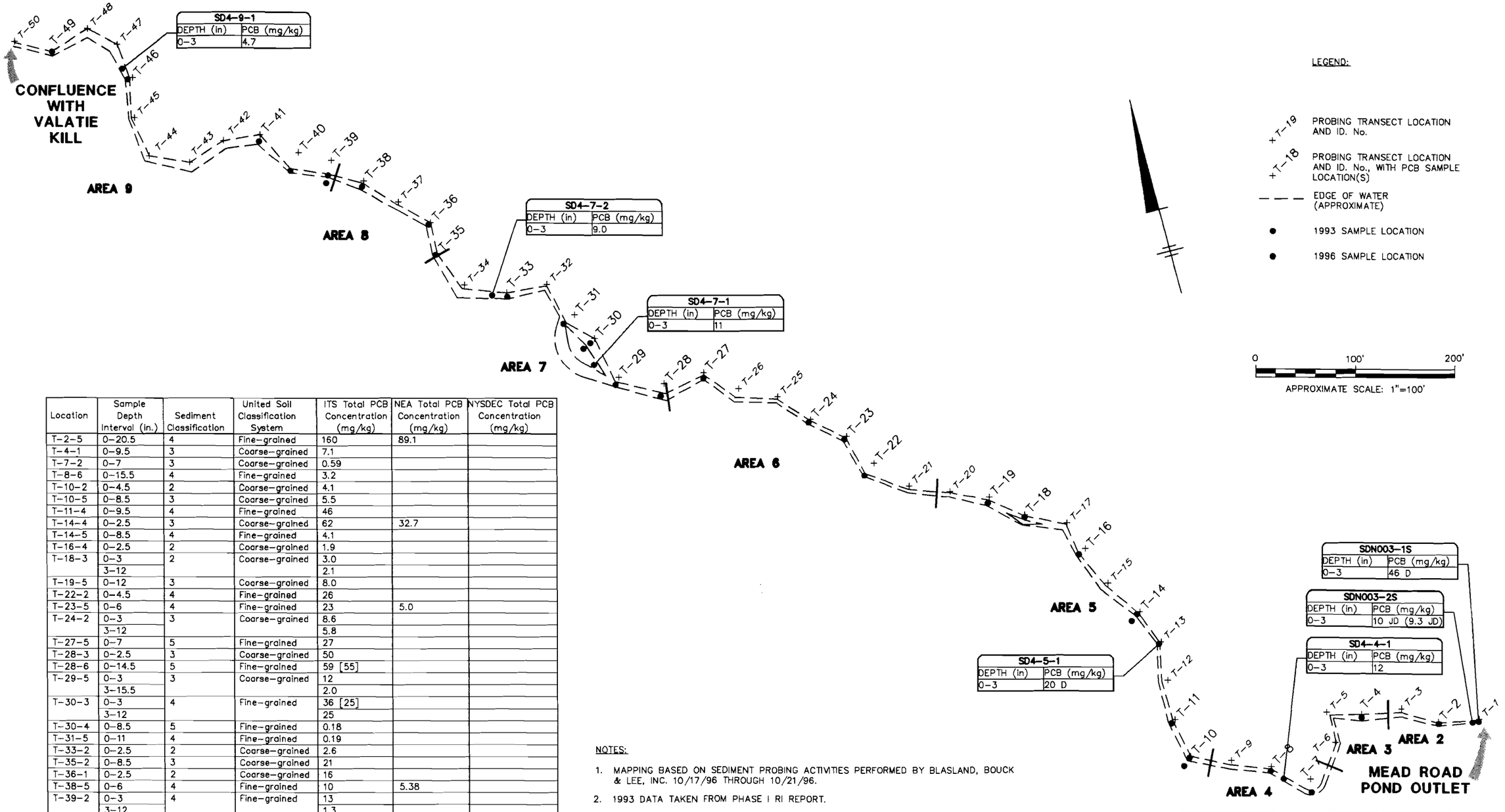
X: NONE
L: ON=*, OFF=*REF*
P: STD-PCP/BL
10/23/97--54-SYR-NES MFS
10071090/10071G02.DWG

GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

LOCATION PLAN

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

FIGURE 2



Location	Sample Depth Interval (in.)	Sediment Classification	United Soil Classification System	ITS Total PCB Concentration (mg/kg)	NEA Total PCB Concentration (mg/kg)	NYSDEC Total PCB Concentration (mg/kg)
T-2-5	0-20.5	4	Fine-grained	160	89.1	
T-4-1	0-9.5	3	Coarse-grained	7.1		
T-7-2	0-7	3	Coarse-grained	0.59		
T-8-6	0-15.5	4	Fine-grained	3.2		
T-10-2	0-4.5	2	Coarse-grained	4.1		
T-10-5	0-8.5	3	Coarse-grained	5.5		
T-11-4	0-9.5	4	Fine-grained	46		
T-14-4	0-2.5	3	Coarse-grained	62	32.7	
T-14-5	0-8.5	4	Fine-grained	4.1		
T-16-4	0-2.5	2	Coarse-grained	1.9		
T-18-3	0-3	2	Coarse-grained	3.0		
	3-12			2.1		
T-19-5	0-12	3	Coarse-grained	8.0		
T-22-2	0-4.5	4	Fine-grained	26		
T-23-5	0-6	4	Fine-grained	23	5.0	
T-24-2	0-3	3	Coarse-grained	8.6		
	3-12			5.8		
T-27-5	0-7	5	Fine-grained	27		
T-28-3	0-2.5	3	Coarse-grained	50		
T-28-6	0-14.5	5	Fine-grained	59 [55]		
T-29-5	0-3	3	Coarse-grained	12		
	3-15.5			2.0		
T-30-3	0-3	4	Fine-grained	36 [25]		
	3-12			25		
T-30-4	0-8.5	5	Fine-grained	0.18		
T-31-5	0-11	4	Fine-grained	0.19		
T-33-2	0-2.5	2	Coarse-grained	2.6		
T-35-2	0-8.5	3	Coarse-grained	21		
T-36-1	0-2.5	2	Coarse-grained	16		
T-38-5	0-6	4	Fine-grained	10	5.38	
T-39-2	0-3	4	Fine-grained	13		
	3-12			1.3		
T-39-5	0-11	4	Fine-grained	35		
T-40-2	0-3	3	Coarse-grained	6.1		1.54
	3-12			8.4 [6.5]	5.88	2.13
T-41-4	0-6	3	Coarse-grained	5.3		0.57
T-46-1	0-4.5	4	Fine-grained	7. 6		1.46
T-49-3	0-2.5	2	Coarse-grained	1.5		

NOTES:

1. MAPPING BASED ON SEDIMENT PROBING ACTIVITIES PERFORMED BY BLASLAND, BOUCK & LEE, INC. 10/17/96 THROUGH 10/21/96.
2. 1993 DATA TAKEN FROM PHASE I RI REPORT.
3. NEA TOTAL PCB CONCENTRATION - ANALYTICAL RESULTS REPORTED BY NEA, SCHENECTADY, NEW YORK. SAMPLES WERE SHIPPED FROM ITS TO NEA FOR RE-ANALYSIS (NOTE THAT RE-ANALYSIS EXCEEDED LABORATORY HOLDING TIME).
4. NYSDEC TOTAL PCB CONCENTRATION - FIELD SCREENING IMMUNOASSAY TESTING RESULTS REPORTED BY NYSDEC LABORATORY (J. LUDLAM CORRESPONDENCE 1/15/97). RESULTS REPORTED AS WET WEIGHT; NO CORRECTION FOR MOISTURE CONTENT.
5. ANALYSES IN BRACKETS INDICATES DUPLICATE SAMPLE RESULT.

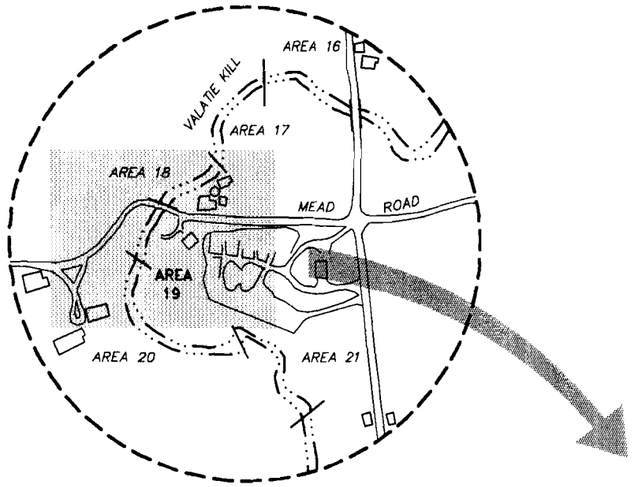
GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

TRIBUTARY T11A - SUMMARY OF SEDIMENT PROBING SURVEY AND PCB DATA

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

FIGURE 6

L: ON=*.OFF=REF
P: STD-PCP/BL
3/13/98 SYR-54-RLP MFS JER
10073040/10073G15.DWG



LOCATION PLAN

NOT TO SCALE

SITE PLAN

LEGEND

- EDGE OF WATER
- AREA LIMITS
- 1994 SAMPLE LOCATION
- 1996 SAMPLE LOCATION AND TOTAL PCB RESULTS IN MILLIGRAMS/ KILOGRAM DRY WEIGHT

NOTES:

1. THE BASE MAP FEATURES ON THIS FIGURE ARE BASED ON AERIAL PHOTOGRAPHS DATED MARCH 31, 1988 AND PERSONAL OBSERVATIONS.

0 50' 100'

APPROXIMATE SCALE

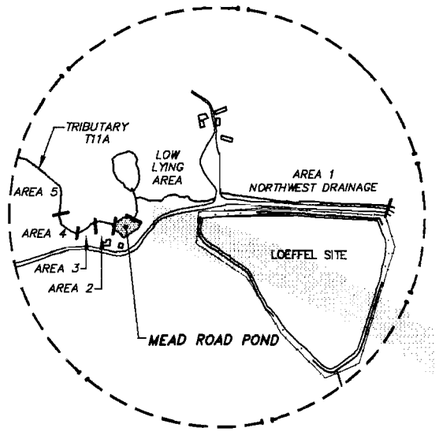
GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

VALATIE KILL AREA 19 SEDIMENT PCB DATA

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

FIGURE 7

X: (XREF)
L: (LAYER)
P: STD-PCP/BL
1/26/98 SYR-54-YCC MFS
10071090/10071G04.DWG



LOCATION PLAN

NOT TO SCALE

SDN-003-1S	
DEPTH (in)	PCB (mg/kg)
0-3	46 D

SDN-003-2S	
DEPTH (in)	PCB (mg/kg)
0-3	10 JD(9.3JD)

SDN-005-3S	
DEPTH (in)	PCB (mg/kg)
0-6	2.7
6-12	4.8
12-24	9.6 JD

SDN-006-3S	
DEPTH (in)	PCB (mg/kg)
0-3	0.79

SDN-005-4S	
DEPTH (in)	PCB (mg/kg)
36-42	<0.045

SDN-006-1S	
DEPTH (in)	PCB (mg/kg)
0-3	84
12-18	9.0(12)
18-24	0.25
24-30	0.40

SDN-006-6S	
DEPTH (in)	PCB (mg/kg)
0-3	130J
0-6	160
12-24	18
36-48	3.0
60-72	3.2

SDN-006-5S	
DEPTH (in)	PCB (mg/kg)
0-3	120
0-6	9.1
12-24	3.9
36-48	31
48-60	73
60-72	410
150-156	<0.037

SDN-006-7S	
DEPTH (in)	PCB (mg/kg)
0-3	43J
30-36	5.6(5.2)
36-42	0.14

SDN-005-1S	
DEPTH (in)	PCB (mg/kg)
0-6	6.6 J
6-12	15 JD
12-24	1.7
24-36	0.51

SDN-005-2S	
DEPTH (in)	PCB (mg/kg)
0-6	3.4 J
6-12	2.6 JD
12-24	2.9
24-36	3.5

SDN-006-2S	
DEPTH (in)	PCB (mg/kg)
0-3	(0.71)

SDN-006-4S	
DEPTH (in)	PCB (mg/kg)
0-3	0.12 J

D-2 0.3 2.0 [0.9]
C-2 0.2 2.0 [1.4]
B-2 0.0 5.7 [1.4]
+D-3 0.7 8.0 [2.6]
E-2 0.1 1.5 [1.3]
+B-3 0.0 7.7 [1.6]
+E-3 0.8 2.2 [1.9]
+C-3 0.3 10.6 [2.5]
F-2 0.1 2.9 [2.4]
A-2 0.3 7.3 [3.5]
F-3 + 0.3 2.9 [2.6]
+D-4 0.7 9.2 [2.3]
+B-4 0.3 4.3 [2.0]
+E-4 0.8 6.0 [2.5]
MEAD ROAD POND
WATER ELEVATION = 602.99
+C-4 0.6 9.2 [2.4]
G-2 0.5 0.5
B-5 0.0 3.5 [1.4]
+F-4 0.7 6.3 [2.5]
+D-5 0.8 10 [2.3]
+E-5 0.9 8.1 [3.0]
C-5 + 0.5 8.6 [1.2]
F-5 0.0 1.5 [1.1]
D-6 + 0.5 7.5 [2.6]
E-6 + 0.5 7.1 [1.9]
D-7 0.1 8.0 [1.4]
E-7 0.1 6.0 [1.6]
F-6 0.2 2.5 [1.5]
F-7 0.0 3.0 [1.3]

SITE PLAN

LEGEND

- EDGE OF WATER
- +A-2 — SEDIMENT PROBING LOCATION
- 0.3 — WATER DEPTH (FEET)
- 7.3 — TOTAL PROBED THICKNESS (FEET)
- [3.5] — SOFT SEDIMENT DEPTH (FEET) (AS MEASURED FROM TOP OF SEDIMENT)
- SPOIL BANK SAMPLE
- POND SEDIMENT SAMPLE
- 1993 DATA
- 1994 DATA
- 1996 DATA

QUALIFIERS:

- D CONCENTRATION IS BASED ON A DILUTED SAMPLE ANALYSIS
- J THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER, THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.

NOTES:

1. DEPTHS ARE RESULTS OF PROBING ACTIVITIES PERFORMED ON OCTOBER 15, 1996 BY BBL PERSONNEL.
2. DUPLICATE RESULTS ARE IN PARENTHESES.
3. 1996 PCB DATA ARE RESULTS FROM ANALYSES PERFORMED BY INCHCAPE TESTING SERVICES. TABLE 2-3 PRESENTS ADDITIONAL INFORMATION.

0 20' 40'
APPROXIMATE SCALE

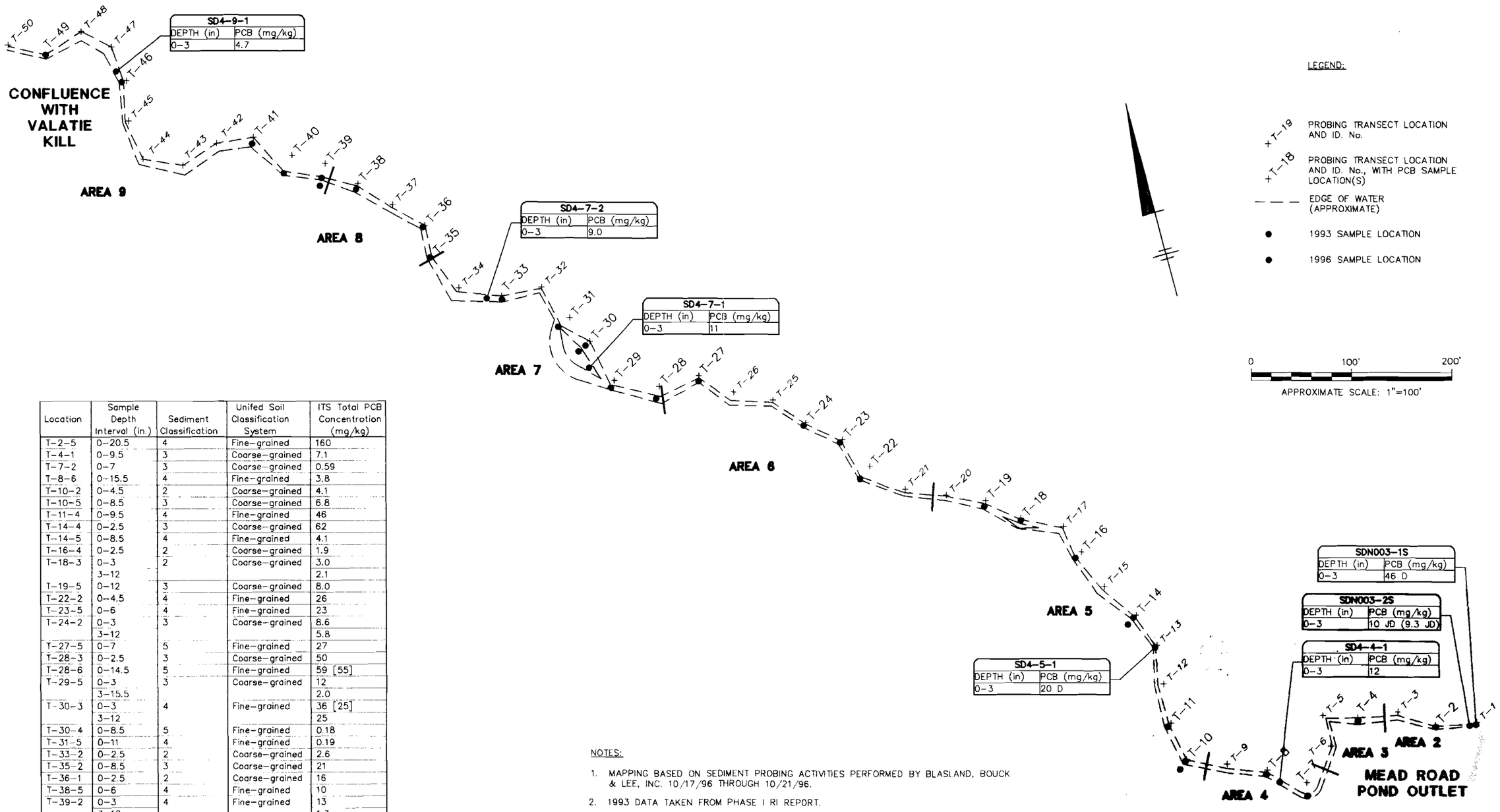
GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

MEAD ROAD POND WATER DEPTH, PROBED THICKNESS, SOFT SEDIMENT DEPTH, AND PCB DATA

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

FIGURE 3

X: (XREF)
L: (LAYER)
P: STD-PCP/BL
3/18/97 SYR-54-YCC MFS
10071D8D/10071G07.DWG



Location	Sample Depth Interval (in.)	Sediment Classification	Unifed Soil Classification System	ITS Total PCB Concentrotion (mg/kg)
T-2-5	0-20.5	4	Fine-grained	160
T-4-1	0-9.5	3	Coarse-grained	7.1
T-7-2	0-7	3	Coarse-grained	0.59
T-8-6	0-15.5	4	Fine-grained	3.8
T-10-2	0-4.5	2	Coarse-grained	4.1
T-10-5	0-8.5	3	Coarse-grained	6.8
T-11-4	0-9.5	4	Fine-grained	46
T-14-4	0-2.5	3	Coarse-grained	62
T-14-5	0-8.5	4	Fine-grained	4.1
T-16-4	0-2.5	2	Coarse-grained	1.9
T-18-3	0-3	2	Coarse-grained	3.0
	3-12			2.1
T-19-5	0-12	3	Coarse-grained	8.0
T-22-2	0-4.5	4	Fine-grained	26
T-23-5	0-6	4	Fine-grained	23
T-24-2	0-3	3	Coarse-grained	8.6
	3-12			5.8
T-27-5	0-7	5	Fine-grained	27
T-28-3	0-2.5	3	Coarse-grained	50
T-28-6	0-14.5	5	Fine-grained	59 [55]
T-29-5	0-3	3	Coarse-grained	12
	3-15.5			2.0
T-30-3	0-3	4	Fine-grained	36 [25]
	3-12			25
T-30-4	0-8.5	5	Fine-grained	0.18
T-31-5	0-11	4	Fine-grained	0.19
T-33-2	0-2.5	2	Coarse-grained	2.6
T-35-2	0-8.5	3	Coarse-grained	21
T-36-1	0-2.5	2	Coarse-grained	16
T-38-5	0-6	4	Fine-grained	10
T-39-2	0-3	4	Fine-grained	13
	3-12			1.3
T-39-5	0-11	4	Fine-grained	35
T-40-2	0-3	3	Coarse-grained	6.1
	3-12			8.4 [6.5]
T-41-4	0-6	3	Coarse-grained	5.3
T-46-1	0-4.5	4	Fine-grained	7. 6
T-49-3	0-2.5	2	Coarse-grained	1.5

NOTES:

1. MAPPING BASED ON SEDIMENT PROBING ACTIVITIES PERFORMED BY BLASLAND, BOUCK & LEE, INC. 10/17/96 THROUGH 10/21/96.
2. 1993 DATA TAKEN FROM PHASE I RI REPORT.
3. ANALYSES IN BRACKETS INDICATES DUPLICATE SAMPLE RESULT.

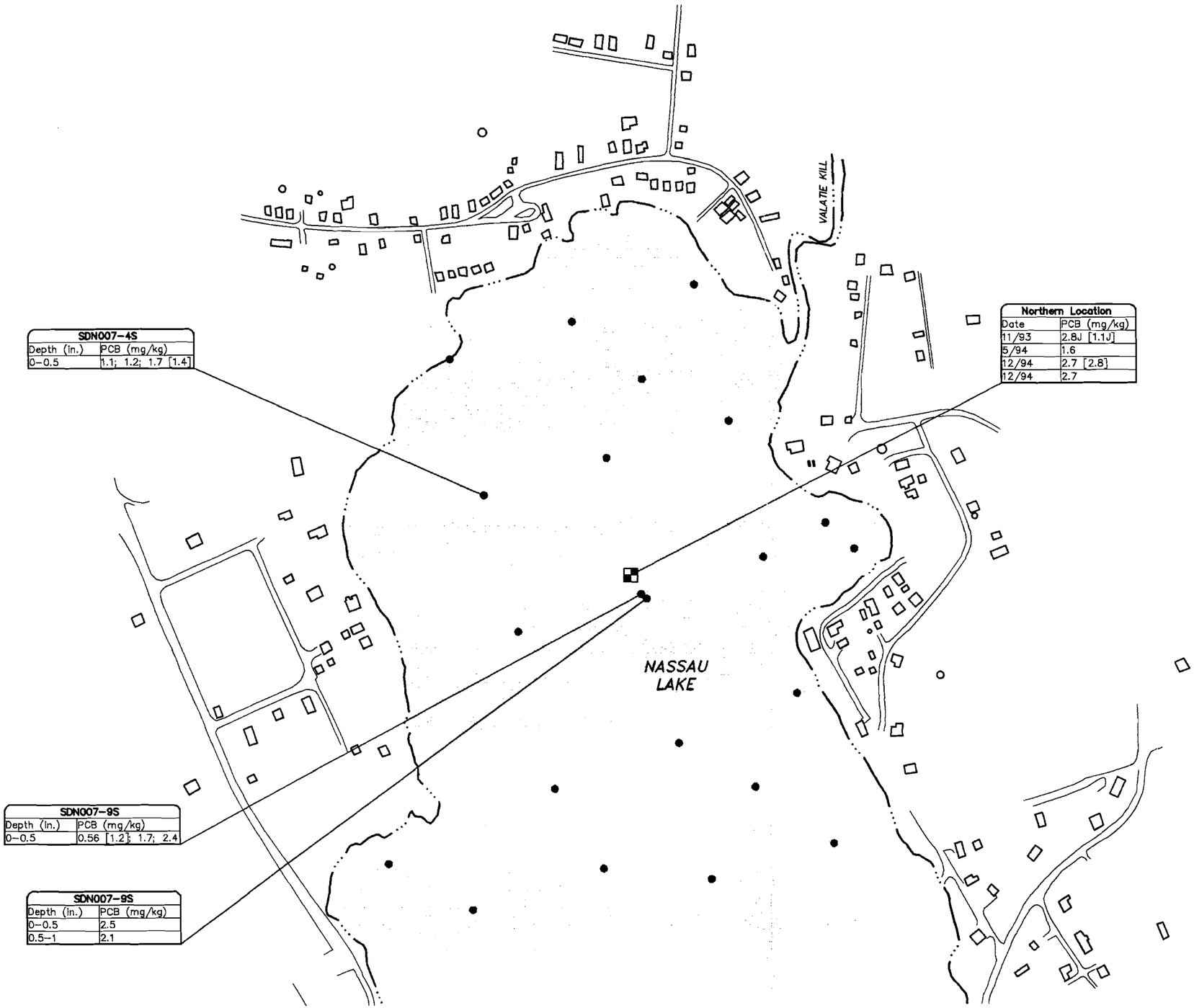
GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

TRIBUTARY T11A - SUMMARY OF SEDIMENT PROBING SURVEY AND PCB DATA

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

FIGURE 6

L: ON=*.OFF=REF
P: STD-PCP/BL
5/9/97 SYR-54-RLP AK RLP
1007109D/10D71G11.DWG



SDN007-4S	
Depth (in.)	PCB (mg/kg)
0-0.5	1.1; 1.2; 1.7 [1.4]

Northern Location	
Date	PCB (mg/kg)
11/93	2.8J [1.1J]
5/94	1.6
12/94	2.7 [2.8]
12/94	2.7

SDN007-9S	
Depth (in.)	PCB (mg/kg)
0-0.5	0.56 [1.2]; 1.7; 2.4

SDN007-9S	
Depth (in.)	PCB (mg/kg)
0-0.5	2.5
0.5-1	2.1

LEGEND

- EDGE OF WATER
- 1993 SAMPLE LOCATION
- 1996/1997 SAMPLE LOCATION AND TOTAL PCB RESULTS IN MILLIGRAMS/KILOGRAM DRY WEIGHT
- 1993-94 FORMER SEDIMENT TRAP SAMPLE LOCATION (LOCATION OF SEDIMENT GRAB SAMPLE FOR 1996 GEOTECHNICAL ANALYSES)

NOTES:

1. THE BASE MAP FEATURES ON THIS FIGURE ARE BASED ON AERIAL PHOTOGRAPHS DATED MARCH 31, 1988 AND AND PERSONAL OBSERVATIONS.
2. DUPLICATE RESULTS SHOWN IN BRACKETS.

400' 0 400'

APPROXIMATE SCALE

SITE PLAN

APPROXIMATE SCALE: 1"=400'

X: (XREF)
L: (LAYER)
P: STD-PCP/BL
4/25/97 SYR-54-AK YCC
10073010/10073G06.DWG

GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

NASSAU LAKE SEDIMENT PCB DATA

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

FIGURE 9

Jill Siebels
Remedial Project Manager

Corporate Environmental Programs
General Electric Company
1 Computer Drive South, Albany, NY 12205
*518 458-6623 Dial Comm: 8*920-9623*
*Fax: 518 458-9247 Dial Comm: 8*920-9200*

Hand Delivered

May 12, 1997

Mr. Jim Ludlam
Bureau of Central Remedial Action
Division of Hazardous Waste Remediation
NYS Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

Re: Phase II Remedial Investigation Reports
Dewey Loeffel Site
Nassau, New York

Dear Jim:

Enclosed please find a copy of the Phase II Loeffel Site Environs Remedial Investigation Report and a copy of the Phase II Hydrogeologic Report for your review and approval. Although we had previously discussed submission of the Feasibility Study in the next few months, it is now our understanding that the NYSDEC is not in a position to discuss a potential settlement of this case and would like to proceed on the normal RI/FS track. As a result, your specific comments and/or approval of the Phase I and II RI Reports are necessary prior to our submittal of the FS for the site.

Pursuant to our recent conversation, the Phase II Loeffel Environs Remedial Investigation Report is complete with the exception of Appendix A - Data Quality and Validation. Following receipt of the final data validation packages, which is expected in the next few weeks, Appendix A and any necessary revisions to the existing document will be forwarded to you for insertion into the report.

We await your approval of the RI Reports. In the meantime, if you have any questions or concerns, please do not hesitate to call.

Respectfully,

Jill E. Siebels
Remedial Project Manager

enclosures

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REPORT

Loeffel Site Environs Remedial Investigation Phase II Report

General Electric Company
Albany, New York

May 1997

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

1.1.1 Phase I and II RI History

In October 1993, GE submitted to the NYSDEC a *Loeffel Site Environs Remedial Investigation Interim Phase I Report* (Interim Phase I RI Report) [Blasland & Bouck Engineers, P.C. (Blasland & Bouck), 1993] which summarized the Phase I RI activities initially conducted at the site environs. Following a meeting in December 1993 between GE and the NYSDEC regarding the Interim Phase I RI Report, GE submitted a *Second Addendum to the RI Work Plan* (Second Work Plan Addendum) in February 1994 (BBL, 1994). This addendum summarized additional Phase I RI activities to be conducted at the site to satisfy the RI requirements. In April 1995, after the State's review of the Second Work Plan Addendum and several conversations and meetings, GE submitted the *Loeffel Site Environs Remedial Investigation Phase I Report* (Phase I RI Report) (BBL, 1995), which superseded the Interim Phase I RI Report. The Phase I RI Report summarized the Phase I RI activities conducted at the site environs, presented analytical results, and identified remaining data needs.

Subsequent to submittal of the Phase I RI Report to the State in April 1995, several scoping meetings were held with the State, including two field site visits, to discuss additional data needs for a Phase II RI. GE submitted a draft Phase II RI Work Plan to the State in July 1996 based upon data needs identified in the scoping meetings. Following receipt of the State's comments to the work plan (Facsimile; Munro to Elder, September 1996), the Work Plan was resubmitted to the State in October 1996 (BBL, 1996). After receiving NYSDEC approval of the Phase II RI Work Plan, GE commenced Phase II RI activities at the site environs.

1.1.2 Overview of Phase II RI Activities

The primary objectives of Phase II activities are as follows:

- Refine estimates of sediment and soil volumes in Mead Road Pond and Area 28 of Valatie Kill;
- Improve the understanding of the spatial distribution of PCBs in Tributary T11A;
- Obtain additional data to improve the characterization of potential exposure to PCB in stream bank/ floodplain soils at a specific location along the Valatie Kill (i.e., Area 19); and
- Collect additional physical and chemical data that will be used to assist in the evaluation of remedial alternatives for Nassau Lake as part of a future Feasibility Study.

All samples obtained during Phase II RI activities were collected in accordance with the procedures outlined in the *Sampling and Analysis Plan* (SAP) (Blasland & Bouck, 1992a).

1.2 Background Information

This section provides a summary of existing information regarding the location and physical setting of the Dewey Loeffel Landfill Site (Loeffel Site) and Loeffel Site Environs, followed by a summary of site operations history. Figure 1 presents a site location map, while Figure 2 presents a location plan of the site environs studied in the Phase II RI.

1.2.1 Location and Physical Setting

The Loeffel Site is located in a hilly rural area in southwestern Rensselaer County, approximately 4 miles northeast of the village of Nassau, New York (see Figure 1). With a total area of 11 acres, the Loeffel Site is capped, graded

to drain surface water from the site, and fenced to restrict access to two locked gates at the northeastern and northwestern ends of the site along Mead Road.

The Loeffel Site Environs includes those surface waters that surround the Loeffel Site, specifically, Mead Road Pond, Tributary T11A (the tributary between Mead Road Pond and Valatie Kill), Valatie Kill, Valley Stream, Nassau Lake, Smith Pond, Lyons Pond, and Mud Pond.

1.2.1.1 Topography and Drainage

The Loeffel Site lies in a valley between two hills, and the local topography allows surface water from the site to drain either toward the northwest or southeast. Surface water draining toward the northwest collects in a drainage channel that directs flow to a low lying area and then to Mead Road Pond. Water exiting Mead Road Pond flows via a small stream, known as Tributary T11A, which in turn flows into the Valatie Kill. The Valatie Kill flows in a southwesterly direction to Nassau Lake. Surface water draining from the site toward the southeast collects in drainage ways that direct flow to a small unnamed tributary (undesignated by New York State) and then into Valley Stream. Valley Stream flows into Smith Pond located about one mile from the site, which drains via the continuation of Valley Stream into Nassau Lake. The outlet flow from Smith Pond is underground for a short distance downstream of the pond.

The aforementioned tributaries are part of the Nassau Lake drainage basin. The Nassau Lake drainage basin consists of three subbasins—the Valatie Kill subbasin, Valley Stream subbasin, and a subbasin containing several areas of direct surface water runoff around portions of Nassau Lake.

Nassau Lake is a man-made reservoir with an area of approximately 173 acres. Water exiting Nassau Lake flows to the south into a downstream section of the

Valatie Kill. Nassau Lake lies approximately 2.5 miles from the Loeffel Site and is at an elevation of approximately 200 feet lower than the Loeffel Site (see Figure 1).

1.2.2 Site History

A description of the Loeffel Site and the Loeffel Site Environs is provided in Section 1.2 of the Phase I RI Work Plan (Blasland & Bouck, 1992b) and Section 1.2 of the Interim Phase I RI Report (Blasland & Bouck, 1993).

1.3 Document Organization

Section 2 presents Phase I and II RI background information, as well as Phase II RI sampling results for Mead Road Pond and Mead Road Pond Spoil Banks, Tributary T11A, Valatie Kill, and Nassau Lake. Section 3 presents conclusions of the Phase II RI activities.

2. RI Activities and Results

2.1 Mead Road Pond and Mead Road Pond Spoil Banks

2.1.1 Background

During Phase I RI activities, sediment samples were collected and analyzed to assess the spatial distribution of PCBs and other constituents in the Mead Road Pond and Mead Road Pond Spoil Banks. Summarized below are the Phase I RI activities and results; additional information regarding prior investigations of the Mead Road Pond and Mead Road Pond Spoil Banks are included in the Interim Phase I RI Report (Blasland & Bouck, 1993) and the Phase I RI Report (BBL, 1995).

As part of the 1992 Phase I RI activities, 11 sediment samples were collected from three cores (SDN-005-1S, SDN-005-2S, and SDN-005-3S) in Mead Road Pond. PCBs were detected in the surficial sediments (10 and 46 mg/kg) and in the sediment cores (0.5 to 15 mg/kg) to a depth of 2 to 3 feet (24 to 36 inches) below grade. Four surficial soil samples were also collected from the Mead Road Pond Spoil Banks (SDN-006-1S, SDN-006-2S, SDN-006-3S, and SDN-006-4S). The PCB concentration in these samples ranged from 0.12 to 84 mg/kg.

Based on the 1992 sampling results, three additional surficial soil samples were collected in 1994 (as part of the Phase I RI activities) from the Mead Road Pond Spoil Banks to further assess the spatial distribution of PCBs in the soils (SDN-006-5S, SDN-006-6S, and SDN-006-7S). The PCB concentration in the three samples ranged from 43 to 130 mg/kg.

The results of the Phase I RI samples indicated that the sediments of Mead Road Pond and the soil of the adjacent banks (believed to include sediments dredged from Mead Road Pond) contain elevated PCB concentrations relative to other locations within the Loeffel Site Environs. The horizontal and vertical extent of PCB and associated volume estimates for sediment and soil had a high relative degree of uncertainty. Based on these findings, the Phase II RI Work Plan

(BBL, 1996a) proposed the collection of sediment depth/thickness data from Mead Road Pond and additional characterization of the spoil banks. The purpose of the additional characterization of the spoil banks was to further define the horizontal and vertical extent of PCB-containing soil in this area and to determine whether or not a visual demarcation existed between the spoil bank materials and the underlying native soil.

2.1.2 Phase II Activities

Sediment probing activities were conducted in Mead Road Pond on October 15, 1996, to assist in identifying areas of sediment deposition. Probing was conducted in a 25-foot grid within the pond to estimate the thickness and volume of sediment deposits. The grid was established using conventional survey methods to lay out a baseline parallel to the long axis of the pond. Grid intervals were measured along the baseline and perpendicular grid lines that were established. The task was accomplished by wading in Mead Road Pond and probing for sediment deposit areas with a ½-inch diameter metal rod (calibrated in tenths of an inch) which was pushed by one person to refusal. The depth of the interface between easily penetrated soft sediment and underlying stiffer sediment was noted as well as the eventual refusal depth.

A core was collected below the depth of soft sediment to confirm that soft sediment thickness estimates made by probing would include all PCB containing material. This core was collected from the stiffer sediment/soil below Mead Road Pond using hand coring equipment at grid node E4 (SDN005-4S; Figure 3); this location is somewhat central to the overall dimensions of the pond. The 36- to 42-inch interval of the core, which was six inches below softer sediment, was sent for PCB analysis. As part of previous Phase I RI activities, the deepest interval collected for PCB analysis was the 24- to 36 inch interval (in core SDN005-1S and SDN005-2S).

In addition to the above, four cores were collected from the Mead Road Pond Spoil Banks located south/southwest of the pond (SDN006-1S, SDN006-5S, SDN006-6S, and SDN006-7S; Figure 3) using hand-coring equipment. Each core was visually inspected to determine whether or not a demarcation/transition exists between sediment materials and native soils. When a transition of sediment to native soil was visually evident, two samples were collected from that core at the transition between sediment and native soil (i.e., one 6-inch sample in the sediment prior to transition and one 6-inch sample in the underlying native soil just beneath the transition) and analyzed for PCBs. If the transition was not apparent in a given core, samples were taken for PCB analysis at the following depth intervals: 0- to 6-inch, 12- to 24-inch, 36- to 48-inch, and 60- to 72-inch.

2.1.3 Phase II Results

Table 3 and Figure 3 present the analytical results of the sediment sampling in Mead Road Pond and Mead Road Pond Spoil Banks.

2.1.3.1 Mead Road Pond

Probing was performed at 28 grid points in Mead Road Pond. Two layers of sediment were encountered during probing efforts: soft sediments in the upper few feet of the Pond; and stiff clayey underlying sediments. Total probed thickness ranged from approximately 0.5 to 10.6 feet, while soft sediment thickness ranged from approximately 0.5 to 3.5 feet. At the time of sampling, the maximum surface water depth in Mead Road Pond was less than one foot.

The results of the probing, including soft sediment thickness, total probed thickness, and physical description are provided in Table 1. Figure 3 presents the grid node locations, water depths, probing thickness information, and PCB data.

Figures 4 and 5 present the contours for total probed sediment thickness and soft sediment thickness, respectively.

Based on the contours presented on Figures 4 and 5, a total probed volume of approximately 2,800 cubic yards (cy) of material was calculated for Mead Road Pond. Of that volume, approximately 840 cy is considered "soft" sediment.

As part of Phase II RI efforts, one sample of stiff sediment underlying the soft sediment was obtained from Mead Road Pond for PCB analysis (Figure 3). PCBs were not detected in this sample (the detection limit was 0.045 mg/kg). Based on both Phase I and Phase II RI data, the average sediment PCB concentration in Mead Road Pond is 7.8 mg/kg. Data quality and validation are discussed in Appendix A.

2.1.3.2 Mead Road Pond Spoil Banks

Fourteen samples of spoil bank material were collected from four cores advanced in the Mead Road Pond Spoil Banks (Figure 3). PCB concentrations ranged from 0.14 to 410 mg/kg, with an arithmetic average of 52 mg/kg. PCBs in all samples were quantified as Aroclor 1260. Table 3 and Figure 3 present the PCB data for Mead Road Pond Spoil Banks.

Surficial (0- to 6-inch interval) samples were collected from three of the four cores. The PCB concentrations in two of the samples were lower than those in the surficial (0- to 3-inch interval) samples collected from approximately the same locations as in the Phase I RI (84 vs. 9 mg/kg [12 mg/kg duplicate] in core SDN006-1S and 120 vs. 9.1 mg/kg in core SDN006-5S). In one location (SDN006-6S), the concentrations were approximately the same (130 vs. 160 mg/kg).

A sample of native soil was scheduled to be collected from core SDN006-5S; however, due to the thickness of the overlying spoil and the limitations of the hand coring equipment, the sampling effort was terminated at the 6-foot depth. A PCB concentration of 410 mg/kg was detected in the 5 to 6 foot interval. As noted in Table 2, "dark grey to black silt and clay" material and "organic matter" were encountered in the 4 to 6 foot interval.

Based on the PCB concentration detected in the 5- to 6-foot interval of core SDN006-5S, the area was resampled to a greater depth using a different collection method. The additional sample collection efforts were discussed with the State, and State concurrence was obtained. GeoProbe™ sampling was conducted in very close proximity (i.e. within 5 feet) to the core SDN006-5S location to determine whether a visual demarcation existed between the organic material previously encountered and the native soils. The GeoProbe™ sampling extended an additional 9 feet beyond the previous 6-foot depth, for a total depth of approximately 15 feet. Table 4 presents a summary description of the materials encountered during the coring efforts.

At a depth of 12.5 to 13 feet, native material was apparent. A sample was collected from this interval of core SDN006-5S for PCB analysis. Analytical results were non-detectable (i.e., less than 0.037 mg/kg) for PCBs. Data quality and validation are discussed in Appendix A.

Based on both Phase I and Phase II data, the average PCB concentration in the Mead Road Pond spoil Banks is 52.7 mg/kg.

2.2 Tributary T11A

2.2.1 Background

During Phase I RI activities, five surficial sediment samples (0- to 3-inch interval) were collected and analyzed to assess the spatial distribution of PCBs

in Tributary T11A. PCBs were detected in these five samples ranging from 4.7 to 20 mg/kg.

2.2.2 Phase II RI Activities

As part of the Phase II RI, an intensive in-stream sediment probing survey was performed to determine the extent, volume, and characteristics of sediments in Tributary T11A. During the week of October 14, 1996, sediments were probed along 50 equally spaced transects along Tributary T11A (approximately every 40 feet along the length of the tributary). Four to six equidistant points were probed along each transect using a metal rod and hand-coring equipment to refusal. The transect locations were located by traversing up the middle of the tributary using conventional survey methods. Transects were established perpendicular to the bank of the tributary.

In addition, a field study was performed to assess the occurrence and extent of existing fine-grained sediment depositional areas. The field study was based on visual inspection of and comparison of these sediments to fine-grained, coarse-grained, and organic sediment texture classes, as defined by the Unified Soil Classification System (Kirkham, 1964). For the purpose of this investigation, "fine-grained" included fine-grained and organic sediment, while "coarse-grained" included coarse-grained sediment, cobbles, and boulders. The results of this field study were used to determine sampling locations for the collection of approximately 30 samples for PCB analysis to characterize PCB concentration and potential PCB mass in the sediment deposits.

The results of the sediment probing survey were forwarded to the NYSDEC on November 6, 1996 (GE, 1996a). Included with the results was the proposed selection of samples for PCB analysis. Following receipt of comments from NYSDEC and the State Attorney General's office (Belenz, 1996), a revised list

of proposed samples for collection and PCB analysis was submitted to the NYSDEC on November 21, 1996 (GE, 1996b).

Following verbal approval by the NYSDEC to proceed, samples were collected at Tributary T11A during the week of November 25, 1996 using Lexan™ core tubes/hand auger, driven to refusal. Cores were composited over their entire length for PCB analysis with the following exception. Six of the 32 sample locations were identified for analysis of the surficial (0- to 3-inch interval) sample interval separately from the remainder of the core. This additional sampling and analysis effort was performed as a supplement to the Phase II RI Work Plan.

Topographic data were also collected along selected sideslopes within Tributary T11A using conventional survey methods along the baseline that was established for the probing transects within the tributary. This information may be useful when evaluating the potential future remedial alternatives, if any, for this area.

2.2.3 Phase II RI Results

2.2.3.1 Probing Results

The results of the in-stream sediment probing survey, including sediment thickness, description, and classification are presented in Table 5 and displayed with PCB results in Table 6.

Based on the results of the probing efforts, a total of six general classifications of materials were described by field personnel that were then re-categorized under the Unified Soil Classification System. The classifications are as follows:

Class	Sediment Classification	Unified Soil Classification System
0	Rock, gravel	No classification
1	Gravel with some sands	No classification
2	Medium to coarse sands	Coarse-grained
3	Fine sands with trace medium to coarse sands	Coarse-grained
4	Silts, fine sands	Fine-grained
5	Silts, organic matter	Fine-grained

A total of 251 locations were probed along the 50 transects. The probing data were categorized as follows: 72 locations contained Class 2 sediments (29 percent), 66 locations contained Class 4 sediments (26 percent), 42 locations contained Class 3 sediments (17 percent), 35 locations contained Class 0 sediments (14 percent), 23 locations contained Class 1 sediments (9 percent), and 13 locations contained Class 5 sediments (5 percent).

With a total sediment volume of approximately 505 cy in Tributary T11A, the estimated volume of sediments present in each class is as follows:

Class	Estimated Volume of Sediment
0	12 cy
1	30 cy
2	127 cy
3	122 cy
4	173 cy
5	41 cy

Based on volume considerations, approximately 50 percent of the sediments were classified as coarse-grained.

Using the general classification descriptions, transect identifications designated as "rock, gravel" (Class 0) or "gravel with some sands" (Class 1) were eliminated from sampling considerations. The remaining sediment probing locations were grouped based on the two Unified Soil Classifications (i.e., fine-

grained and coarse-grained). Thirteen locations from each of the two classifications were selected using random number generation.

Four additional sampling locations were selected in areas that appeared to have relatively large sediment volume per unit length of stream to ensure evenness of sample distribution. Six samples were also identified for surficial sample collection (0- to 3-inch interval) based on the relatively thin layer of sediment present in select areas. Two additional locations were selected due to their sediment probing descriptions in response to comments received by the NYSDEC. Therefore, a total of 38 sample locations along 27 transects were identified (Figure 6) for PCB analysis.

2.2.3.2 Analytical Results

Table 6 and Figure 6 present the analytical results of the sediment sampling in Tributary T11A. A total of 38 samples (plus three duplicates) were submitted to ITS for PCB analysis. Reported PCB concentrations range from 0.18 to 160 mg/kg, with an average concentration of 19 mg/kg. All sample PCB concentrations, except two, were quantified as Aroclor 1260. Two samples (T-8-6 at 0 to 15.5 inches and T-10-5 at 0 to 8.5 inches) were quantified as a combination of Aroclor 1260 and Aroclor 1248. PCB concentrations in the 17 fine-grained samples ranged from 0.18 to 160 mg/kg, with an average concentration of 28 mg/kg. PCB concentrations in the 21 coarse-grained samples ranged from 0.59 to 62 mg/kg, with an average concentration of 11 mg/kg. Data quality and validation are discussed in Appendix A.

2.2.3.3 Topographic Results

As part of the Phase II RI, five transects were identified along Tributary T11A (Transects A through E, respectively) for topographic elevation data compilation. The five transects were chosen to represent, in cross-section, the

relative gradient from top to toe of bank along the ravine which Tributary T11A traverses. General sideslopes ranged from 1.1H:1V (horizontal:vertical) to 3.6H:1V along the tributary, as shown in Table 7. The general slope of the tributary itself (as measured via transects along the creek bed) ranged from 15H:1V to 23H:1V, as shown in Table 8.

2.3 Valatie Kill

2.3.1 Background

As part of the Phase I RI, surface water, sediment/soil, and biota sampling and analyses were completed at Valatie Kill between China Hill Pond and Nassau Lake. These Phase I RI activities included sediment characterization along the Valatie Kill, and specific sediment and biota testing at the China Hill Road crossing, Mead Road crossing, Areas 19 and 28, the Averill Road/Nassau Road gage station, and the inlet to Nassau Lake. These investigations are described in detail in the Phase I RI Report (BBL, 1995), and a brief summary of the results of those investigation results pertinent to the Phase II activities is presented below.

PCBs were detected in surficial sediments in the Valatie Kill between the Tributary T11A confluence and Nassau Lake generally at concentrations less than 8 mg/kg, with the higher concentrations associated with areas of fine-grained sediments. However, within a former impoundment in Area 28 along the Valatie Kill, PCBs were detected at higher concentrations in sediments (depths of up to 5 feet). In surficial sediments within the stream channel in Area 28, PCB concentrations of up to 17 mg/kg were detected. The maximum sediment PCB concentration detected along a sideslope within Area 28 (48 mg/kg) was at a depth of 0.5 to 1.0 feet below existing grade.

Historically, Area 28 was apparently impounded during a period of time when PCB transport in the Northern Drainage Basin was occurring at much higher rates than present. During that period, Area 28 functioned as a depositional zone,

apparently trapping a relatively large amount of PCBs that were being transported. Based on these findings, the RI Phase I Report identified the need to better assess the volume of sediment deposited in Area 28.

Also, as described in the Phase I RI Report, two soil samples collected in September 1994 from a residential property within Area 19 of the Valatie Kill indicated the presence of PCBs at concentrations of 5.1 and 3.6 mg/kg (Figure 7). The Phase I RI Report identified the need to further define the extent of PCBs in the surficial soil at this property for use in a baseline risk assessment for the site environs.

2.3.2 Phase II RI Activities

As specified in the Phase II RI Work Plan, Phase II RI activities at Valatie Kill consisted of surficial soil sampling from a residential property within Area 19 and sediment probing in the Area 28 impoundment. Both activities are described below.

2.3.2.1 Area 19 Soil Sampling

During Phase II RI efforts, two surficial soil grab samples (0- to 3-inch depth) (SD8-19-3 and SD8-19-4) were collected from the residential property in Area 19 (Figure 7) and analyzed for PCBs by Inchcape Testing Services of Colchester, VT. The samples were collected somewhat further away from the Valatie Kill than the previous two samples obtained from Area 19 (samples SD8-19-1 and SD8-19-2; refer to BBL, 1995).

2.3.2.2 Area 28 Sediment Probing

In October 1996, the Area 28 impoundment sediments were probed to assess deposit thickness and volume. Field probing was conducted in a grid pattern (40

probing locations on a 20-foot by 20-foot grid) within the impoundment to identify the extent of sediment deposits. Similar to the grid pattern established for Mead Road Pond, conventional survey methods were used for Area 28. A baseline was established parallel to the long axis of Area 28. Grid intervals were measured along the baseline and perpendicular grid lines were established from these points. This task was accomplished by probing for sediment deposit areas with a metal calibrated rod (i.e., pushing to refusal). Areas that were penetrable with the ½-inch diameter metal calibrated rod (calibrations in tenths of a foot) were considered sediment deposits.

Physical information and areas of significant deposition were recorded in field notes during probing. The data generated during this reconnaissance are presented on the surveyed grid on Figure 8.

2.3.3 Phase II RI Results

2.3.3.1 Area 19 Surficial Soil Sampling

Table 9 and Figure 7 present the results of the sediment sampling at Area 19. Analysis of the two surficial soil samples collected from Area 19 indicated PCB concentrations of 1.4 and 0.084 mg/kg at SD8-19-3 and SD8-19-4, respectively. As mentioned previously, the samples were collected further away from the stream bank than the samples previously collected as part of Phase I RI efforts. When compared to the Phase I RI data, the Phase II RI data indicate a decreasing PCB concentration in surficial soils with increasing distance from the Valatie Kill banks. Data quality and validation are discussed in Appendix A.

2.3.3.2 Area 28 Sediment Probing

Table 10 and Figure 8 present the results of the sediment depth probing conducted in October 1996 in the Area 28 impoundment. Probing was

conducted at 40 locations on a 20-foot by 20-foot grid that encompassed Valatie Kill, a terrace deposit on the northern bank of the Valatie Kill, and an area southeast of the Valatie Kill. The greatest sediment depths (5.9 feet) were found in the eastern portion of the terrace deposit area, west of a bend in Valatie Kill. Sediments in the terrace deposit range in depth from 2.7 to 5.9 feet. Sediment depths within the Valatie Kill in this area range from 0.3 feet to 2.5 feet, while sediment deposits on the eastern sideslope of the Valatie Kill range from 0.5 to 1.8 feet in depth. Based on the probing data, approximately 1,800 cy of sediment exists in Area 28 of the Valatie Kill (volume estimate includes the terrace deposit on the northern bank of the Valatie Kill).

2.4 Nassau Lake

2.4.1 Background

As part of the Phase I RI for the site environs, surface water, sediment, and biota investigations were completed at Nassau Lake. Detailed results of those investigations are provided in the Phase I RI Report (BBL, 1995). The results pertinent to the Phase II activities are summarized below.

During Phase I RI activities at Nassau Lake, PCBs were not detected in surface water, but were detected in surface sediment samples (0- to 3-inch depth) varying from 0.28 to 4 mg/kg. Sediment PCB concentrations showed a decreasing trend between the Valatie Kill inlet and the Nassau Lake dam. Similar to the surficial sediment PCB data, a spatial gradient existed in the subsurface PCB data collected from the sediment traps (2.8 mg/kg in the northern location to less than 0.4 mg/kg at the southern location). These data corresponded to the PCB concentrations in the 0- to 0.5-inch sections of three finely-sectioned sediment cores collected from the lake, which ranged from less than detectable to 2.5 mg/kg.

Additional data needs were identified based upon discussions with NYSDEC.

Results of finely-sectioned cores collected in 1993 illustrated ongoing natural recovery processes, with PCB concentrations decreasing towards the sediment-water interface. Additional surficial sediment PCB concentration measurements were proposed to assess the evidence for continued natural recovery since the 1993 sample collection. In addition, other physical and chemical characterization data needs were identified in relation to other remedial alternatives which might be considered.

2.4.2 Phase II RI Activities

The Phase II RI Work Plan proposed that three composite Nassau Lake sediment samples be analyzed for PCBs, total organic content (TOC), Beryllium (Be-7) and Cesium (Cs-137) to provide further chemical data for evaluation of potential remedial alternatives. Furthermore, while prior investigations have defined the horizontal and vertical extent of PCBs in Nassau Lake sediments, to update the existing PCB mass balance model of Nassau Lake and the evaluation of potential remedial alternatives for the lake as part of future feasibility study activities, various sediment characterization tests on lake sediments were proposed in the Phase II RI Work Plan, as follows:

1. Geotechnical characterization to determine the geotechnical properties of the sediments for engineering analyses;

2. Elutriate testing to assess potential chemical and nutrient releases into the water column and to assess sediment processing facilities during potential sediment removal activities;

3. Sediment settleability testing to determine the settling rate and bulking factor for potentially removed sediments; and

4. Sediment oxygen demand (SOD) testing to assess the impact of potential sediment removal on undissolved oxygen concentrations in the lake.

Table 11 provides a summary of analyses performed on the samples collected from Nassau Lake.

2.4.2.1 PCB, TOC, Cs-137, and Be-7 Testing

To complement existing sediment characterization of Nassau Lake, BBL collected three composite surface sediment samples in October 1996 from the lake in the vicinity of sampling location SDN007-4S and three composite surface sediments in December 1996 from the lake in vicinity of sampling location SDN007-9S (Figure 9). Based on analytical difficulties associated with the SDN007-9S sediment samples (refer to Appendix A regarding Data Quality and Validation), a third series of composite sampling was conducted in January 1997 at the lake, also in the vicinity of SDN007-9S (Figure 9). Composite samples from each event were produced by combining nine discrete sediment samples into groups of three in the field. The discrete sediment samples were collected using 3-inch diameter Lexan™ plastic core tube, extruding the uppermost 0.5 inch of sediment. All surface sediment composite samples were submitted for PCB, TOC, Cs-137, and Be-7 analyses.

2.4.2.2 Geotechnical Characterization

Sediment cores were retrieved from the lake (total volume of approximately 15 gallons of sediment taken in the vicinity of sample location SDN007-4S) and tested to assess water content, consolidation properties, strength, and other physical properties.

2.4.2.3 Elutriate Testing

One composite sediment sample was collected and mixed with water in a closed system to simulate the release of chemicals resulting from potential sediment removal activities. The mixture was analyzed for nitrogen, phosphate, and biological oxygen demand (BOD_5) parameters.

2.4.2.4 Sediment Settleability Testing

Two sediment samples were mixed with water and placed in 6-foot columns to estimate sedimentation rates by monitoring suspended sediment concentration over time within the column.

2.4.2.5 Sediment Oxygen Demand Testing

The Phase II RI Work Plan specified that SOD testing be conducted on two sediment cores in accordance with ASTM STP 976 methods (no specific method identified). Upon receipt by the laboratory, the SOD testing was conducted as adapted from the "Procedures For Handling and Chemical Analysis of Sediment and Water Samples", *U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS 1981.* Two sediment cores (one including the top two feet and the other including the remainder of the core) were analyzed for SOD.

2.4.3 Phase II RI Results

2.4.3.1 PCB, TOC, Cs-137, and Be-7 Testing

Table 12 presents the PCB, TOC, Cs-137, and Be-7 results of the sediment sampling at Nassau Lake. PCB results are also presented on Figure 9. Data quality and validation are discussed in Appendix A.

- **PCB Analysis**

  PCBs were detected in the three October 1996 composite surface sediment samples analyzed, ranging in concentration from 1.1 to 1.7 mg/kg (1.4 mg/kg duplicate). PCBs were also detected in four composite sediment samples (including duplicate) collected in January 1997, ranging in concentration from 0.56 to 2.4 mg/kg. The low levels of PCBs that were detected in surficial sediment is consistent with progressive natural recovery processes in Nassau Lake. This is substantiated by the fact that these low concentrations exist, even after a significant runoff event from the Valatie Kill to Nassau Lake in January 1996 (flow of 745 cfs, corresponding to an approximate 10-year event, according to the Valatie Kill gaging station).

- **TOC Analysis**

  Nine sediment samples collected in October and December 1996 and January 1997 were analyzed for TOC with concentrations ranging from 34,700 to 111,000 mg/kg (dry weight) or 3.5 percent (%) to 11 %.

- **Cs-137 Testing**

  Nine sediment samples collected in October and December 1996 and January 1997 were analyzed for Cs-137. Cs-137 was detected in all nine of the samples, ranging in concentration from 0.89 to 1.74 picocurie per gram (pci/g).

- **Be-7 Testing**

  Nine sediment samples collected in October and December 1996 and January 1997 were analyzed for Be-7. Be-7 was detected in two of the samples, at concentrations of 1.5 and 2.5 pci/g.

  Be-7, which has a relatively short half-life (54 days), is useful to confirm recently deposited sediment. The January 1996 runoff event from the Valatie Kill to Nassau Lake (referenced above) was probably the predominate

contributor of sediment to the lake in 1996. Given the time between this event and the sampling (almost one year later), the low detection frequency of Be-7 is not surprising.

2.4.3.2 Geotechnical Characteristics

Sediment samples SDN007-4S-1 and SDN007-4S-3 were analyzed for geotechnical parameters including consolidation, shear, moisture content, density, gradation, moisture, ash, and organic content, Atterberg limits, and specific gravity. Appendix B contains the complete laboratory results for these tests and analyses. A summary of these analyses is included below.

Consolidation Test Results	
Pressure	**Consolidation**
SDN007-4S-1	
0.10 Ksf 6.40 Ksf End of test (0-Ksf)	13% 70% 65%
SDN007-4S-3	
0.2 Ksf 3.2 Ksf End of Test (0-Ksf)	11% 60% 42%

- **Consolidation Testing**

  Sample SDN007-4S-1 was classified as a light brown organic silt (OH) with an initial moisture content of 262 percent. In a one-dimensional consolidation test (ASTM D 2435-92), this sample compressed 38 percent under a pressure of 0.4 kip per square foot (Ksf) and 74 percent under a pressure of 6.40 Ksf (note that 1 kip is equal to 1,000 pounds of force). The sample remained at 65 percent consolidation after unloading at the end of the test. Sample SDN007-4S-3, a black fibrous silty peat (Pt) of 700 percent initial moisture content, almost reached a 60 percent consolidation under a pressure of 3.2 Ksf. This sample remained at 42 percent consolidation after unloading.

The initial void ratios (e_o) were 6.1 and 16.6 for samples SDN007-4S-1 and SDN007-4S-3 with corresponding coefficient of compression (C_c) values of 1.6 and 9.6. A coefficient of consolidation (C_v) value of 0.02 ft^2/day was obtained at a load of 3.2 Ksf for sample SDN007-4S-1 and a C_v value of 0.01 ft^2/day was obtained at a load of 1.6 Ksf for sample SDN007-4S-3.

Sediment Shear Strength Test Results	
SDN007-4S-1	2.5 & 4.0 psf
SDN007-4S-3	2.5 & 2.7 psf

- **Sediment Shear Strength**

Laboratory vane shear tests [ASTM D 2573 (1980)] were conducted to determine the undrained shear strength of the two sediment samples. In two tests, sample SDN007-4S-1 was found to have peak shear strengths of 2.5 and 4.0 pounds per square foot (psf), while sample SDN007-4S-3 testing resulted in peak shear strengths of 2.5 and 2.7 psf.

Sediment Density Results	
SDN007-4S-1	Wet density = 65.6 pcf Dry density = 9.5 pcf
SDN007-4S-3	Wet density = 65.6 pcf Dry density = 9.2 pcf

- **Sediment Density**

Moisture content determination (ASTM D 2216-92) was used to determine the wet and dry densities of the two sediment samples. Sample SDN007-4S-1 was determined to have an average wet density of 65.6 pounds per cubic foot (pcf) and an average dry density of 9.5 pcf, and sample SDN007-4S-3 was determined to have a wet density of 65.6 pcf and a dry density of 9.2 pcf. The consolidation test samples had initial wet densities of 72.0 pcf and 64.8 pcf and dry densities of 19.9 pcf and 8.1 pcf for samples SDN007-4S-1 and SDN007-4S-3, respectively.

Sediment Gradation Results
SDN007-4S-1
Sieve Testing: 100% passing #10 sieve; over 90% passing #200 sieve
Hydrometer Testing: 25% silt and clay particles between 0.075 and 0.02 mm in diameter, with 30% from 0.015 to 0.01 mm, 10% between 0.01 and 0.0015 mm, and 25% smaller than 0.0015 mm in diameter
SDN007-4S-3
Sieve Testing: 100% passing #10 sieve; over 90% passing #200 sieve
Hydrometer Testing: 70% silt and clay particles between 0.075 mm and 0.0015 mm in diameter and 25% smaller than 0.0015 mm in diameter

- **Sediment Gradation**

Both samples SDN007-4S-1 and SDN007-4S-3 were reported to have 100 percent passing a U.S. Standard #10 Sieve and over 90 percent passing a #200 sieve.

Hydrometer testing of the two sediment samples showed that sample SDN007-4S-1 contained approximately 25 percent silt and clay particles between 0.075 mm and 0.02 mm in diameter, with 30 percent from 0.015 to 0.01 mm, 10 percent between 0.01 and 0.0015 mm, and 25 percent smaller than 0.0015 mm in diameter. Sample SDN007-4S-3 was more uniformly graded, containing approximately 70 percent silt and clay particles between 0.075 mm and 0.0015 mm in diameter and 25 percent smaller than 0.0015 mm in diameter.

Moisture, Ash, and Organic Content		
Moisture	Ash	Organic
SDN007-4S-1		
551.0%	63.0%	37.0%
SDN007-4S-3		
546.6%	69.4%	30.6%

- **Moisture, Ash, and Organic Content**

Both sediment samples were analyzed for moisture, ash and organic content using Method ASTM D 2974-87. Sample SDN007-4S-1 was found to have a moisture content of 551.0 percent in this test, an ash content of 63.0 percent, and an organic content of 37.0 percent. Sample SDN007-4S-3 was found to have a moisture content of 546.6 percent, an ash content of 69.4 percent, and an organic content of 30.6 percent. The samples for consolidation testing had initial moisture contents of 262.0 percent and 700.0 percent for samples SDN007-4S-1 and SDN007-4S-3, respectively.

Sediment Atterberg Limits	
Liquid Limit	Plasticity Index
SDN007-4S-1	
348	192
SDN007-4S-3	
292	133

- **Sediment Atterberg Limits**

Sample SDN007-4S-1 was found to have a liquid limit of 348 and a plasticity index of 192. Sample SDN007-4S-3 was found to have a liquid limit of 292 and a plasticity index of 133. These two parameters confirm the composition of these sediment samples as high plasticity organic silts and clays.

Specific Gravity	
SDN007-4S-1	2.32
SDN007-4S-3	2.37

- **Sediment Specific Gravity**

The specific gravity of the two samples was determined using Method ASTM D-854. Sample SDN007-4S-1 had a specific gravity of 2.32 and sample SDN007-4S-3 had specific gravity of 2.37.

Elutriate Testing	
Chemical	Concentration
SDN007-4C	
Nitrate/nitrate Nitrate Ammonia Total Phosphate BOD_5	0.03 mg/l 0.005 mg/l 0.98 mg/l 0.48 mg/l 5.7 mg/l

2.4.3.3 Elutriate Testing

Composite sample SDN007-4C was collected in October 1996 and submitted for elutriate testing. Nitrogen concentrations were reported as follows: 0.03 milligrams per liter (mg/l) as nitrate/nitrite (Method 353.2), 0.005 mg/l as nitrite (Method 354.1), and 0.98 mg/l as ammonia (Method 350.2). The total phosphate (as phosphorous - Method 365.2) concentration was 0.48 mg/l, and the BOD_5 was 5.7 mg/l (Method 405.1) for the sample.

Sediment Settleability	
Sediment Suspended	Minutes Elapsed
SDN007-4S-1	
75% 50% 25%	4 23 480
SDN007-4S-3	
75% 50% 25%	8 45 480

2.4.3.4 Sediment Settleability - Hydrometer Testing

For sample SDN007-4S-1, approximately 75 percent of the sediment material remained suspended after 4 minutes in the soil-water mixture, 50 percent remained suspended after 23 minutes, and 25 percent (particles below 0.0015 mm in diameter) remained suspended after 480 minutes. For sample SDN007-4S-3, approximately 75 percent of the sediment material remained suspended after 8 minutes in the soil-water mixture, 50 percent remained suspended after 45 minutes, and 25 percent (particles below 0.0015 mm in diameter) remained suspended after 480 minutes.

Sediment Oxygen Demand	
Sample Depth	Result
SDN007-4S	
0-2 feet	3,200 mg/kg
2-3.5 feet	4,000 mg/kg

2.4.3.5 Sediment Oxygen Demand

The two discrete sediment samples collected at depth [SDN007-4S (0-2 feet) and SDN007-4S (2-3.5 feet)] were analyzed for SOD. The former sample exhibited a SOD of 3,200 mg/kg (dry weight) and the latter 4,000 mg/kg (dry weight). Note that the results are based on a five-day test and expressed in terms of mass of oxygen demand per mass of sediment. This would be appropriate to determine the oxygen demand which would occur in the water column as a result of resuspension. An area-normalized method would be more appropriate to in-situ sediment bed. If a one centimeter (cm) layer of sediment is assumed to contribute to the in-situ SOD, the respective SOD values on an area basis would be 1.02 grams per square meter per day ($g/m^2/day$) for the upper (0-2 feet) sediment sample and 1.12 $g/m^2/day$ for the lower (2-3.5 feet) sediment sample.

Settling Column Testing (USACE Method)	
Suspended Sediment Conc.	**Time for Settlement to Occur**
145 g/l	Did not occur; test abandoned after 19 days
6 g/l	5 days (1g/l remaining in water column)

2.4.3.6 Settling Column Testing

In accordance with United States Army Corps of Engineers (USACE) guidance (USACE 1978), settling column testing was performed for approximately 15 gallons of sediment, collected from Nassau Lake in the vicinity of sample SDN007-4. Two test "runs" were conducted. In the first test run, a suspended solids concentration of approximately 163 grams per liter (g/l) was added to a 6-foot tall settling column (approximate concentration based on USACE guidance, 1978, for discharge rates into a settling basin). Following 19 days of testing, little or no suspended solids/water interface had been established within the column apparatus, and the first test run was abandoned. In the second test run, a suspended solids concentration of 6 g/l was added to the settling column. Following five days of gravity settling, the water above the solids was tested to be at 1 g/l.

The above tests suggest that the suspended solids concentration for Nassau Lake during potential sediment removal operations is likely to be high, and will remain high (i.e., marginal settlement following resuspension) for a significant timeframe following completion of such activities. The results of the two settling column tests will be further assessed as part of the FS process for Loeffel Site Environs.

3. Summary and Conclusions

3.1 Phase II RI Results

A summary of the results for the Phase II RI efforts is as follows:

- Additional sampling and analysis of spoil materials associated with the Mead Road Pond spoil banks confirmed visual demarcation of spoil material versus native underlying soil. Spoil volume is estimated to be 1,200 cy.

- Additional probing, sampling, and analysis of Mead Road Pond sediments confirmed soft sediment and stiff underlying material volumes within the pond and indicated low but detectable PCBs only in the upper soft sediment. Total sediment and soft sediment volumes are estimated to be 2,800 and 840 cy respectively.

- Sediment probing within Tributary T11A confirmed sediment thicknesses and volumes within the tributary; additional sampling and analysis confirmed an average PCB concentration in sediment that was slightly higher than previously reported as part of Phase I RI efforts (19 mg/kg versus 12 mg/kg).

- Additional sampling and analysis within Area 19 of the Valatie Kill indicated an average PCB concentration in this relatively small area of flood plain to be 0.74 mg/kg.

- Results of sediment probing within Area 28 of the Valatie Kill were used to estimate a total sediment volume of 1,800 cy in this area.

- Nasssau Lake sediment analytical characterization indicated low levels of PCB in surficial sediment following a major runoff event (January 15, 1996 flow event approximately a 10-year reoccurrence interval), consistent with progressive natural recovery processes.

- Nassau Lake geotechnical characterization concluded sediment to be very soft, low-bearing capacity materials that have poor settleability characteristics. Such information will be used for data interpretation for feasibility study of Nassau Lake sediments.

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Tables

Table 1
General Electric Company - Albany, New York
Loeffel Site Environs Phase II RI Report

Mead Road Pond - Summary of Probing Data[1]

Grid Node	Water Depth (ft)	Soft Sediment Thickness (ft)	Total Sediment Thickness (ft)	Description
A-2	0.3	3.5	7.3	Soft silt
B-2	0	1.4	5.7	Soft silt
B-3	0	1.6	7.7	Silt and sand
B-4	0.3	2.0	4.3	Silt and clay
B-5	0	1.4	3.5	Silt and clay
C-2	0.2	1.4	2.0	Silt and clay on top of rock
C-3	0.3	2.5	10.6	Silt and clay
C-4	0.6	2.4	9.2	Silt and clay
C-5	0.3	1.2	8.6	Silt and clay
D-2	0.3	0.9	2.0	Silt and clay
D-3	0.7	2.6	8.0	Silt and clay
D-4	0.7	2.3	9.2	Soft silt and clay
D-5	0.8	2.3	10	Soft silt and clay
D-6	0.5	2.6	7.5	Silt and clay
D-7	0.1	1.4	8.0	Silt and clay
E-2	0.1	1.3	1.5	Silt and clay
E-3	0.8	1.9	2.2	Silt and clay
E-4(SDN005-4S)[2]	0.8	2.5	6.0	Soft silt and clay
E-5	0.9	3.0	8.1	Soft silt and clay
E-6	0.5	1.9	7.1	Silt and clay
E-7	0.1	1.6	6.0	Silt and clay
F-2	0.1	2.4	2.9	Silt and clay
F-3	0.3	2.6	2.9	Silt and clay
F-4	0.7	2.5	6.3	Silt and clay
F-5	0	1.1	1.5	Silt and clay
F-6	0.2	1.5	2.5	Silt and clay
F-7	0	1.3	3.0	Silt and clay
G-2	0.5	0.5	0.5	Silt and clay (pond outlet)

Notes:

1. Results of probing activities taken from BBL field notes dated October 15, 1996.
2. A sample from this core was sent for PCB analysis. See Table 3 for additional information.

Table 2
General Electric Company - Albany, New York
Loeffel Site Environs Phase II RI Report

Mead Road Pond and Mead Road Pond Spoil Banks - Summary of Field Data

Location	Depth (in)	Description[2]
Mead Road Pond		
SDN005-4S	36-42[1]	Light brown silty clay
Mead Road Pond Spoil Banks		
SDN006-1S	0-6	Brown silt, trace clay, roots
	6-12	Brown silt, trace clay, gravel
	12-18[1]	Brown silt and fine sand, trace gravel
	18-24[1]	Brown/grey fine to medium sand and silt, trace gravel
	24-30[1]	Grey fine to medium sand, silt, trace clay
	30-36	Grey fine to medium sand, silt, trace clay
	36-42	Grey fine to medium sand, silt, trace clay
	42-48	Grey fine to medium sand, silt, trace clay
	48-54	Grey fine to medium sand, silt
SDN006-5S[3]	0-6[1]	Brown silt and clay
	6-12	Brown clay with silt
	12-18[1]	Brown clay
	18-24[1]	Brown clay, silt and fine sand
	24-30	Brown silt and clay, trace fine sand
	30-36	Brown silt with clay, trace fine sand
	36-42[1]	Brown silt and clay on top of dark grey silt and clay
	42-48[1]	Dark grey silt with clay, organic odor
	48-54[1]	Dark grey to black silt, trace clay
	54-60[1]	Dark grey to black silt, trace clay
	60-66[1]	Dark grey to black silt, organic matter, leaves
	66-72[1]	Dark grey silt and clay
SDN006-6S	0-6[1]	Brown silt, organic matter, roots
	6-12	Brown silt
	12-18[1]	Brown silt, trace fine sand, gravel
	18-24[1]	Brown silt on top of dark grey silt with clay
	24-30	Brown silt with clay
	30-36	Brown/dark brown silt with clay
	36-42[1]	Light brown silt, trace clay and fine sand
	42-48[1]	Brown silt and fine sand, trace medium sand
	48-54	Brown silt and fine sand
	54-60	Brown silt and fine sand, trace medium sand, gravel
	60-66[1]	Brown silt with clay
	66-72[1]	Brown silt with clay

Table 2
(Cont'd)
General Electric Company - Albany, New York
Loeffel Site Environs Phase II RI Report

Mead Road Pond and Mead Road Pond Spoil Banks - Summary of Field Data

Location	Depth (in)	Description[2]
SDN006-7S	0-6	Brown silt with clay
	6-12	Brown silt with clay
	12-18	Brown silt with clay
	18-24	Brown silt with clay
	24-30	Brown silt with clay, trace gravel
	30-36[1]	Brown silt and clay on top of tan silt, clay, trace very fine sand
	36-42[1]	Tan silt and very fine sand, trace sand and gravel
	42-48	Tan silt and very fine sand, trace gravel
	48-54	Tan silt with fine sand, trace gravel
	54-60	Tan silt with fine sand, trace gravel

Notes:

1. A sample from this interval was sent for PCB analysis. See Table 3 for additional information.
2. Results of field activities taken from BBL field notes dated October 15 and 16, 1996.
3. At location SDN006-5S, additional GeoProbe samples were taken on November 8, 1996 by GeoTrans from 0 to 180 inches. See Table 4 for additional information.

Table 3
General Electric Company - Albany, New York
Loeffel Site Environs Phase II RI Report

Mead Road Pond and Mead Road Pond Spoil Banks - Summary of Analytical Results
[Concentrations are presented in milligrams per kilogram, mg/kg dry weight]

Sample ID	Depth (in)	Total Aroclors
Mead Road Pond		
SDN005-4S	36-42	ND(0.045)
Mead Road Pond Spoil Banks		
SDN006-1S	12-18	9.0[12]
	18-24	0.25
	24-30	0.40
SDN006-5S	0-6	9.1
	12-24	3.9
	36-48	31
	48-60	73
	60-72	410
	150-156 (See Note 4)	ND(0.037)
SDN006-6S	0-6	160
	12-24	18
	36-48	3.0
	60-72	3.2
SDN006-7S	30-36	5.6 [5.2]
	36-42	0.14

Notes:

1. Except as specifically noted, samples were collected by BBL on October 15, 1996, and submitted to Inchcape Testing Services for PCB analysis.
2. ND(0.037)-Compound was analyzed for, but not detected. The detection limit is shown in parenthesis.
3. Duplicate results are presented in brackets.
4. Sample collected by GeoTrans, Inc. on November 8, 1996 using GeoProbe sampling equipment. Sample submitted to Inchcape Testing Services for PCB analysis. See Table 4 for additional information.
5. All detections quantified as Aroclor 1260.

Table 4
General Electric Company - Albany, New York
Loeffel Site Environs Phase II RI Report

Mead Road Pond Spoil Banks - Summary of GeoProbe Field Data

Depth (in)	Sediment Recovered (in)	Description
0-48	2.9	Moist, pale, greyish-brown till (fill), loose fine sand and silt, some coarse sand, few fine gravel and cobbles, some roots and twigs throughout entire sample, last 4" exhibits some grey staining.
48-96	4.0	Same to 60", moist, medium dark grey to black (stained) till/fill, higher percentage of fines, horizontal bands of light and dark. Vertical soil fracture, stained bright light-brown (52-59"), two photos. Transition at 77" into pale yellowish brown and greyish orange fine to medium sand, trace coarse sand.
96-144	2.2	Same to 101". 101" to 105": moist, greenish grey fine sand, some coarse sand, few silt, trace fine gravel. 105" to 115": greyish orange-dark yellowish orange, horizontally banded fine sand and silt. Rest: black and light grey ash with some pale brown sand and silt.
144-180[2]	2.3	Same to 146". 146" to 151": dry, moderate to greyish brown medium sand, few fine sand/ash. 151" to 157": greyish black and black ash. 157" to 166"': dry. moderate yellowish orange and moderate brown fine and medium sand, trace coarse sand. Rest: firm, dry, olive-greenish grey, silt. and fine sand, some coarse sand, trace fine gravel, possible native till (sampled this zone).

Notes:

1. Results of field activities taken from GeoTrans field notes dated November 8, 1996 (GeoTrans, 1996).
2. A sample from 150 to 156 inches was sent for PCB analysis. See Table 3 for additional information.

Table 5
General Electric Company - Albany, New York
Loeffel Site Environs Phase II RI Report

Tributary T11A - Summary of Detailed Sediment Probing Survey Field Data(1)

ID	Distance from Northeast Edge of Bank (ft) (2)	Water Depth (ft)	Sediment Thickness (ft)	Sediment Classification(3)	Sediment Description
T-1-1	0	0.0	1.9	3	silt and fine sand, trace medium to coarse sand, gravel, brown
T-1-2	1	0.1	1.2	4	silt with fine sand, trace coarse sand, gravel, brown
T-1-3	2	0.3	0.2	0	gravel, rock
T-1-4	3	0.4	1.0	1	gravel/rock, trace fine sand and silt at bottom
T-1-5	4	0.0	1.5	1	gravel/rock mixed with silt
T-1-6	5	0.0	1.0	0	gravel/rock
T-2-1	0	0.0	1.0	3	silt and fine sand trace medium to coarse sand, gravel, brown
T-2-2	2	0.1	0.2	0	rock/gravel
T-2-3	4	0.05	0.2	4	silt, fine sand, medium to coarse sand and gravel, brown
T-2-4	6	0.0	0.7	3	fine sand and silt trace coarse sand and gravel, brown
T-2-5	8	0.0	1.7	4	silt, roots, organic matter, trace gravel, bank material, brown
T-3-1	0	0.0	0.5	4	silt and fine sand on top rocks, brown
T-3-2	2.25	0.0	1.5	3	silt and fine sand trace medium to coarse sand (between rocks), brown
T-3-3	4.5	0.2	1.3	2	medium to coarse sand, gravel, trace fine sand and silt, brown
T-3-4	6.75	0.3	1.6	2	medium to coarse sand, gravel, trace fine sand and silt, brown
T-3-5	9	0.0	1.0	4	silt and fine sand trace medium to coarse sand, gravel, brown
T-4-1	0	0.1	0.8	3	fine to medium sand and silt, trace coarse sand and gravel
T-4-2	2	0.1	0.3	2	medium to coarse sand, gravel, trace fine sand, brown
T-4-3	4	0.0	0.5	2	medium to coarse sand, gravel, trace fine sand, brown
T-4-4	6	0.3	0.3	2	medium to coarse sand, gravel, brown
T-4-5	8	0.0	0.9	5	silt, trace fine sand, roots, organic matter, bank material, brown
T-5-1	0	0.0	0.4	4	silt with fine to medium sand, trace coarse sand, gravel, brown
T-5-2	3.2	0.0	0.7	4	silt and fine sand, trace medium to coarse sand, gravel, brown
T-5-3	6.4	0.4	0.3	2	medium to coarse sand and gravel, trace fine sand and silt, brown
T-5-4	9.6	0.0	0.7	3	fine to medium sand and silt, trace coarse sand and gravel (between rocks)
T-5-5	12.8	0.0	0.6	4	silt and fine sand, brown
T-5-6	16	0.0	0.3	5	silt, organic matter, bank material
T-6-1	0	0.0	0.2	0	coarse sand, gravel
T-6-2	2.3	0.5	0.2	0	gravel/rock
T-6-3	4.6	0.1	0.2	0	gravel/rock
T-6-4	7	0.0	0.8	3	silt and fine to medium sand, on top medium to coarse sand and gravel, brown
T-7-1	0	0.0	0.9	4	silt trace fine sand, brown
T-7-2	3.1	0.0	0.6	3	fine sand trace silt, brown
T-7-3	6.2	0.0	0.2	2	medium to coarse sand gravel, rock
T-7-4	9.3	0.0	0.8	1	medium to coarse sand, gravel, trace fine sand and silt
T-7-5	12.4	0.4	0.2	0	gravel/rock
T-7-6	15.5	0.4	0.6	2	coarse sand, gravel, rock
T-8-1	0	0.0	0.5	2	medium to coarse sand, gravel, trace fine sand and silt
T-8-2	2.8	0.1	0.2	0	rock/gravel
T-6-3	5.6	0.1	0.2	0	rock/gravel
T-8-4	8.4	0.0	0.5	2	medium to coarse sand, gravel
T-8-5	11.2	0.0	1.9	4	grey to black fine to medium sand and silt, trace coarse sand, gravel, organic odor
T-8-6	14	0.0	1.3	4	silt with fine sand, brown
T-9-1	0	0.0	1.4	4	silt trace fine sand, brown
T-9-2	2.75	0.0	0.7	4	silt and fine sand, brown
T-9-3	5.5	0.2	0.7	1	medium to coarse sand, gravel, rock
T-9-4	8.25	0.2	0.2	0	gravel/rock
T-9-5	11	0.0	0.3	4	silt trace fine sand, brown
T-10-1	0	0.1	0.2	0	gravel and rock
T-10-2	2.25	0.3	0.4	2	medium to coarse sand
T-10-3	4.5	0.1	0.2	1	gravel/rock on top medium to coarse sand
T-10-4	6.75	0.0	0.8	2	medium to coarse sand, gravel, rock, trace fine sand
T-10-5	9	0.0	0.7	3	fine to medium sand, silt, organic odor, oil sheen, trace coarse sand,gravel, grey
T-11-1	0	0.0	1.0	4	silt and fine sand, trace coarse sand, gravel, grey
T-11-2	2.75	0.1	0.2	1	gravel/rock, medium to coarse sand
T-11-3	5.5	0.2	0.2	1	gravel/rock, medium to coarse sand
T-11-4	8.25	0.0	0.8	4	silt with fine sand, trace gravel, grey
T-11-5	11	0.0	1.0	4	silt, trace fine sand, grey
T-12-1	0	0.0	0.6	4	silt, trace fine sand, brown
T-12-2	3.25	0.0	0.2	2	medium to coarse sand, trace fine sand, silt, gravel
T-12-3	6.5	0.1	0.2	2	medium to coarse sand, gravel, trace fine sand, brown
T-12-4	9.75	0.0	0.4	3	fine to medium sand, trace coarse sand, brown
T-12-5	13	0.0	0.5	3	fine sand and silt, trace medium sand, brown
T-13-1	0	0.0	1.1	2	brown medium to coarse sand, gravel, rock, trace fine sand and silt
T-13-2	2.6	0.2	0.2	0	gravel/rock
T-13-3	5.25	0.0	0.3	2	medium to coarse sand, gravel rock
T-13-4	7.85	0.0	0.8	3	brown/grey fine sand and silt, trace medium sand
T-13-5	10.5	0.0	0.7	4	dark brown silt with fine sand, trace medium to coarse sand, gravel

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ID	Distance from Northeast Edge of Bank (ft) (2)	Water Depth (ft)	Sediment Thickness (ft)	Sediment Classification(3)	Sediment Description
T-14-1	0	0.0	0.6	4	brown fine sand and silt, trace medium to coarse sand, gravel
T-14-2	2.5	0.4	0.2	2	medium to coarse sand, gravel
T-14-3	5	0.1	0.2	2	medium to coarse sand, gravel
T-14-4	7.5	0.0	0.2	3	fine to coarse sand, trace silt
T-14-5	10	0.0	0.7	4	silt, trace fine sand, brown
T-15-1	0	0.0	0.4	4	silt with fine sand, trace coarse sand, gravel, rock, brown
T-15-2	3	0.0	0.4	2	medium to coarse sand, gravel, rock
T-15-3	6	0.1	0.2	1	coarse sand, gravel, rock
T-15-4	9	0.1	0.2	2	medium to coarse sand, gravel, trace fine/sand and silt
T-15-5	12	0.0	0.5	5	brown/grey silt, organic matter
T-16-1	0	0.0	0.5	2	medium to coarse sand, gravel, trace fine sand and silt, brown
T-16-2	3	0.0	0.3	2	medium to coarse sand, gravel
T-16-3	6	0.0	0.3	2	medium to coarse sand, gravel, trace fine sand and silt, brown
T-16-4	9	0.2	0.2	2	medium to coarse sand, gravel
T-16-5	12	0.0	0.5	2	medium to coarse sand, trace fine sand, brown
T-17-1	0	0.0	0.8	3	fine to medium sand and silt, bank material, brown
T-17-2	3.25	0.1	0.2	2	medium to coarse sand, brown gravel
T-17-3	6.5	0.1	0.2	2	medium to coarse sand, gravel
T-17-4	9.75	0.0	0.3	4	silt and fine sand, trace medium sand, brown
T-17-5	13	0.0	0.4	5	silt trace fine sand, organic matter, brown
T-18-1	0	0.0	0.7	4	fine sand and silt, brown
T-18-2	3.5	0.1	0.3	2	medium to coarse sand, gravel, rock
T-16-3	7	0.0	1.0	2	medium to coarse sand, gravel, rock
T-16-4	10.5	0.1	0.7	2	medium to coarse sand, gravel, trace fine sand and silt, brown
T-16-5	14	0.0	1.0	2	medium to coarse sand, silt, trace sand, brown
T-19-1	0	0.0	0.2	1	medium to coarse sand, gravel
T-19-2	2.25	0.0	0.7	2	medium to coarse sand, trace fine sand
T-19-3	4.5	0.1	0.2	1	medium to coarse sand, gravel, rock
T-19-4	6.75	0.1	0.2	1	medium to coarse sand, gravel, rock
T-19-5	9	0.0	1.0	3	brown fine to medium sand on top grey silt, trace fine sand, organic odor, oil sheen
T-20-1	0	0.0	0.5	4	silt and fine sand, bank material, brown
T-20-2	2.3	0.1	0.2	1	medium to coarse sand, gravel, rock
T-20-3	4.6	0.1	0.4	1	medium to coarse sand,gravel, rock
T-20-4	7	0.0	0.8	4	silt with fine to medium sand, brown
T-21-1	0	0.0	0.4	4	fine sand with silt, brown
T-21-2	2.5	0.0	0.2	2	medium to coarse sand, trace fine sand
T-21-3	5	0.5	0.1	1	medium to coarse sand, gravel
T-21-4	7.5	0.0	0.2	2	medium to coarse sand, gravel, trace fine sand
T-21-5	10	0.0	0.5	4	fine sand and silt, trace medium to coarse sand, brown
T-22-1	0	0.0	0.7	4	silt, trace fine sand and gravel, brown
T-22-2	3.4	0.0	0.4	4	silt and fine sand, brown
T-22-3	6.8	0.0	0.3	2	medium to coarse sand, trace fine sand, brown
T-22-4	10.2	0.0	0.5	1	medium to coarse sand, gravel
T-22-5	13.6	0.3	0.2	1	medium to coarse sand, gravel
T-22-6	17	0.0	0.3	4	silt with fine to medium sand, gravel, brown
T-23-1	0	0.0	0.4	4	silt and fine sand, trace medium sand, brown
T-23-2	2.75	0.3	0.2	2	medium to coarse sand, gravel, rock
T-23-3	5.5	0.1	0.2	2	medium to coarse sand, gravel, rock
T-23-4	8.25	0.0	0.3	2	medium to coarse sand, gravel, rock
T-23-5	11	0.0	0.5	4	silt with fine sand, bank material, brown
T-24-1	0	0.0	0.8	4	silt and fine sand, trace gravel, brown
T-24-2	3.4	0.1	1.0	3	fine to medium sand with silt, trace coarse sand, gravel, brown
T-24-3	6.8	0.0	1.5	2	medium to coarse fine sand, gravel, rock, trace fine sand, silt
T-24-4	10.2	0.0	1.0	2	medium to coarse sand, gravel, rock, trace fine sand
T-24-5	13.6	0.0	1.0	2	medium to coarse sand, trace fine sand and silt
T-24-6	17	0.0	1.5	4	silt, trace fine sand, gravel, brown
T-25-1	0	0.0	0.9	3	fine, sand and silt, trace medium sand, brown
T-25-2	2	0.0	0.7	2	medium to coarse sand
T-25-3	4	0.2	0.5	2	medium to coarse sand, gravel, trace fine sand
T-25-4	6	0.0	0.3	2	medium to coarse sand, gravel, trace fine sand
T-25-5	8	0.0	0.6	3	fine sand and silt, trace medium sand, gravel, brown
T-26-1	0	0.0	1.1	4	silt and fine sand, trace medium sand, organic matter, brown, organic odor
T-26-2	3.5	0.0	0.5	5	silt and fine sand, trace medium sand, brown
T-26-3	7	0.0	0.6	2	medium to coarse sand, trace fine sand and silt
T-26-4	10.5	0.3	0.0	0	rock
T-26-5	14	0.0	0.3	2	medium to coarse sand, gravel, rock

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ID	Distance from Northeast Edge of Bank (ft) (2)	Water Depth (ft)	Sediment Thickness (ft)	Sediment Classification(3)	Sediment Description
T-27-1	0	0.0	0.2	4	silt and fine sand, trace gravel, brown
T-27-2	2	0.1	0.1	0	gravel/rock
T-27-3	4	0.2	0.1	0	gravel/rock
T-27-4	6	0.0	0.3	4	silt and fine sand, brown
T-27-5	8	0.0	0.6	5	brown/grey silt and fine sand
T-28-1	0	0.0	0.8	4	silt and fine sand, trace medium to coarse sand, gravel, brown
T-28-2	4.6	0.0	1.1	5	silt and fine sand, trace organic matter, brown to grey
T-28-3	9.6	0.3	0.2	3	fine to medium sand, brown
T-28-4	14.4	0.1	1.0	2	medium to coarse sand, trace fine sand
T-28-5	19.2	0.0	0.5	2	medium to coarse sand, gravel
T-28-6	24	0.0	1.2	5	brown to dark grey silt and fine sand
T-29-1	0	0.0	0.3	4	silt and fine sand trace, gravel, brown
T-29-2	8	0.1	0.2	2	medium to coarse sand, gravel
T-29-3	16	0.0	0.5	4	silt, fine sand, roots, brown
T-29-4	24	0.0	0.6	4	silt, fine sand, brown
T-29-5	32	0.0	1.3	3	fine sand, silt, coarse sand, gravel, brown
T-29-6	40	0.0	1.5	4	bank material, silt, fine sand with gravel, roots, brown
T-30-1	0	0.0	0.2	0	rock/gravel
T-30-2	6.5	0.0	0.8	3	fine to medium sand and silt, trace coarse sand, gravel
T-30-3	13	0.0	1.0	4	silt and fine sand, trace medium to coarse sand, brown
T-30-4	27	0.0	0.7	5	brown fine sand and silt, trace medium to coarse sand, gravel
T-30-5	33.5	0.0	0.2	2	medium to coarse sand, trace fine sand and silt
T-30-6	40	0.0	1.0	4	silt and fine sand, trace medium to coarse sand, gravel, brown
T-31-1	0	0.0	1.1	4	brown silt and fine sand, trace gravel, roots
T-31-2	4	0.0	1.0	2	brown medium to coarse sand, gravel, rock
T-31-3	8	0.0	0.9	3	brown fine sand and silt, trace coarse sand and gravel
T-31-4	12	0.1	0.2	2	medium to coarse sand, gravel, rock
T-31-5	16	0.0	0.9	4	brown fine sand and silt, bank material
32-1	0	0.0	0.3	3	brown fine sand sand silt, trace medium to coarse sand
32-2	3.5	0.2	0.2	2	brown medium to coarse sand, gravel
T-32-3	7	0.0	0.4	3	brown fine to medium sand with silt, trace coarse sand
T-32-4	10.5	0.0	0.8	4	brown silt with fine sand, organic matter
T-32-5	14	0.0	0.6	4	brown silt, trace fine sand, gravel
T-33-1	0	0.6	0.2	2	brown medium to coarse sand, gravel
T-33-2	4	0.0	0.2	2	brown medium to coarse sand, gravel
T-33-3	8	0.05	0.3	3	brown fine sand and silt
T-33-4	12	0.0	0.3	4	brown silt, trace fine sand
T-33-5	16	0.0	0.7	4	brown silt, trace fine sand
T-33-6	20	0.0	1.1	4	brown silt, trace fine sand gravel
T-34-1	0	0.0	0.6	5	brown silt, organic matter
T-34-2	3.25	0.0	0.3	5	brown silt, roots, organic matter
T-34-3	6.5	0.2	0.0	0	rock/gravel
T-34-4	9.75	0.1	0.5	3	brown fine to coarse sand, silt
T-34-5	13	0.1	0.3	2	brown medium to coarse sand, gravel, trace fine sand
T-35-1	0	0.1	0.8	3	brown fine sand, trace medium sand
T-35-2	5	0.2	0.7	3	brown fine to medium sand and silt
T-35-3	10	0.0	0.6	3	brown fine to medium sand and silt
T-35-4	15	0.0	0.8	3	brown/grey fine sand with silt, trace medium sand
T-35-5	20	0.0	0.2	4	brown fine sand and silt, organic matter
T-35-6	25	0.0	0.8	3	brown fine sand and silt, trace medium sand
T-36-1	0	0.1	0.2	2	brown medium to coarse sand, gravel
T-36-2	3	0.5	0.2	0	gravel/rock
T-36-3	6	0.0	1.0	3	fine sand, trace medium sand, brown
T-36-4	9	0.0	0.4	3	brown fine to medium sand with silt, trace coarse sand, gravel
T-36-5	12	0.0	0.3	4	brown fine sand, silt, roots
T-37-1	0	0.0	1.1	4	brown silt, trace fine sand
T-37-2	3	0.0	0.6	4	brown silt, trace fine sand
T-37-3	6	0.3	0.0	0	rock/gravel
T-37-4	9	0.0	0.6	4	brown silt, trace fine sand
T-37-5	12	0.0	0.4	4	brown silt, trace fine sand
T-38-1	0	0.0	0.3	3	brown fine sand and silt, trace medium to coarse sand
T-38-2	2.75	0.1	0.0	0	gravel/rock
38-3	5.5	0.2	0.1	0	gravel/rock
38-4	8.25	0.3	0.3	3	brown fine sand trace medium sand
T-38-5	11	0.0	0.5	4	brown silt trace fine sand

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ID	Distance from Northeast Edge of Bank (ft) (2)	Water Depth (ft)	Sediment Thickness (ft)	Sediment Classification(3)	Sediment Description
T-39-1	0	0.0	1.0	5	brown silt
T-39-2	5	0.0	1.0	4	brown silt, trace fine sand gravel
T-39-3	10	0.0	0.3	4	brown silt, trace fine sand
T-39-4	15	0.2	0.1	1	coarse sand, gravel, rock
T-39-5	20	0.0	0.9	4	brown silt and fine sand
T-40-1	0	0.0	1.0	4	brown silt, trace fine sand
T-40-2	5.5	0.0	1.0	3	brown fine sand, trace medium sand
T-40-3	11	0.0	1.0	4	brown fine sand and silt, organic matter
T-40-4	16.5	0.0	0.2	1	coarse sand, gravel
T-40-5	22	0.0	0.8	3	brown fine to medium sand
T-41-1	0	0.1	1.0	3	brown/grey fine to medium sand with silt on top grey silt
T-41-2	3	0.2	0.2	2	medium to coarse sand, gravel, rock
T-41-3	6	0.2	0.1	1	coarse sand, gravel, rock
T-41-4	9	0.2	0.5	3	brown fine sand, gravel, rock
T-41-5	13	0.1	0.3	2	medium to coarse sand, gravel; sample located beyond bank limits - may be overflow channel
T-42-1	0	0.0	0.0	0	rock, gravel
T-42-2	2.6	0.7	0.0	0	rock/boulders
T-42-3	5.2	0.05	0.0	0	boulders, rock
T-42-4	8	0.0	0.0	0	rock/boulder
T-42-5	9	0.0	0.3	2	medium to coarse sand, gravel, trace fine sand and silt; sample located beyond bank limits-may be overflow channel
T-43-1	0	0.2	0.0	0	rock/boulders
T-43-2	3	0.3	0.0	0	rock/boulders
T-43-3	6	0.2	0.0	0	rock/boulders
T-43-4	9	0.0	0.0	0	rock/boulders
T-44-1	0	0.2	0.2	2	medium to coarse sand, gravel
T-44-2	3	0.2	0.2	1	coarse sand, gravel, rock
T-44-3	6	0.1	0.5	2	medium to coarse sand, gravel
T-44-4	9	0.0	1.2	4	brown silt and fine sand, trace medium sand, rocks, bank material
T-45-1	0	0.0	0.5	5	brown silt gravel, roots
T-45-2	2	0.0	0.6	2	brown medium to coarse sand, gravel, trace fine sand
T-45-3	4	0.2	0.0	0	rock
T-45-4	6	0.3	0.2	2	brown medium to coarse sand, gravel, trace fine sand
T-46-1	0	0.0	0.4	4	brown silt and fine sand
T-46-2	2.6	0.0	0.4	2	medium to coarse sand, gravel
T-46-3	5.2	0.1	0.1	0	rock, gravel
T-46-4	8	0.4	0.1	1	rock, medium to coarse sand
T-47-1	0	0.1	0.3	2	brown medium to coarse sand, trace fine sand
T-47-2	3.3	0.1	0.0	0	rock, gravel
T-47-3	6.6	0.0	0.9	1	medium to coarse sand, gravel, rock
T-47-4	10	0.1	0.4	3	fine sand and silt, trace medium to coarse sand
T-48-1	0	0.1	0.2	0	gravel, rock
T-48-2	3	0.7	0.0	0	rock
T-48-3	6	0.1	0.2	2	medium to coarse sand, gravel
T-48-4	9	0.0	0.2	2	medium to coarse sand and gravel, trace fine sand
T-49-1	0	0.3	0.3	3	brown fine sand, trace medium to coarse sand
T-49-2	2	0.2	0.1	2	medium to coarse sand, gravel
T-49-3	4	0.1	0.2	2	medium to coarse sand, gravel
T-49-4	6	0.0	0.5	3	brown fine sand
T-50-1	0	0.0	0.0	0	rock
T-50-2	2	0.1	0.1	2	medium to coarse sand, gravel
T-50-3	4	0.3	0.3	2	medium to coarse sand, gravel
T-50-4	6	0.1	0.1	2	medium to coarse sand, gravel

Notes:

1. - Results of probing activities taken from BBL field notes dated October 17 through 21, 1996.
2. - Transect measurements (in feet) taken from the northeast edge of bank of the streambed channel at the toe of the sideslope.
3. - Sediment classification key:
   - 0 - rock, gravel
   - 1 - gravel with some sands
   - 2 - medium to coarse sands
   - 3 - fine sands with trace medium to coarse sands
   - 4 - silts, fine sands
   - 5 - silts, organic matter

Table 6
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Tributary T11A - Summary of Field Data and Analytical Results
[Concentrations are presented in milligrams per kilogram, mg/kg dry weight]

Location	Sample Depth Interval (in)	Sediment Classification	Unified Soil Classification System	Total Aroclors[3]
T-2-5	0-20.5	4	Fine-grained	180
T-4-1	0-9.5	3	Coarse-grained	7.8
T-7-2	0-7	3	Coarse-grained	0.64
T-8-6	0-15.5	4	Fine-grained	4.0
T-10-2	0-4.5	2	Coarse-grained	4.5
T-10-5	0-8.5	3	Coarse-grained	7.3
T-11-4	0-9.5	4	Fine-grained	54
T-14-4	0-2.5	3	Coarse-grained	71
T-14-5	0-8.5	4	Fine-grained	4.5
T-16-4	0-2.5	2	Coarse-grained	1.9
T-18-3	0-3	2	Coarse-grained	3.8
	3-12			2.5
T-19-5	0-12	3	Coarse-grained	8.7
T-22-2	0-4.5	4	Fine-grained	29
T-23-5	0-6	4	Fine-grained	25
T-24-2	0-3	3	Coarse-grained	10
	3-12			6.6
T-27-5	0-7	5	Fine-grained	31
T-28-3	0-2.5	3	Coarse-grained	57
T-28-6	0-14.5	5	Fine-grained	67 [62]
T-29-5	0-3	3	Coarse-grained	14
	3-15.5			2.3
T-30-3	0-3	4	Fine-grained	40 [28]
	3-12			28
T-30-4	0-8.5	5	Fine-grained	0.20
T-31-5	0-11	4	Fine-grained	0.21
T-33-2	0-2.5	2	Coarse-grained	3.4
T-35-2	0-8.5	3	Coarse-grained	24
T-36-1	0-2.5	2	Coarse-grained	19
T-38-5	0-6	4	Fine-grained	11

Table 6
(Cont'd)
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Tributary T11A - Summary of Field Data and Analytical Results
[Concentrations are presented in milligrams per kilogram, mg/kg dry weight]

Location	Sample Depth Interval (in)	Sediment Classification	Unified Soil Classification System	Total Aroclors[3]
T-39-2	0-3	4	Fine-grained	15
	3-12			1.4
T-39-5	0-11	4	Fine-grained	39
T-40-2	0-3	3	Coarse-grained	7.5
	3-12			9.7 [7.4]
T-41-4	0-6	3	Coarse-grained	6.2
T-46-1	0-4.5	4	Fine-grained	8. 6
T-49-3	0-2.5	2	Coarse-grained	2.0

Notes:

1. All samples were collected by BBL on November 25 and 27, 1996, and submitted to Inchcape Testing Services for PCB analysis. See Table 5 for additional description information.
2. Duplicate results are presented in brackets.
3. All detections quantified as Aroclor 1260, except T-8-6 (0-15.5") and T-10-5 (0-8.5"), which are quantified as Aroclor 1260 and Aroclor 1248.

Table 7
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Tributary T11A - Summary of Bank Elevation and Slope Data

Transect	Closest Sampling Transect	Bank	Top of Bank Elevation (ft.)	Toe of Bank Elevation (ft.)	Change in Elevation (ft.)	Horizontal Distance Between Top Bank and Toe Bank (ft.)	General Slope (H : V)
A	T-4	N	608.8	598.3	10.5	17.5	1.7 : 1
		S	607.3	598.3	9	19	2.1 : 1
B	T-10	NE	609.8	591.3	18.5	39	2.1 : 1
		SW	606.5	589.8	16.7	25	1.5 : 1
C	T-16	NE	606.2	581.0	25.2	36	1.4 : 1
		SW	606.8	579.8	27	40	1.5 : 1
D	T-29	NE	554.5	551.4	3.1	8	2.6 : 1
		SW	576.1	551.8	24.3	26	1.1 : 1
E	T-42	N	522.1	519.9	2.2	4.5	2.0 : 1
		S	540.5	521.8	18.7	67	3.6 : 1

Notes:
1. Bank elevation data obtained from field survey activities performed by BBL in October 1996 as part of Phase II RI work efforts.
2. Horizontal distances between top and toe of banks are based on measurements taken during the October 1996 field survey, and are approximate.

Table 8
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Loeffel Site Environs Phase II RI Report

Tributary T11A - Summary of Slope Data

Transects	Bank	First Transect Toe of Bank Elevation (ft.)	Second Transect Toe of Bank Elevation (ft.)	Change in Elevation (ft.)	Approximate Horizontal Distance Between Transects (ft.)	General Slope (H : V)
A to B	NE	598.3	591.3	7	160	23 : 1
	SW	598.3	589.8	8.5	181	21 : 1
B to C	NE	591.3	581.0	10.3	230	22 : 1
	SW	589.8	579.8	10	233	23 : 1
C to D	NE	581.0	551.4	29.6	501	17 : 1
	SW	579.8	551.8	28	504	18 : 1
D to E	NE	551.4	519.9	31.5	481	15 : 1
	SW	551.8	521.8	30.0	449	15 : 1
A to E	NE	598.3	519.9	78.4	1,372	18 : 1
	SW	598.3	521.8	76.5	1,367	18 : 1

Notes:
1. Bank elevation data obtained from field survey activities performed by BBL in October 1996 as part of Phase II RI work efforts.
2. Horizontal distances between transects are based on measurements taken during the October 1996 field survey, and are approximate.

Table 9
General Electric Company - Albany, New York
Loeffel Site Environs Phase II RI Report

Valatie Kill - Area 19 - Summary of Field Data and Analytical Results
[Concentrations are presented in milligrams per kilogram, mg/kg dry weight]

Sample ID	Sample Depth Interval (in)	Total Aroclors	Description
SD8-19-3	0-3	1.4	Brown silt, grass cover
SD8-19-4	0-3	0.084	Brown silt, grass cover

Notes:

1. Samples were collected by BBL on October 17, 1996, and submitted to Inchcape Testing Services for PCB analysis. Description taken from BBL field notes dated October 17, 1996.
2. All detections quantified as Aroclor 1260.

Table 10
General Electric Company - Albany, New York
Loeffel Site Environs RI Phase II Report

Valatie Kill - Area 28 - Summary of Probing Data

Grid Node	Elevation (ft)	Water Depth (ft)	Sediment Thickness (ft)	Description
B-1	430.9	0	1.0	Silt with fine sand
B-2	428.5	1.2	1.0	Coarse sand and gravel on top of silt
B-3	429.4	0.4	2.0	Coarse sand and gravel on top of silt
B-4	429.1	0.7	3.3	Fine sand and silt
B-5	429.0	0.7	2.6	Fine sand and silt
B-6	429.0	1.3	1.0	Sands and gravels
C-1	431.1	0	1.0	Silt and fine sand
C-2	428.7	1.2	0.4	Sands and gravel
C-3	429.9	0	2.7	Fine sand and silt
C-4	430.7	0	4.1	Fine sand and silt
C-5	429.6	0.2	3.3	Fine sand and silt
C-6	429.5	0.3	2.3	Fine sand and silt
D-1	429.7	0.3	0.7	Sand and gravel
D-2	428.9	1.1	0.8	Gravel on top of silt
D-3	431.0	0	4.1	Fine sands and silt
D-4	430.9	0	4.4	Fine sands and silt
D-5	429.9	0	3.9	Fine sands and silt
E-1	430.1	0	0.6	Fine to coarse sand and gravel
E-2	429.1	0.9	0.9	Sands and gravel
E-3	431.1	0	3.9	Fine sand and silt
E-4	431.0	0	4.9	Fine sand and silt
E-5	430.6	0	4.4	Fine sand and gravel
F-2	428.6	1.2	1.4	Sands and gravel on top of silt and fine sand

Table 10
General Electric Company - Albany, New York
Loeffel Site Environs RI Phase II Report

Valatie Kill - Area 28 - Summary of Probing Data
(cont'd.)

Grid Node	Elevation (ft)	Water Depth (ft)	Sediment Thickness (ft)	Description
F-3	431.3	0	5.0	Fine sand and silt
F-4	431.3	0	3.5	Fine sand and silt
G-2	429.7	0.3	0.8	Sand and clay
G-3	431.1	0	3.7	Fine sand and silt
G-4	431.4	0	5.0	Fine sand and silt
H-2	431.2	0	1.8	Silt and fine sand
H-3	428.8	1.2	2.5	Sands and gravel
H-4	430.3	0	5.9	Fine sands and silt
I-2	432.0	0	1.7	Silt, fine sand between rocks
I-3	429.8	0.3	1.1	Sands and gravel
I-4	429.4	0.6	1.7	Sands and gravel on top of silt and clay
J-2	432.8	0	1.5	Sand and silt
J-3	432.4	0	1.8	Silt and clay on top of rock
J-4	432.7	0	0.9	Fine sand, silt, and clay on top of rock
J-5	429.0	1.0	1.8	Fine sand and silt
J-6	430.8	0	2.2	Fine sand and silt
K-2	433.4	0	0.5	Fine sand and silt on top of rock
K-3	433.0	0	1.8	Fine sand and silt on top of rock
K-4	428.1	2.0	1.4	Sands and gravel
K-5	431.5	0	3.8	Sand and silt

Note: 1. Results of probing activities taken from BBL field notes dated October 17, 1996.

Table 11
General Electric Company - Albany, New York
Loeffel Site Environs Phase II RI Report

Nassau Lake - Summary of Analyses Performed

Location	Water Depth (ft)	Sediment Depth (in)	Analysis
SDN007-4C	--	0-18	Elutriate test
	--	0-36	Column settling test
SDN007-4C-1	6	0-6	PCB, TOC, Be-7, Cs-137
SDN007-4C-2	5.9	0-6	PCB, TOC, Be-7, Cs-137
SDN007-4C-3	5.6	0-6	PCB, TOC, Be-7, Cs-137
SDN007-4S	--	0-24	Sediment oxygen demand
		24-42	
SDN007-4S-1	--	0-15.5	Geotechnical analyses
		0-31	Bulk density
		0-35	Consolidation
SDN007-4S-3	--	0-15.5	Geotechnical analyses
		0-27.5	Bulk density
		0-29	Consolidation
SDN007-9C-1A	--	0-0.5	PCB, TOC, Be-7, Cs-137
SDN007-9C-2A	--	0-0.5	PCB, TOC, Be-7, Cs-137
SDN007-9C-3A	--	0-0.5	PCB, TOC, Be-7, Cs-137

Notes:
1. Samples were collected by BBL on October 22 and 23, 1996, December 2 and 3, 1996, and January 28 and 29, 1997. See Table 12 for additional information.
2. Geotechnical analyses include water content, organic content, vane shear, grain size, specific gravity, and Atterberg limits.

Table 12
General Electric Company - Albany, New York
Loeffel Site Environs Phase II RI Report

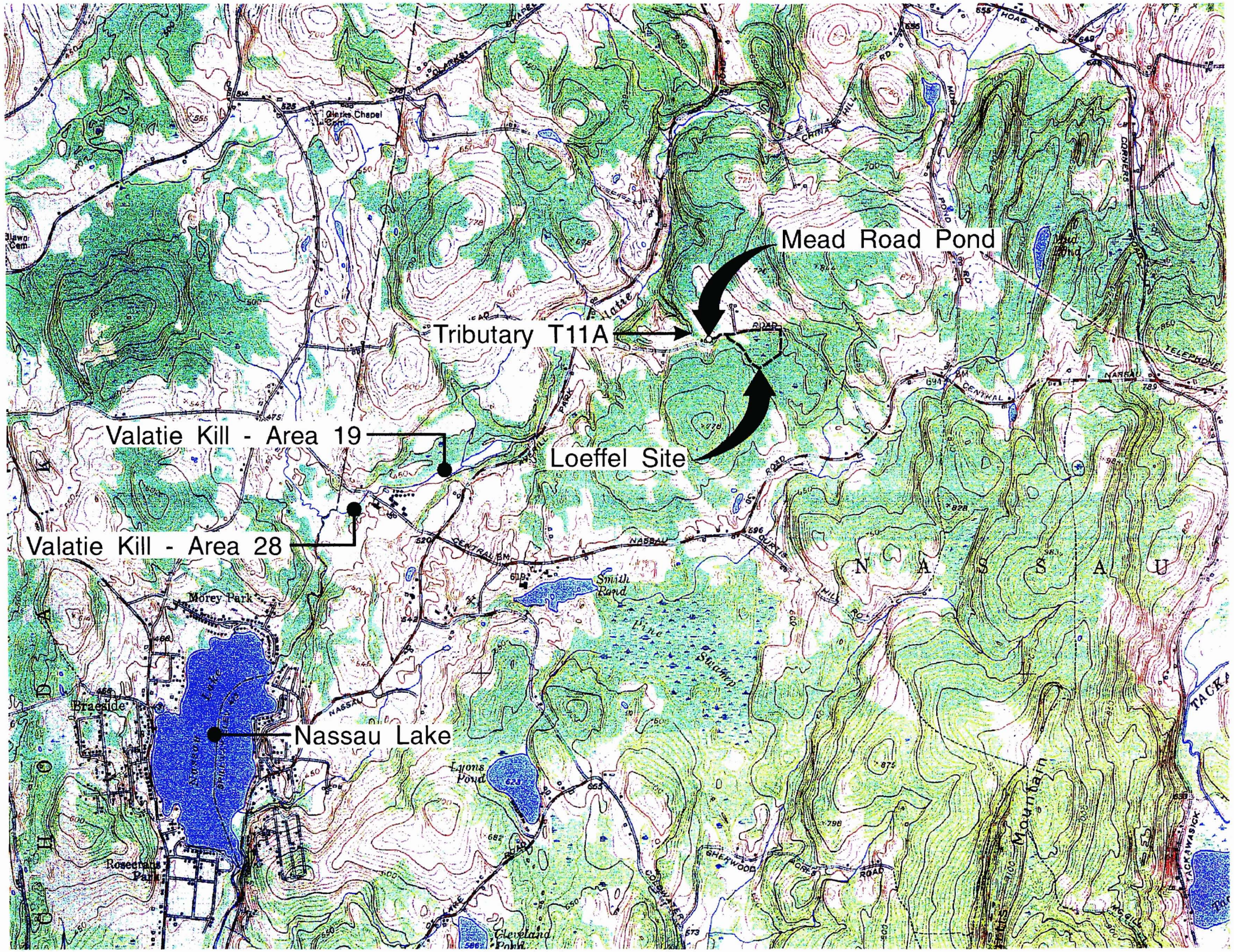
Nassau Lake - Summary of Analytical Results

Location	Sediment Depth (in)	Total Aroclors (mg/kg)	TOC (mg/kg)	Cs-137 (pci/g)	Be-7 (pci/g)
SDN-007-4C-1	0-0.5	1.7 [1.4]	34,700	1.71	2.50
SDN-007-4C-2	0-0.5	1.2	63,200	1.70	ND(3.0)
SDN-007-4C-3	0-0.5	1.1	91,600	1.74	ND(3.0)
SDN007-9C-1A	0-0.5	2.4	81,100	1.3	ND (0.9)
SDN007-9C-2A	0-0.5	0.56 [1.2]	89,800 [86,100]	1.2	ND (0.8)
SDN007-9C-3A	0-0.5	1.7	99,100	1.2	ND (1.0)

Notes:

1. Samples SDN007-9C-1A, -2A, and -3A were collected by BBL on January 28 and 29, 1997, and submitted to ITS Environmental for PCB and TOC analyses, Northeast Analytical, Inc. for PCB analysis, and Teledyne Brown Engineering for Cesium and Beryllium analyses. All other samples were collected by BBL on October 22 and 23, 1996, and December 2 and 3, 1996, and submitted to Inchcape Testing Services for PCB and TOC analyses, and Teledyne Brown Engineering for Cesium and Beryllium analyses.
2. Duplicate results are presented in brackets.
3. ND(3.0) - Compound was analyzed for, but not detected. The detection limit is shown in parenthesis.
4. All PCB detections quantified as Aroclor 1260.

Figures



NOTES:

1. All locations and features are approximate.
2. Water area locations are refered to by their "Surface Water Common Name" and/or their "NYS Water Index Number".

2000' 0 2000'

APPROX. SCALE: 1" = 2000 FEET

Reference: Base map source: USGS 7.5 Min. Topo. Quad., Nassau, N.Y. 1953.

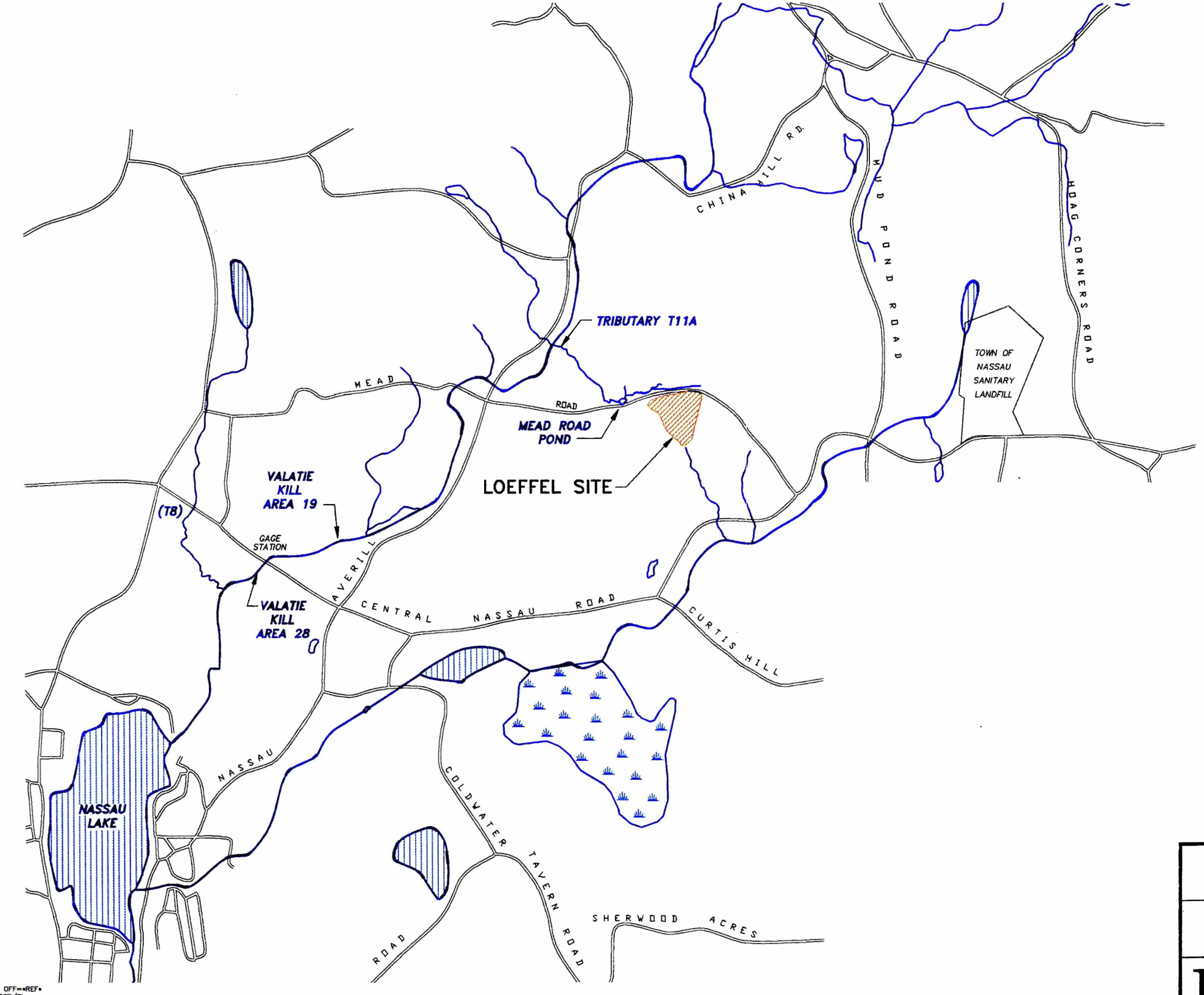
GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

SITE LOCATION MAP

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

FIGURE 1

01/97 SYR-D54-DJH
10073010/10073n01.cdr



2000' 0 2000'

APPROX. SCALE: 1" = 2000'

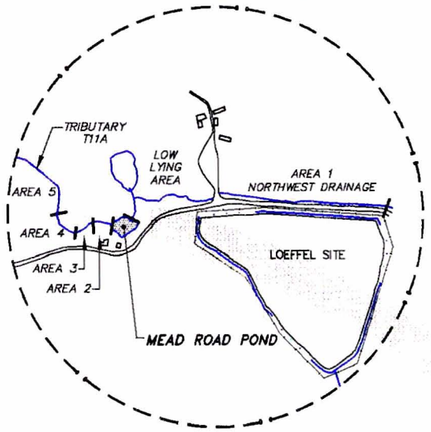
X: NONE
L: ON==*, OFF==*REF*
P: STD-PCP/BL
1/97-54-SYR-NES PMC
10071090/10071G02.DWG

GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

LOCATION PLAN

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

FIGURE **2**



LOCATION PLAN

NOT TO SCALE

SDN-003-1S	
DEPTH (in)	PCB (mg/kg)
0-3	46 D

SDN-003-2S	
DEPTH (in)	PCB (mg/kg)
0-3	10 JD(9.3JD)

SDN-005-3S	
DEPTH (in)	PCB (mg/kg)
0-6	2.7
6-12	4.8
12-24	9.6 JD

SDN-006-1S	
DEPTH (in)	PCB (mg/kg)
0-3	84
12-18	9.0(12)
18-24	0.25
24-30	0.40

SDN-006-6S	
DEPTH (in)	PCB (mg/kg)
0-3	130J
0-6	160
12-24	18
36-48	3.0
60-72	3.2

SDN-006-5S	
DEPTH (in)	PCB (mg/kg)
0-3	120
0-6	9.1
12-24	3.9
36-48	31
48-60	73
60-72	410
150-156	<0.037

SDN-006-7S	
DEPTH (in)	PCB (mg/kg)
0-3	43J
30-36	5.6(5.2)
36-42	0.14

SDN-006-3S	
DEPTH (in)	PCB (mg/kg)
0-3	0.79

SDN-005-4S	
DEPTH (in)	PCB (mg/kg)
36-42	<0.045

SDN-005-1S	
DEPTH (in)	PCB (mg/kg)
0-6	6.6 J
6-12	15 JD
12-24	1.7
24-36	0.51

SDN-005-2S	
DEPTH (in)	PCB (mg/kg)
0-6	3.4 J
6-12	2.6 JD
12-24	2.9
24-36	3.5

SDN-006-2S	
DEPTH (in)	PCB (mg/kg)
0-3	0.71

SDN-006-4S	
DEPTH (in)	PCB (mg/kg)
0-3	0.12 J

D-2 0.3 2.0 [0.9]
C-2 0.2 2.0 [1.4]
B-2 0.0 5.7 [1.4]
A-2 0.3 7.3 [3.5]
+D-3 0.7 8.0 [2.6]
E-2 0.1 1.5 [1.3]
+B-3 0.0 7.7 [1.6]
+C-3 0.3 10.6 [2.5]
E-3 0.8 2.2 [1.9]
F-2 0.1 2.9 [2.4]
F-3 0.3 2.9 [2.6]
+D-4 0.7 9.2 [2.3]
+B-4 0.3 4.3 [2.0]
+E-4 0.8 6.0 [2.5]
MEAD ROAD POND
WATER ELEVATION = 602.99
+C-4 0.6 9.2 [2.4]
G-2 0.5 0.5
B-5 0.0 3.5 [1.4]
+F-4 0.7 6.3 [2.5]
+D-5 0.8 10 [2.3]
E-5 0.9 8.1 [3.0]
C-5 0.3 8.6 [1.2]
F-5 0.0 1.5 [1.1]
D-6 0.5 7.5 [2.6]
E-6 0.5 7.1 [1.9]
D-7 0.1 8.0 [1.4]
E-7 0.1 6.0 [1.6]
F-6 0.2 2.5 [1.5]
F-7 0.0 3.0 [1.3]

SITE PLAN

LEGEND

- EDGE OF WATER
- +A-2 SEDIMENT PROBING LOCATION
- 0.3 WATER DEPTH (FEET)
- 7.3 TOTAL PROBED THICKNESS (FEET)
- [3.5] SOFT SEDIMENT DEPTH (FEET) (AS MEASURED FROM TOP OF SEDIMENT)
- SPOIL BANK SAMPLE
- POND SEDIMENT SAMPLE
- 1993 DATA
- 1994 DATA
- 1996 DATA

QUALIFIERS:

D CONCENTRATION IS BASED ON A DILUTED SAMPLE ANALYSIS

J THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER, THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.

NOTES:

1. DEPTHS ARE RESULTS OF PROBING ACTIVITIES PERFORMED ON OCTOBER 15, 1996 BY BBL PERSONNEL.
2. DUPLICATE RESULTS ARE IN PARENTHESES.
3. 1996 PCB DATA ARE RESULTS FROM ANALYSES PERFORMED BY INCHCAPE TESTING SERVICES. TABLE 2-3 PRESENTS ADDITIONAL INFORMATION.

0 20' 40'

APPROXIMATE SCALE

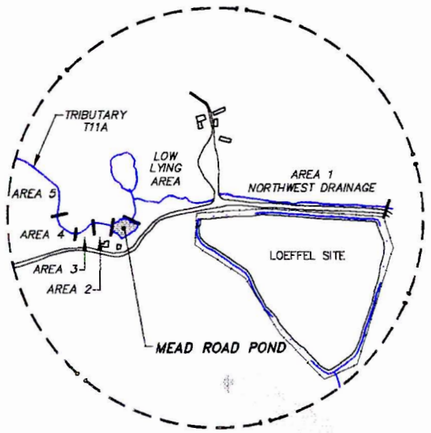
GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

MEAD ROAD POND WATER DEPTH, PROBED THICKNESS, SOFT SEDIMENT DEPTH, AND PCB DATA

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

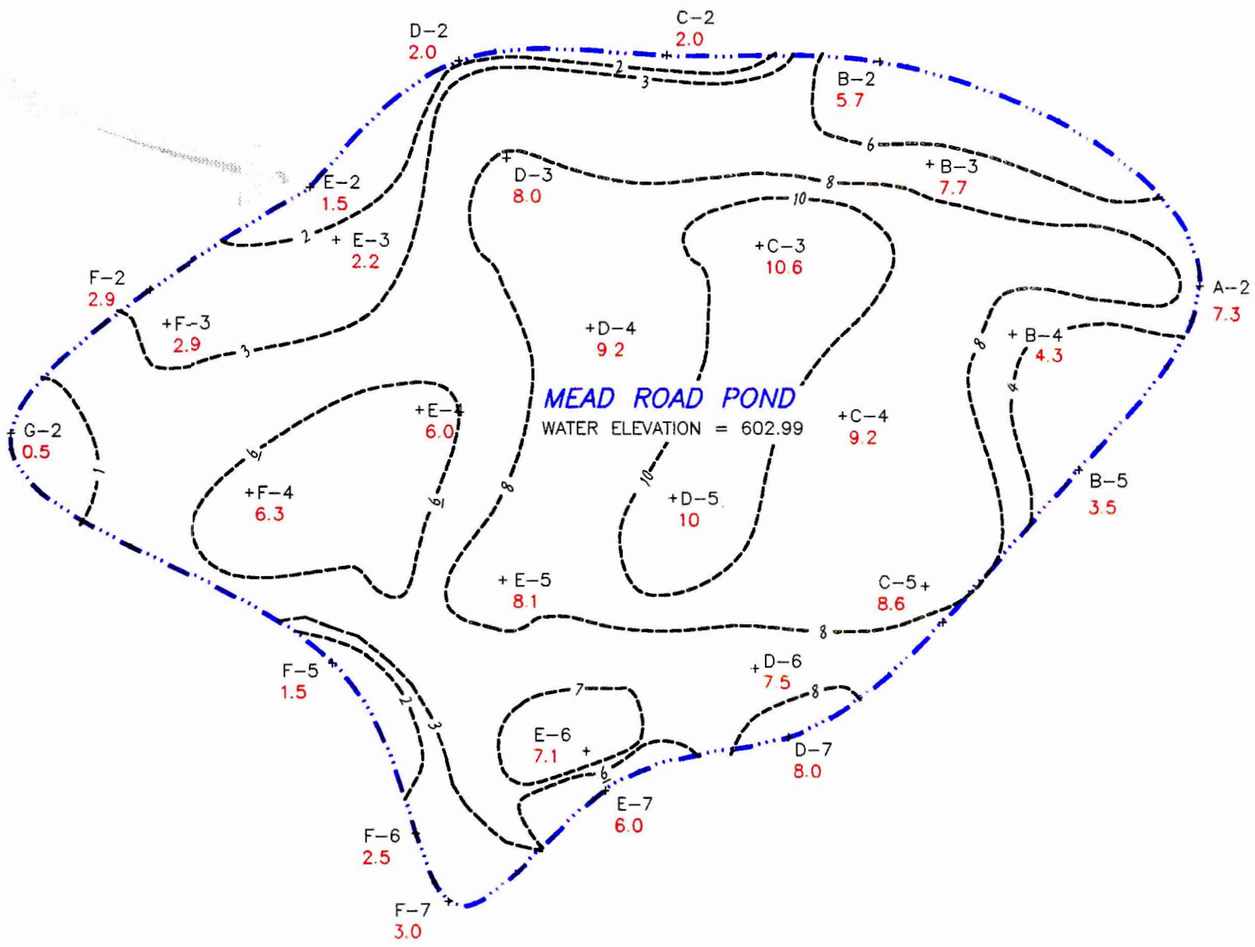
FIGURE 3

X: (XREF)
L: (LAYER)
P: STD-PCP/BL
3/18/97 SYR-54-YCC MFS
10071090/10071G07.DWG



LOCATION PLAN

NOT TO SCALE



SITE PLAN

LEGEND

- EDGE OF WATER
- TOTAL SEDIMENT THICKNESS CONTOUR AND ELEVATION
- +A-2 SEDIMENT PROBING LOCATION
- 7.3 TOTAL PROBED THICKNESS (FEET)

NOTE:

RESULTS OF PROBING ACTIVITIES PERFORMED ON OCTOBER 15, 1996 BY BBL PERSONNEL.

0 20' 40'

APPROXIMATE SCALE

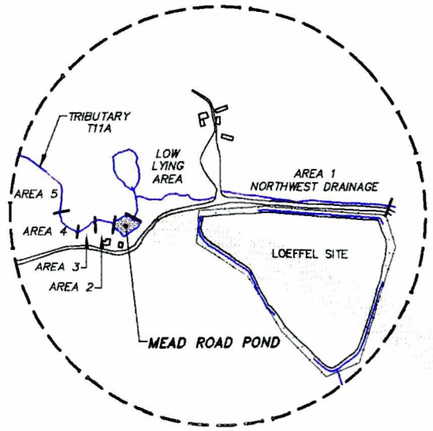
GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

MEAD ROAD POND
TOTAL PROBED THICKNESS CONTOUR MAP

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

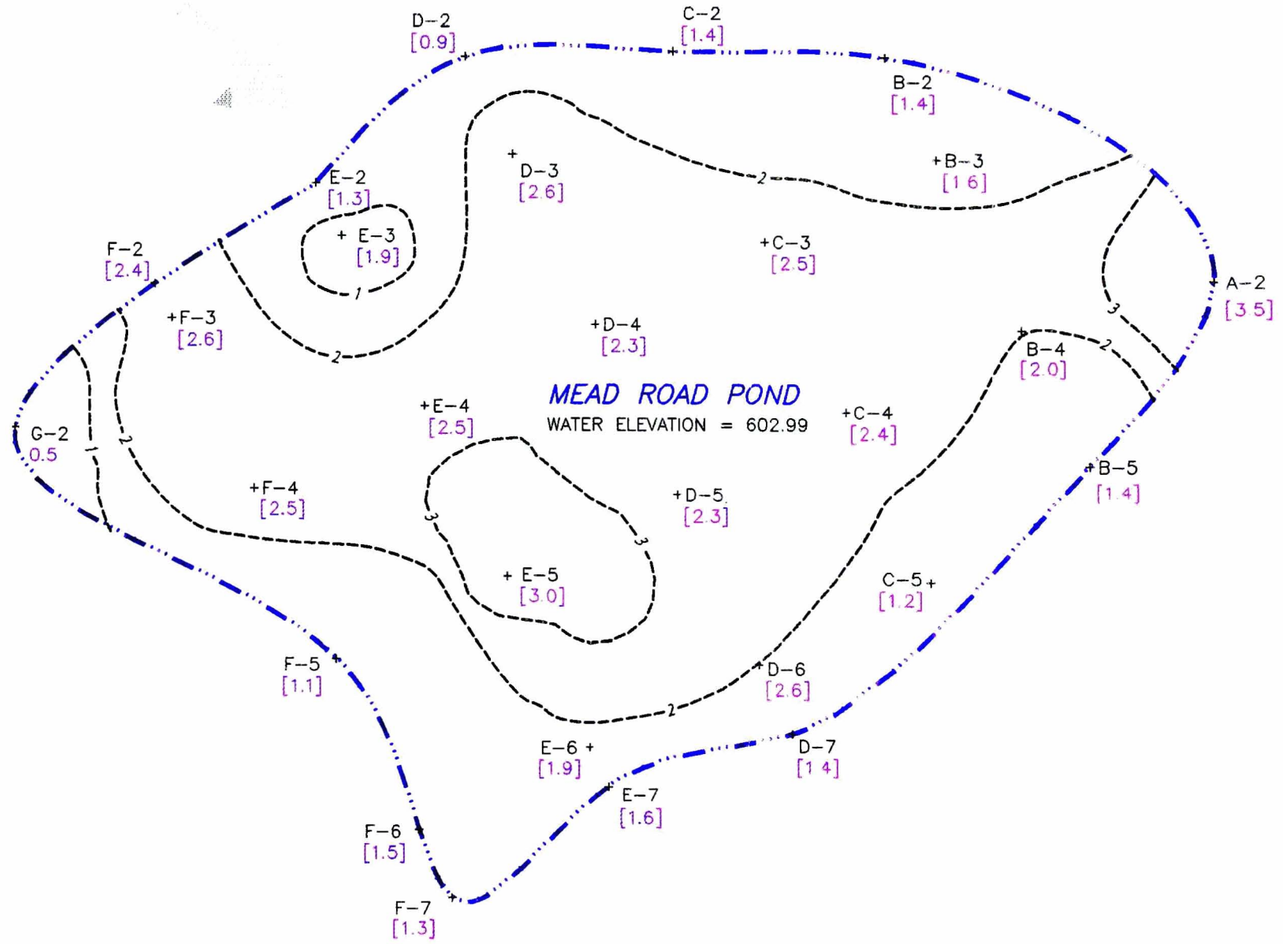
FIGURE 4

X: (XREF)
L: OFF=2-1*, 2-3*, REF
P: STD-PCP/BL
3/18/97 SYR-54-YCC MFS
10071090/10071GC8.DWG



LOCATION PLAN

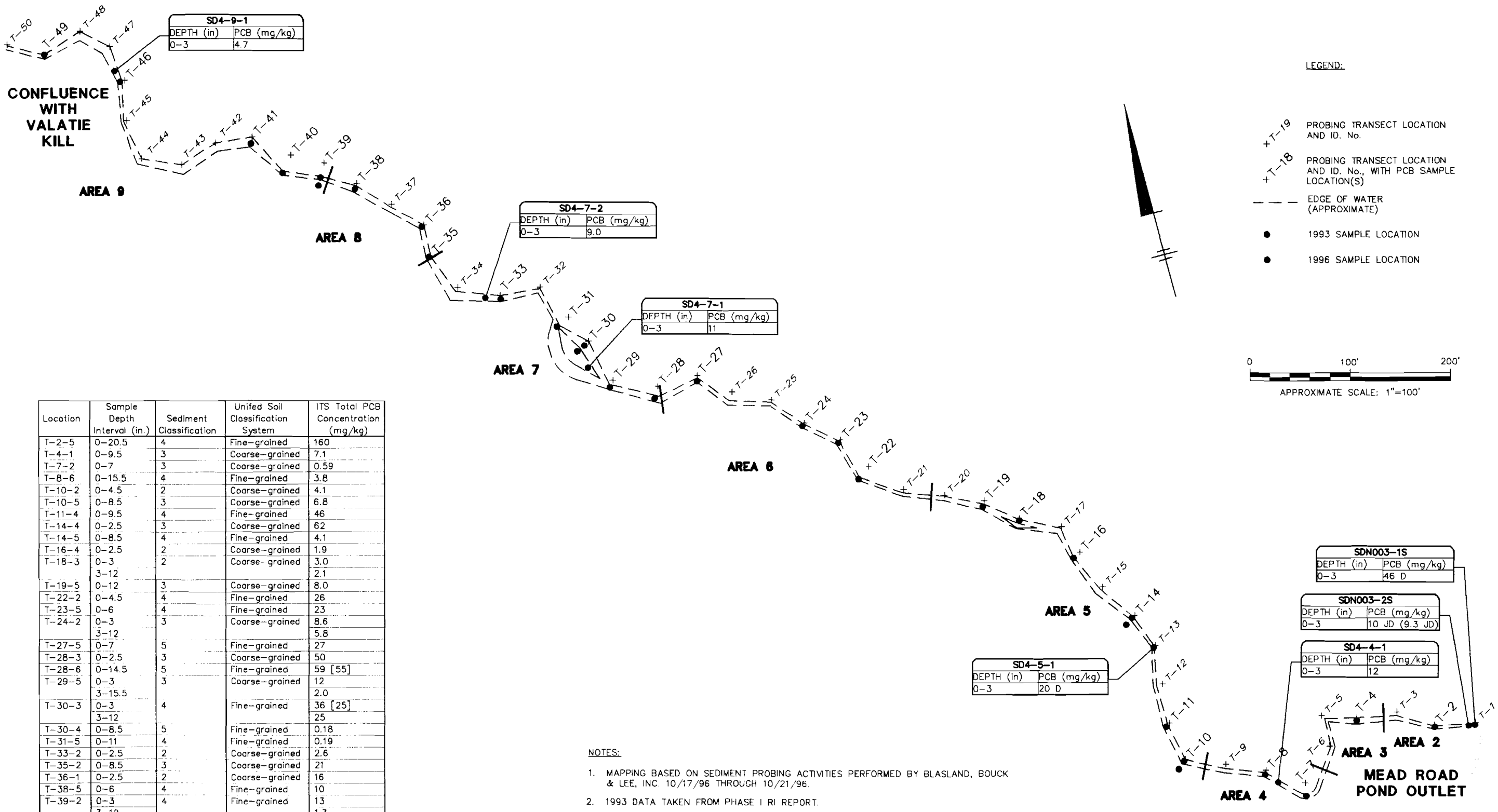
NOT TO SCALE



SITE PLAN

APPROXIMATE SCALE: 1"=20'

X: (XREF)
L:OFF=2-1*, 2-2*. REF
P: STD-PCP/BL
1/97 SYR-54-YCC MFS PMC
10071090/10071G09.DWG



Location	Sample Depth Interval (in.)	Sediment Classification	Unifed Soil Classification System	ITS Total PCB Concentration (mg/kg)
T-2-5	0-20.5	4	Fine-grained	160
T-4-1	0-9.5	3	Coarse-grained	7.1
T-7-2	0-7	3	Coarse-grained	0.59
T-8-6	0-15.5	4	Fine-grained	3.8
T-10-2	0-4.5	2	Coarse-grained	4.1
T-10-5	0-8.5	3	Coarse-grained	6.8
T-11-4	0-9.5	4	Fine-grained	46
T-14-4	0-2.5	3	Coarse-grained	62
T-14-5	0-8.5	4	Fine-grained	4.1
T-16-4	0-2.5	2	Coarse-grained	1.9
T-18-3	0-3	2	Coarse-grained	3.0
	3-12			2.1
T-19-5	0-12	3	Coarse-grained	8.0
T-22-2	0-4.5	4	Fine-grained	26
T-23-5	0-6	4	Fine-grained	23
T-24-2	0-3	3	Coarse-grained	8.6
	3-12			5.8
T-27-5	0-7	5	Fine-grained	27
T-28-3	0-2.5	3	Coarse-grained	50
T-28-6	0-14.5	5	Fine-grained	59 [55]
T-29-5	0-3	3	Coarse-grained	12
	3-15.5			2.0
T-30-3	0-3	4	Fine-grained	36 [25]
	3-12			25
T-30-4	0-8.5	5	Fine-grained	0.18
T-31-5	0-11	4	Fine-grained	0.19
T-33-2	0-2.5	2	Coarse-grained	2.6
T-35-2	0-8.5	3	Coarse-grained	21
T-36-1	0-2.5	2	Coarse-grained	16
T-38-5	0-6	4	Fine-grained	10
T-39-2	0-3	4	Fine-grained	13
	3-12			1.3
T-39-5	0-11	4	Fine-grained	35
T-40-2	0-3	3	Coarse-grained	6.1
	3-12			8.4 [6.5]
T-41-4	0-6	3	Coarse-grained	5.3
T-46-1	0-4.5	4	Fine-grained	7. 6
T-49-3	0-2.5	2	Coarse-grained	1.5

NOTES:

1. MAPPING BASED ON SEDIMENT PROBING ACTIVITIES PERFORMED BY BLASLAND, BOUCK & LEE, INC. 10/17/96 THROUGH 10/21/96.
2. 1993 DATA TAKEN FROM PHASE I RI REPORT.
3. ANALYSES IN BRACKETS INDICATES DUPLICATE SAMPLE RESULT.

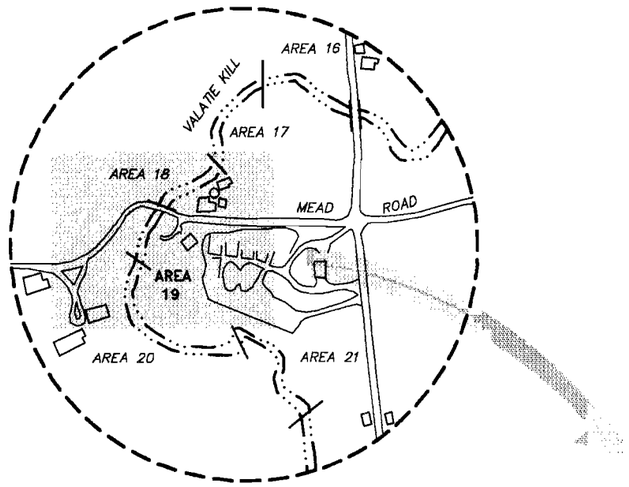
L: ON=*.OFF=REF
P: STD-PCP/BL
5/9/97 SYR-54-RLP AK RLP
10071090/10071G11.DWG

GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

TRIBUTARY T11A - SUMMARY OF SEDIMENT PROBING SURVEY AND PCB DATA

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

FIGURE 6



LOCATION PLAN

NOT TO SCALE

SITE PLAN

LEGEND

- EDGE OF WATER
- AREA LIMITS
- 1994 SAMPLE LOCATION
- 1996 SAMPLE LOCATION AND TOTAL PCB RESULTS IN MILLIGRAMS/ KILOGRAM DRY WEIGHT

NOTES:

1. THE BASE MAP FEATURES ON THIS FIGURE ARE BASED ON AERIAL PHOTOGRAPHS DATED MARCH 31, 1988 AND PERSONAL OBSERVATIONS.

0 50' 100'

APPROXIMATE SCALE

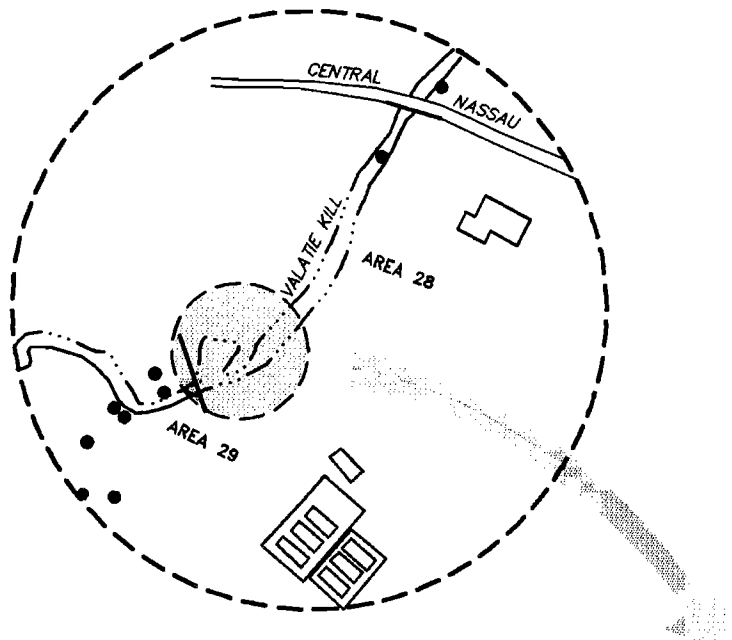
GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

VALATIE KILL AREA 19
SEDIMENT PCB DATA

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

FIGURE **7**

X: (XREF)
L: (LAYER)
P: STD-PDP/BL
3/18/97 SYR-54-YCC MFS
10071090/10071G04.DWG



LOCATION PLAN

NOT TO SCALE

SITE PLAN

LEGEND:

- APPROXIMATE FORMER POND ELEVATION
- EDGE OF WATER
- 434 TOPOGRAPHIC CONTOUR
- K-2 SEDIMENT PROBING LOCATION
- 433.4 ELEVATION (FEET)
- 0.0 WATER DEPTH (FEET)
- 0.5 SEDIMENT THICKNESS (FEET)
- ● 1993 SAMPLE LOCATION
- ● 1994 SAMPLE LOCATION

NOTES:

1. BASE MAP PREPARED FROM SURVEY INFORMATION GENERATED BY BBL, DATED JUNE 23, 1994, @ A SCALE OF 1" = 20'.
2. CONTOUR INTERVAL = 1 FOOT.
3. ELEVATIONS BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929.
4. ELEVATION OF THE TOP OF THE OVERFLOW PIPE (APPROXIMATE LOCATION SHOWN) = 433.54 FEET ABOVE MSL AND IS ASSUMED TO BE THE APPROXIMATE FORMER POND ELEVATION.
5. SEDIMENT PROBING RESULTS BASED ON PHASE II RI ACTIVITIES CONDUCTED BY BBL (OCTOBER 1996).

0' 30' 60'

APPROXIMATE SCALE

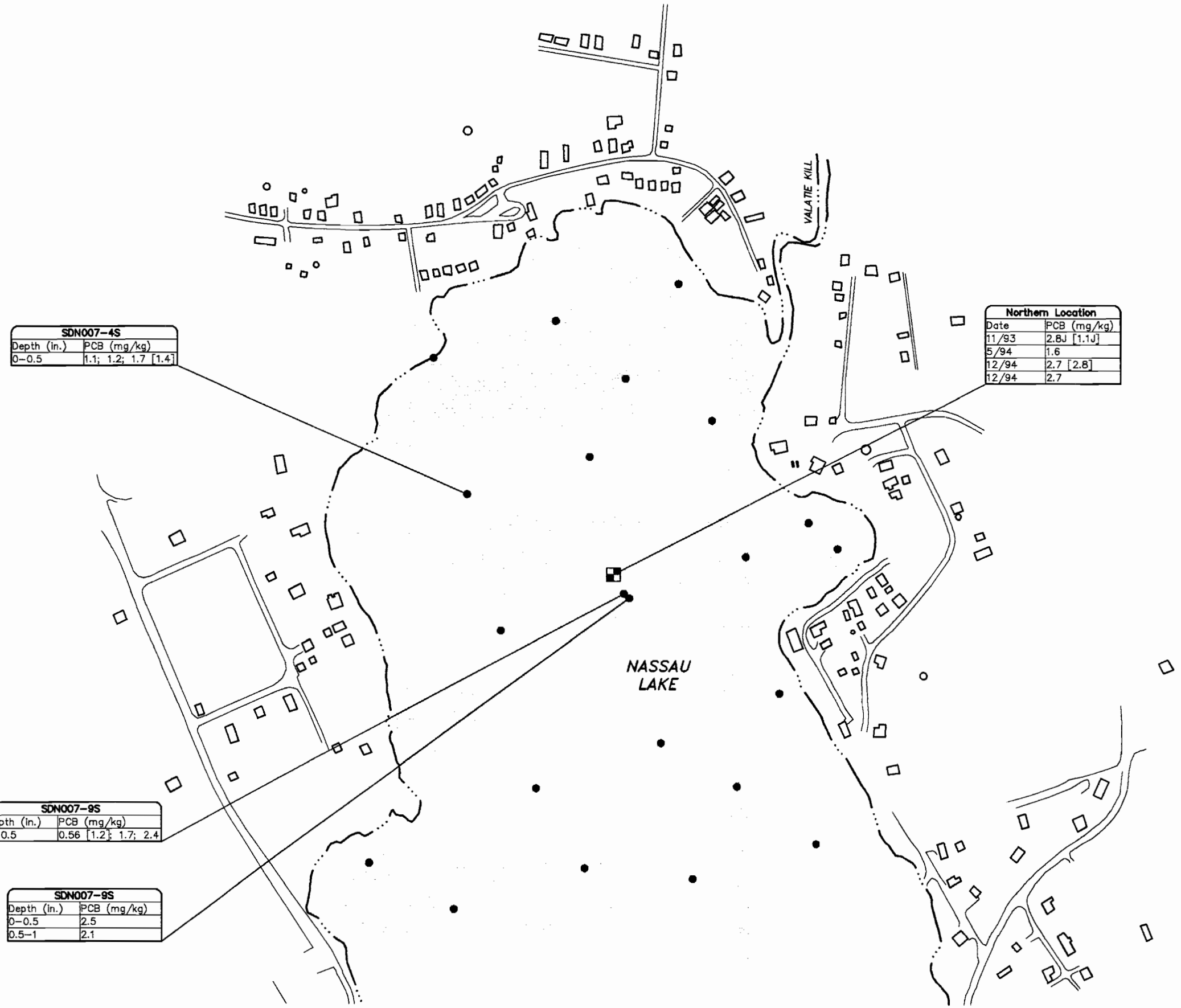
GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

VALATIE KILL AREA 28 WATER DEPTH AND SEDIMENT THICKNESS DATA

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

FIGURE 8

X: (XREF)
L: (LAYER)
P: STD-PCP/BL
3/18/97 SYR-54-YCC MFS
10071090\10071G05.DWG



SDN007-4S	
Depth (in.)	PCB (mg/kg)
0-0.5	1.1; 1.2; 1.7 [1.4]

Northern Location	
Date	PCB (mg/kg)
11/93	2.8J [1.1J]
5/94	1.6
12/94	2.7 [2.8]
12/94	2.7

SDN007-9S	
Depth (in.)	PCB (mg/kg)
0-0.5	0.56 [1.2]; 1.7; 2.4

SDN007-9S	
Depth (in.)	PCB (mg/kg)
0-0.5	2.5
0.5-1	2.1

LEGEND

- EDGE OF WATER
- 1993 SAMPLE LOCATION
- 1996/1997 SAMPLE LOCATION AND TOTAL PCB RESULTS IN MILLIGRAMS/ KILOGRAM DRY WEIGHT
- 1993-94 FORMER SEDIMENT TRAP SAMPLE LOCATION (LOCATION OF SEDIMENT GRAB SAMPLE FOR 1996 GEOTECHNICAL ANALYSES)

NOTES:

1. THE BASE MAP FEATURES ON THIS FIGURE ARE BASED ON AERIAL PHOTOGRAPHS DATED MARCH 31, 1988 AND AND PERSONAL OBSERVATIONS.
2. DUPLICATE RESULTS SHOWN IN BRACKETS.

400' 0 400'
APPROXIMATE SCALE

SITE PLAN

APPROXIMATE SCALE: 1"=400'

X: (XREF)
L: (LAYER)
P: STD-PCP/BL
4/25/97 SYR-54-AK YCC
10073c10/10073G06.DWG

GENERAL ELECTRIC COMPANY
REMEDIAL INVESTIGATION
LOEFFEL SITE ENVIRONS
PHASE II RI REPORT

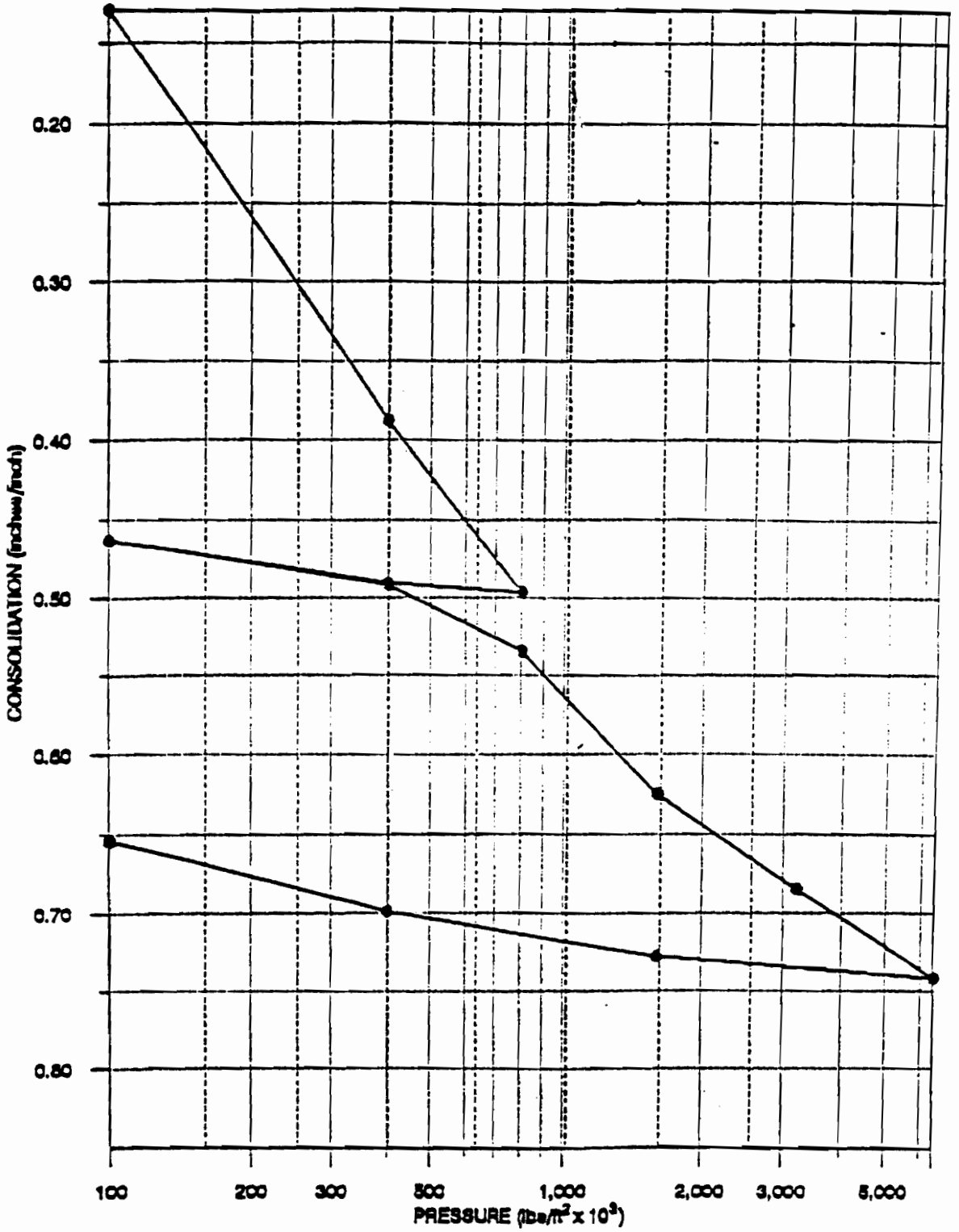
NASSAU LAKE SEDIMENT PCB DATA

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

FIGURE **9**

Appendix A
Data Quality and Validation Results

Appendix B
Nassau Lake Laboratory Results - Geotechnical Characteristics



KEY	BORING NUMBER	SAMPLE DEPTH (FEET)	SOIL CLASSIFICATION	INITIAL MOISTURE CONTENT	INITIAL DRY DENSITY (LBS/FT³)
●	4S-1	0.0-2.9	Light brown organic silt (OH) (very soft, wet)	261.7	19.9

Geo Engineers

CONSOLIDATION TEST RESULTS

FIGURE

Consolidation Test Data Summary

Job Name:	B B & L			Job #:	5467-001-27-1130	Date:	12/23/96
Boring #:	SDN007	Sample #:	4S-1	Depth:	0.0-2.9'	Tested By:	JRS

Load (Psf)	del H1	H1	del H2	H2	Average Height (In)	t90 (min)	Cv (In. ^ 2 min)	Cv (Ft. ^ 2 Day)
3200	0.5345	0.4655	0.6251	0.3749	0.4202	21.20	0.002	0.02

Soil Type	Moisture Content (%)	Dry Density (pcf)
(OH)	261.7	19.9

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DO NOT ALTER THE DATA BELOW

Pressure (Ksf)	Consolidation (In)
0.10	0.1293
0.40	0.3880
0.80	0.4966
0.40	0.4904
0.10	0.4632
0.40	0.4917
0.80	0.5345
1.60	0.6251
3.20	0.6848
6.40	0.7421
1.60	0.7280
0.40	0.6998
0.10	0.6541

One Dimensional Consolidation Test (ASTM D 2435 - 92)

Job Name: BB:L Job No: 5467-001
Boring No: SDN 007 Sample No: US-1 Depth: 6.0-2.91 Tested By: SH Date: 11/1/96
Soil Description: LIGHT BROWN ORGANIC SILT (OH) (VERY SOFT, WET)

Load Sequence:

Special Instructions:
Consolidometer No:

Moisture Density Data

	Total Sample	Tested Sample		
Wet Soil + Rings (g)		130.31		
No. of Rings				
Ring Wt. (g)		43.58		
Wet Soil Wt. (g)		86.73	Moisture Content After Test	
Factor*		0.8310		
Wet Density (pcf)		72.1		"Residual Pan"
Pan Number		Z-4	DP-3	DP-9
Pan & Wet Soil (g)		341.67	229.09	**********
Pan & Dry Soil (g)		129.89	208.39	184.07
Moisture Loss (g)		211.78	20.7	**********
Pan Wt. (g)		85.33	190.76	153.71
Dry Soil Wt. (g)		44.56	17.63	0.36
Moisture Content (%)		475.27 ?	117.42	
Dry Density (pcf)		19.9		

Initial Moisture Content (Back Calculated)

Initial Wet Soil Wt. (g)	86.73
Total Dry Wt. (g)	17.99
Wt. H2o (g)	68.74
Moisture Content (%)	261.7

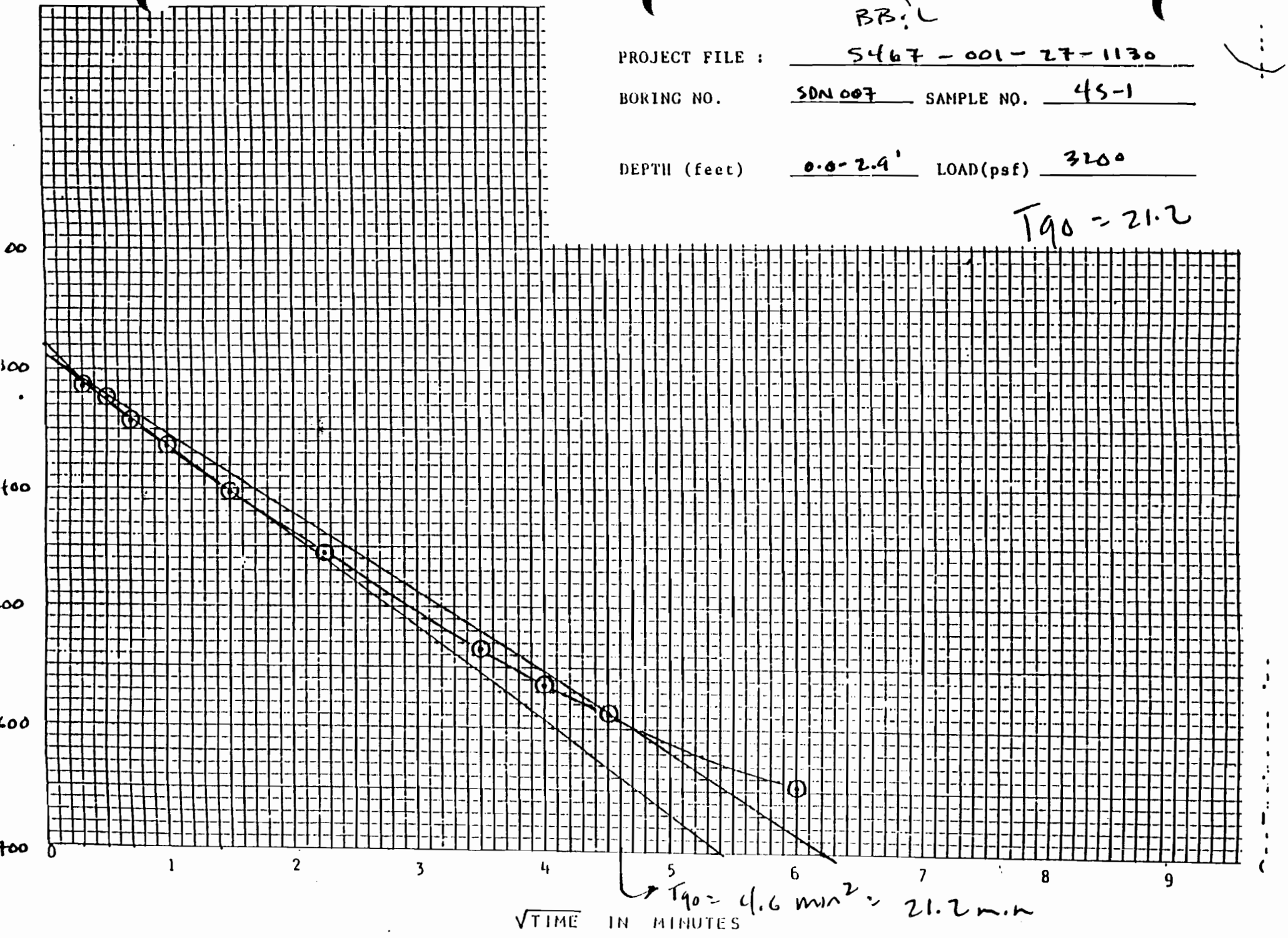
BB&L

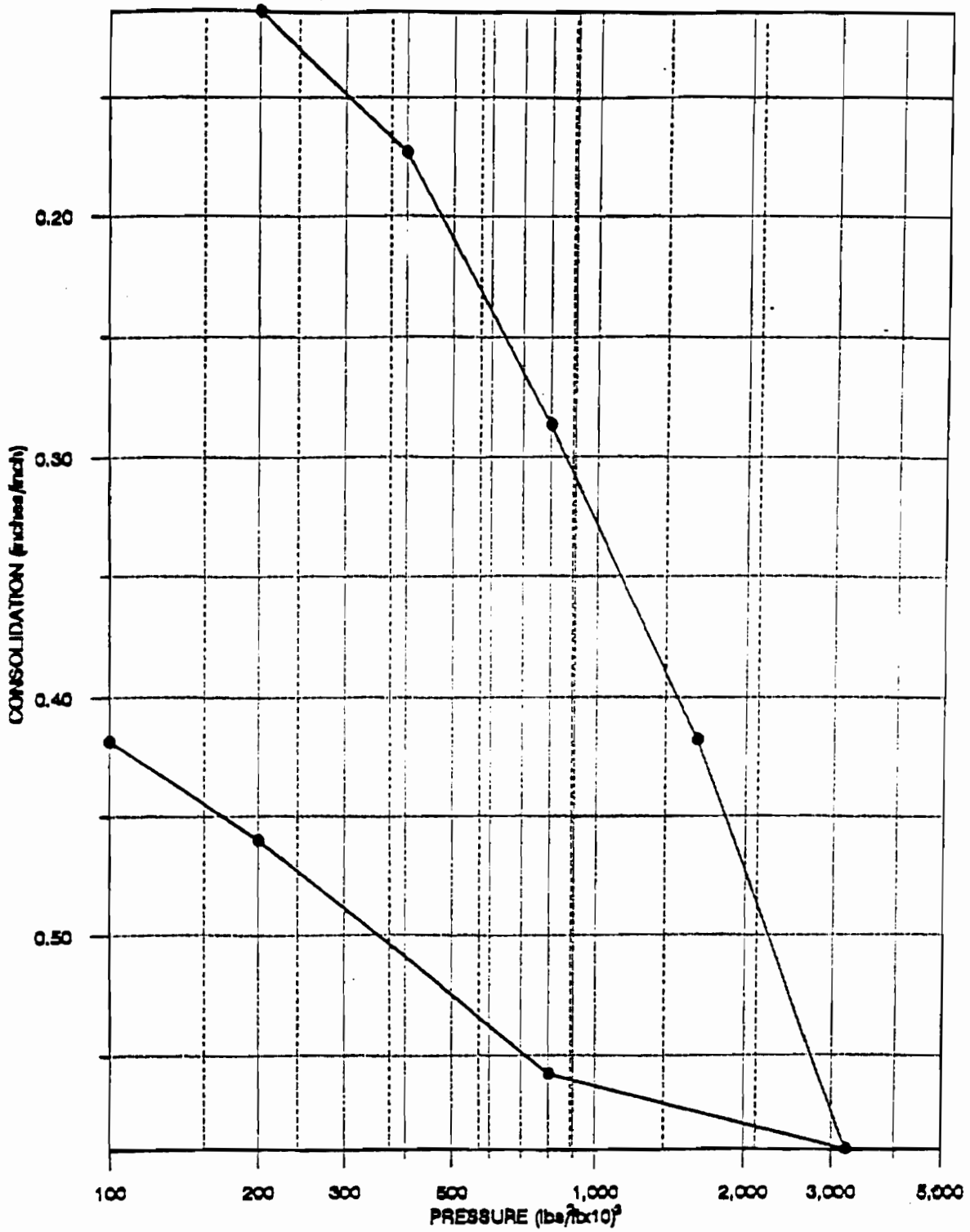
PROJECT FILE : 5467 - 001 - 27 - 1130

BORING NO. SDN 007 SAMPLE NO. 4S-1

DEPTH (feet) 0.0 - 2.9' LOAD(psf) 3200

$T_{90} = 21.2$





KEY	BORING NUMBER	SAMPLE DEPTH (FEET)	SOIL CLASSIFICATION	INITIAL MOISTURE CONTENT	INITIAL DRY DENSITY (LBS/FT³)
●	4S-3	0.0-2.4	Black fibrous silty peat (Pt) (very soft, wet)	700.0	8.1

5467-001-27-1130 JRS:dlw 12/23/96

GeoEngineers

CONSOLIDATION TEST RESULTS

FIGURE

Consolidation Test Data Summary

Job Name:	B B & L			Job #:	5467-001-27-1130	Date:	12/23/96
Boring #:	SDN007	Sample #:	4S-3	Depth:	0.0-2.4'	Tested By:	JRS

Load (Psf)	del H1	H1	del H2	H2	Average Height (In)	t90 (min)	Cv (In. ^ 2 min)	Cv (Ft. ^ 2 Day)
1600	0.5345	0.4655	0.6251	0.3749	0.4202	3.61	0.010	0.10

Soil Type	Moisture Content (%)	Dry Density (pcf)
(PT)	700.0	8.1

DO NOT ALTER THE DATA BELOW

Pressure (Ksf)	Consolidation (In)
0.20	0.1143
0.40	0.1734
0.80	0.2863
1.60	0.4177
3.20	0.5895
0.80	0.5575
0.20	0.4600
0.10	0.4183

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One Dimensional Consolidation Test (ASTM D 2435 - 92)

Job Name: BB&L Job No: 5467-001-06-1130

Boring No: SDN 007 Sample No: 45-3 Depth: 0.0-2.4' Tested By: PR Date: 11/25/96

Soil Description: BLACK FIBROUS SILTY PEAT (Pt) (VERY SOFT, WET)

Load Sequence: 50, 200, 400, 800, 1600, 3200, 800, 200, 100

Special Instructions:

Consolidometer No:

Moisture Density Data

	Total Sample	Tested Sample		
Wet Soil + Rings (g)		121.18		
No. of Rings				
Ring Wt. (g)		43.58		
Wet Soil Wt. (g)		77.60	Moisture Content After Test	"Residual Pan"
Factor*		0.3310		
Wet Density (pcf)		64.5		
Pan Number		W2	I 3	DP10
Pan & Wet Soil (g)		239.48	100.29	**********
Pan & Dry Soil (g)		37.47	60.70	192.24
Moisture Loss (g)		202.01	39.59	**********
Pan Wt. (g)		7.94	51.04	192.20
Dry Soil Wt. (g)		29.53	9.66	0.04
Moisture Content (%)		(700.0) 684.1	409.8 %	
Dry Density (pcf)		(8.1) 8.2		

Initial Moisture Content (Back Calculated)

Initial Wet Soil Wt. (g)	77.60
Total Dry Wt. (g)	9.70
Wt. H2o (g)	67.9
Moisture Content (%)	700.0

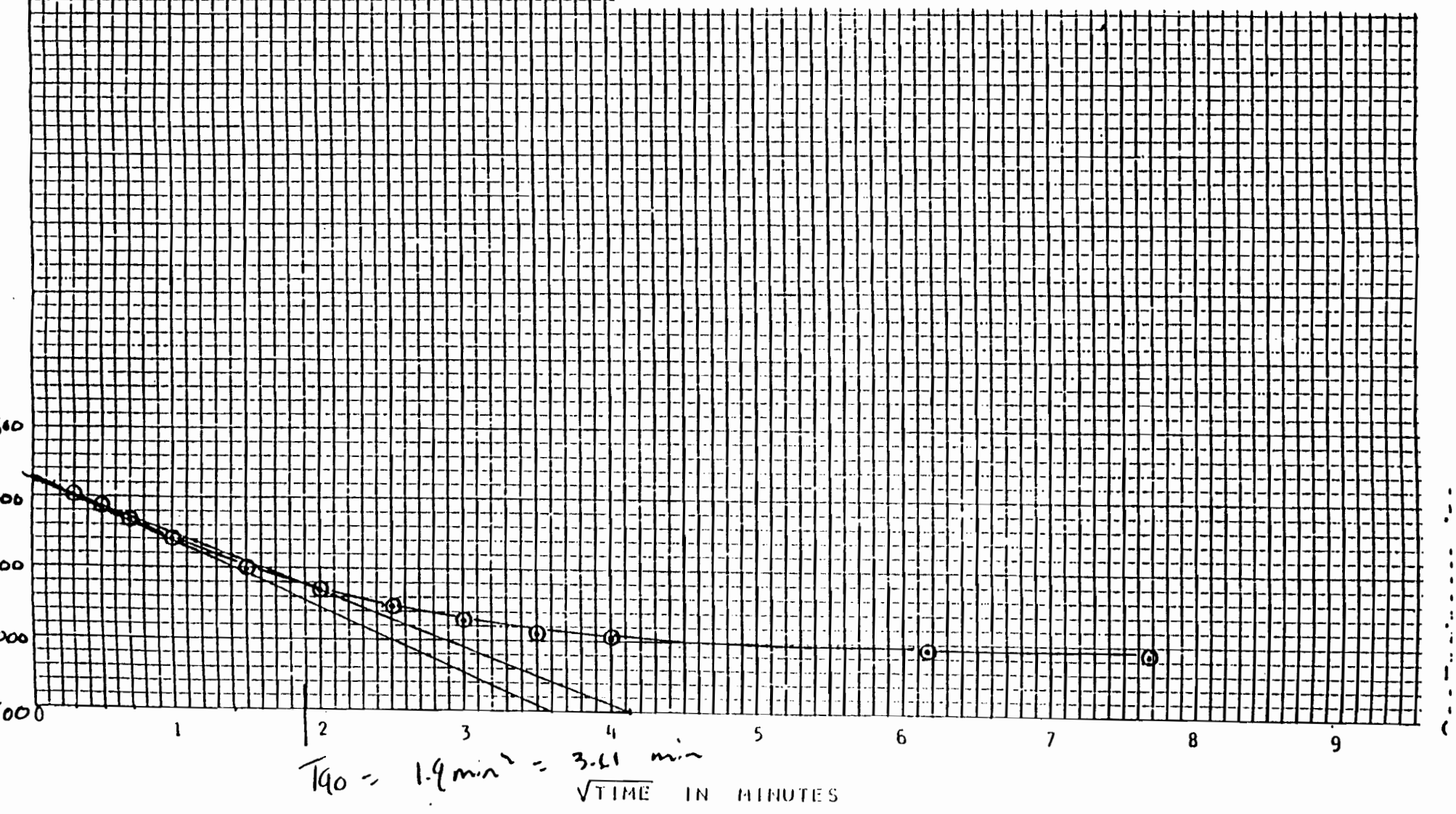
BB&L

PROJECT FILE : 5467-001-27-1130

BORING NO. SDN007 SAMPLE NO. 4S-3

DEPTH (feet) 0-0-2.4' LOAD(psf) 1600

T_{90} = 3.61



T_{90} = 1.9 min$^{1/2}$ = 3.61 min

$\sqrt{\text{TIME}}$ IN MINUTES

Vane Shear Test Data

Job Name:	B B & L			Date:	11/4/96
Job Number:	5467-001-27-1130			Tested By:	JRS
Boring #:	SDN007	Sample #:	4S-3	Depth:	0.0-2.4'

Trial #	Peak Strength Reading	Peak Shear Strength (psf)	Remolded Strength Reading	Remolded Shear Strength (psf)	Sensitivity
1.	6.0	3.0			
2.	5.0	2.5			
3.	4.0	2.0			
Average	5.0	2.5	0	0	0

Comments: This test was run on the extremely soft organic silt at the top of the sample.

Vane Shear Test Data

Job Name: B B & L Date: 11/4/96

Job Number: 5467-001-27-1130 Tested By: JRS

Boring #: SDN007 Sample #: 4S-3 Depth: 0.0-2.3'

Trial #	Peak Strength Reading	Peak Shear Strength (psf)	Remolded Strength Reading	Remolded Shear Strength (psf)	Sensitivity
1.	5.0	2.5			
2.	7.0	3.0			
3.	5.0	2.5			
Average	5.7	2.7	0	0	0

Comments: This test was run on the extremely soft organic silt at the top of the sample.

Vane Shear Test Data

Job Name:	B B & L			Date:	11/4/96
Job Number:	5467-001-27-1130			Tested By:	JRS
Boring #:	SDN007	Sample #:	4S-1	Depth:	0.0-2.6'

Trial #	Peak Strength Reading	Peak Shear Strength (psf)	Remolded Strength Reading	Remolded Shear Strength (psf)	Sensitivity
1.	5.0	2.5			
2.	5.0	2.5			
3.	5.0	2.5			
Average	5.0	2.5	0	0	0

Comments: This test was run on the extremely soft organic silt at the top of the sample.

Vane Shear Test Data

Job Name:	B B & L			Date:	11/4/96
Job Number:	5467-001-27-1130			Tested By:	JRS
Boring #:	SDN007	Sample #:	4S-1	Depth:	0.0-2.9'

Trial #	Peak Strength Reading	Peak Shear Strength (psf)	Remolded Strength Reading	Remolded Shear Strength (psf)	Sensitivity
1.	9.0	4.0			
2.	9.0	4.0			
3.	8.0	4.0			
Average	8.7	4.0	0	0	0

Comments: This test was run on the extremely soft organic silt at the top of the sample.

GeoEngineers

Moisture Content Determinations (ASTM D 2216-92)

Job Name: BTB ; L Job Number: 5467 - 001 - 27 - 1130

Date					
Tested by	JH				
Boring/Test Pit No.	SDN 007-45-3				
Sample No.					
Depth (ft.)	0.0 - 2.3'				
Pan Number	GL-8	DB-0			
Pan + Wet Soil (g)	416.4	942.5			
Pan + Dry Soil (g)	168.19	288.86			
Moisture Loss (g)	248.21	653.64			
Pan Wt. (g)	102.73	182.26			
Dry Soil Wt. (g)	65.46	106.60			
Moisture Content (%)	379.2%	613.2%			
Soil Description	DARK BROWN ORGANIC SILT (Silt)(V. soft, wet) WITH ORGANICS VS Sample	BLACK PEAT	Ho = 10.1 cm 10.1 cm 10.3 cm 760.9 gl wet wt		

Document ID: MCD-2216.VSD

Geo Engineers

Moisture and Density Determinations for D&M Ring Samples with I.D. of 2.416"

Job Name: BB;L Job Number: 5467-001-27-1130

Date/Tested by:	JH				
Boring No.	SDW007				
Sample No.	45-3				
Depth (ft.)	0.0 - 2.3'				
~~Rings + Wet Soil~~ (g) Ht	4.00 IN				
~~No. of Rings~~ DIA	3.75 IN				
Ring Weight (g) V.	44.18 IN3				
Wet Soil Weight (g)	760.9				
~~Factor*~~ Vol. (FT3)	0.0256				
Wet Density (pcf)	65.6				
Pan Number					
Pan + Wet Soil (g)					
Pan + Dry Soil (g)					
Moisture Loss (g)					
Pan Wt. (g)					
Dry Soil Wt. (g)					
Moisture Content (%)	613.2.2				
Dry Density (pcf)	9.2				
Soil Description	BLACK PEAT (Pt) (VERY SOFT, WET)	DATA TRANSFERRED FROM MOISTURE CONTENT FORM			

Average ring weights and factors to use to find wet soil weight and determine wet density.

# Rings	Avg. Ring Weights (g)	*Factors
1	45.3	0.8310
2	90.6	0.4155
3	135.9	0.2770
4	181.2	0.2077
5	226.5	0.1662
6	271.8	0.1385

Document ID: MOISTURE.VSD

GeoEngineers

Moisture Content Determinations (ASTM D 2216-92)

Job Name: BB; 1 Job Number: 5467 - 001 - 27 - 1130

Date	11/4/96				
Tested by	JM				
Boring/Test Pit No.	SDN007-45-1				
Sample No.					
Depth (ft.)	0.0 - 2.6'				
Pan Number	~~BGT~~ V9		DP16		GL-9
Pan + Wet Soil (g)	271.15		1000.7		364.08
Pan + Dry Soil (g)	56.27		243.36		139.73
Moisture Loss (g)	214.88		757.34		224.35
Pan Wt. (g)	8.08 (V)		116.01		101.36
Dry Soil Wt. (g)	48.19		125.35		38.37
Moisture Content (%)	445.9 %		594.7%		584.7 %
Soil Description	BROWN ORGANIC SILT (OH) (VERY SOFT, WET) ALMOST LIQUID VS Sample		11.7 11.7 cm 11.7 CM 885.7 g. BROWN ORGANIC SILT (OH) (VERY SOFT, WET) IN CONTACT WITH BLACK PEAT (Pt) (VERY SOFT, WET)	PEAT = 17.5" SOIL = BROWN	BROWN UPPER SEDIMENT LIQUID

Document ID: MCD-2216.VSD

Geo Engineers

Moisture and Density Determinations for D&M Ring Samples with I.D. of 2.416"

Job Name: BB:L Job Number: 5467 -001 - 27 - 1130

Date/Tested by:	11/4/96 JY				
Boring No.	SDW007				
Sample No.	45-1				
Depth (ft.)	0.0 - 2.6'				
~~Rings + Wet Soil (g)~~ H	4.61 IN				
~~No. of Rings~~ DIA	3.75 IN				
~~Ring Weight (g)~~ V.	50.91-11.04 IN^3				
Wet Soil Weight (g)	885.7				
~~Factor~~ V (FT^3)	0.0295 0.0064				
Wet Density (pcf)	66.3				
Pan Number					
Pan + Wet Soil (g)					
Pan + Dry Soil (g)					
Moisture Loss (g)					
Pan Wt. (g)					
Dry Soil Wt. (g)					
Moisture Content (%)	594.7%				
Dry Density (pcf)	9.5				
Soil Description	BROWN ORGANIC SILT (OH) (VERY SOFT, WET) IN CONTACT WITH BLACK PEAT (Pt) (VERY SOFT, WET)	DATA TRANSFERED FROM MOISTURE CONTENT PAGE			

Average ring weights and factors to use to find wet soil weight and determine wet density.

# Rings	Avg. Ring Weights (g)	*Factors
1	45.3	0.8310
2	90.6	0.4155
3	135.9	0.2770
4	181.2	0.2077
5	226.5	0.1662
6	271.8	0.1385

Document ID: MOISTURE.VSD

GeoEngineers

Moisture Content Determinations (ASTM D 2216-92)

Job Name: BB: 1 Job Number:

Date	11/4/96				
Tested by	JS				
Boring/Test Pit No.	SDN007-45-3				
Sample No.					
Depth (ft.)	0.0 - 2.4'				
Pan Number	B1				
Pan + Wet Soil (g)	268.83				
Pan + Dry Soil (g)	96.44				
Moisture Loss (g)	172.39				
Pan Wt. (g)	51.33				
Dry Soil Wt. (g)	45.11				
Moisture Content (%)	382.22				
Soil Description	BROWN ORGANIC SILT (OH) (VERY SOFT, WET)				

Document ID: MCD-2216.VSD

GeoEngineers

Moisture and Density Determinations ~~for D&M~~

~~Ring Samples with I.D. of 2.416"~~

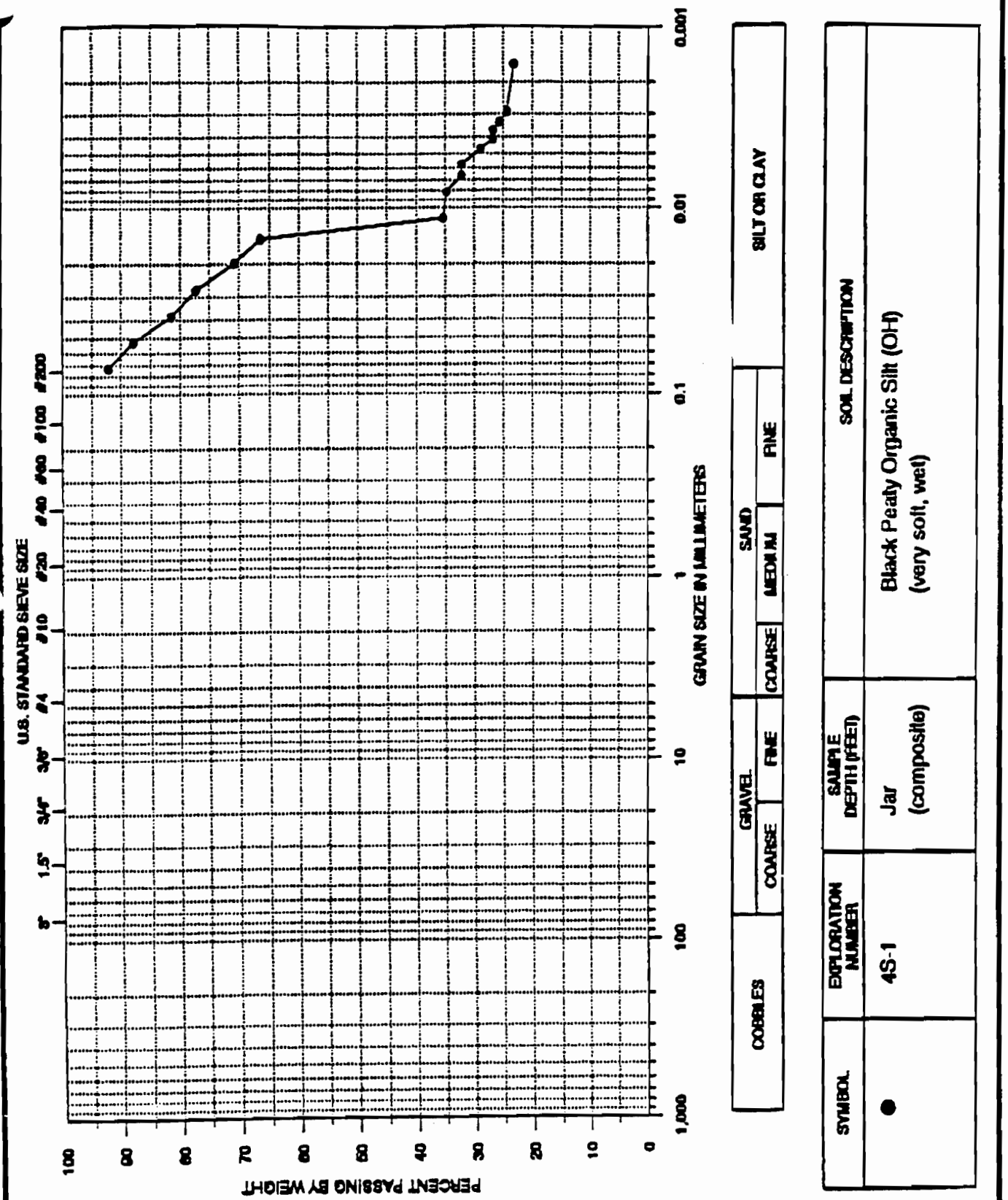
Job Name: BB L Job Number: 5467-001-06-1130

Date/Tested by:	10/29/96 JMS				
Boring No.	SDN-007-45-1				
Sample No.					
Depth (ft.)	0.0-2.9'				
~~Rings + Wet Soil (g)~~ H	10.5, 10.6, 10.4 cm				
No. of Rings H (in)	4.13				
~~Ring Weight~~ (g) DIA	3.75"				
Wet Soil Weight (g)	774.6				
Factor* Volume (ft^3)	0.0264				
Wet Density (pcf)	64.7				
Pan Number	Z3		Z-1		
Pan + Wet Soil (g)	563.2				
Pan + Dry Soil (g)	~~401.20~~ 157.11		139.60		
Moisture Loss (g)	406.09 ~~462.0~~				
Pan Wt. (g)	87.04		85.34		
Dry Soil Wt. (g)	~~70.07 14.11~~				
Moisture Content (%)	579.6%				
Dry Density (pcf)	9.5				
Soil Description	Black Peat (PT) (very soft, wet)				

Average ring weights and factors to use to find wet soil weight and determine wet density.

# Rings	Avg. Ring Weights (g)	*Factors
1	45.3	0.8310
2	90.6	0.4155
3	135.9	0.2770
4	181.2	0.2077
5	226.5	0.1662
6	271.8	0.1385

Document ID: MOISTURE.VSD



GeoEngineers

GRADATION CURVES

FIGURE

5407-001 JRS.dw 12/

Hydrometer Test Data

Job Name BB&L Job No: 5467-001-27-1130

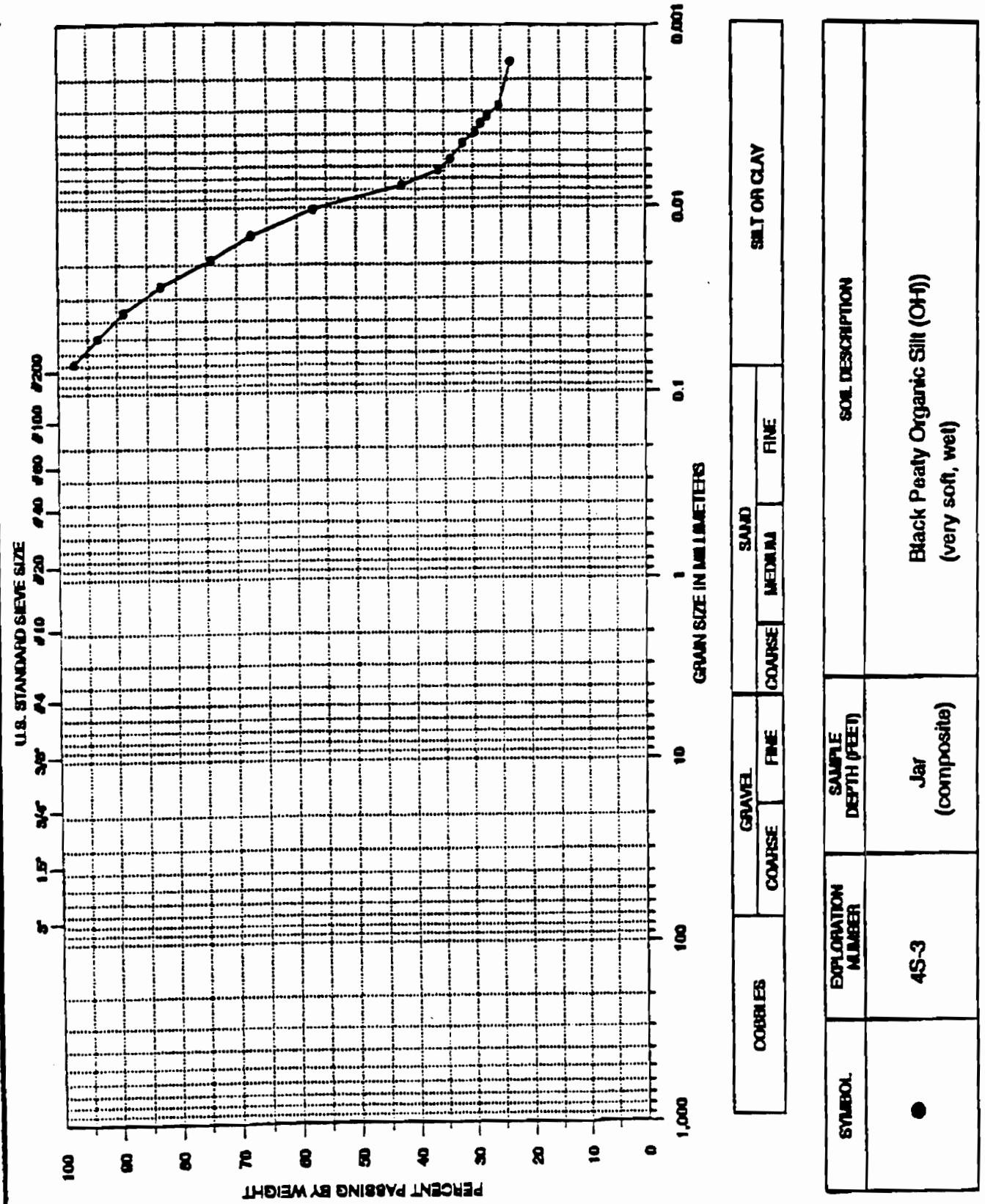
Date: 12/18/96 Tested By: PR Checked:

Boring No: SDN007 Sample #: 4S-1 Depth: N/A

Pan #:	T-44	Air Dried Soil wt:	54.00
Pan & Wet Soil:	289.15	Corr. soil wt:	49.90
Pan & Dry Soil:	285.05	Specific Gravity	2.32
Moisture loss:	4.10	% Passing #10 Sieve:	100.00%
Pan wt:	235.15	W a	4990 1.07
Dry soil wt:	49.90	Composite Corr.	0
Moisture Content (%)	8.2%		

Date	Time	Elapsed Time (Min) (t)	Temp.	Hyd. Reading	% Soil in Suspen.	Eff. Depth (L)	K	Diam. (D) (mm.)
12/5/96	952	0.0						
		0.5	19	43	92.2%	9.2	0.0170	0.0730
		1.0	19	41	87.9%	9.6	0.0170	0.0525
	954	2.0	19	38	81.5%	10.1	0.0170	0.0381
	956	4.0	19	36	77.2%	10.4	0.0170	0.0274
	1000	8.0	19	33	70.8%	10.9	0.0170	0.0198
	1007	15.0	19	31	66.5%	11.2	0.0170	0.0147
	1022	30.0	19	16.5	35.4%	13.6	0.0170	0.0114
	1052	60.0	19.5	16	34.3%	13.7	0.0169	0.0081
	1122	90.0	19.5	15	32.2%	13.8	0.0169	0.0066
	1152	120.0	19.8	15	32.2%	13.8	0.0168	0.0057
	1253	180.0	20	13.5	28.9%	14.1	0.0168	0.0047
	1352	240.0	20	12.5	26.8%	14.2	0.0168	0.0041
	1452	300.0	20	12.5	26.8%	14.2	0.0168	0.0037
	1552	360.0	20	12	25.7%	14.3	0.0168	0.0033
	1752	480.0	20	11.4	24.4%	14.4	0.0168	0.0029
12/6/96	1155	1554.0	19.5	10.8	23.2%	14.5	0.0169	0.0016

a	
Specific G	Corr. Fact.
2.95	0.94
2.9	0.95
2.85	0.96
2.8	0.97
2.75	0.98
2.7	0.99
2.65	1
2.6	1.01



Geo Engineers

GRADATION CURVES

FIGURE

5487-001 JRS.dwg 12/24/96

Hydrometer Test Data

Job Name BB&L Job No: 5467-001-27-1130

Date: 12/18/96 Tested By: PR Checked:

Boring No: SDN007 Sample #: 4S-3 Depth: N/A

Pan #:	T-43	Air Dried Soil wt:	54.00
Pan & Wet Soil:	287.36	Corr. soil wt:	50.54
Pan & Dry Soil:	283.90	Specific Gravity	2.37
Moisture loss:	3.46	% Passing #10 Sieve:	100.00%
Pan wt:	233.36	W a	5054 1.07
Dry soil wt:	50.54	Composite Corr.	0
Moisture Content (%)	6.8%		

Date	Time	Elapsed Time (Min) (t)	Temp.	Hyd. Reading	% Soil in Suspen.	Eff. Depth (L)	K	Diam. (D) (mm.)
12/5/96	1002	0.0						
		0.5	19	46	97.4%	8.8	0.0164	0.0685
		1.0	19	44	93.2%	9.1	0.0164	0.0493
	1004	2.0	19	42	88.9%	9.4	0.0164	0.0355
	1006	4.0	19	39	82.6%	9.9	0.0164	0.0258
	1010	8.0	19	35	74.1%	10.6	0.0164	0.0188
	1017	15.0	19	32	67.7%	11.0	0.0164	0.0141
	1032	30.0	19.5	27	57.2%	11.9	0.0163	0.0102
	1102	60.0	19.5	20	42.3%	13.0	0.0163	0.0076
	1132	90.0	19.5	17	36.0%	13.5	0.0163	0.0063
	1202	120.0	19.8	16	33.9%	13.7	0.0162	0.0055
	1302	180.0	20	15	31.8%	13.8	0.0162	0.0045
	1402	240.0	20	14	29.6%	14.0	0.0162	0.0039
	1502	300.0	20	13.5	28.6%	14.1	0.0162	0.0035
	1602	360.0	20	13	27.5%	14.2	0.0162	0.0032
	1802	480.0	20	12	25.4%	14.3	0.0162	0.0028
12/6/96	1156	1554.0	19.5	11	23.3%	14.5	0.0163	0.0016

a	
Specific G	Corr. Fact.
2.95	0.94
2.9	0.95
2.85	0.96
2.8	0.97
2.75	0.98
2.7	0.99
2.65	1
2.6	1.01

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Moisture, Ash and Organic Matter of Peat and Other Organic Soils (ASTM D 2974-87)

Job Name: BB&L

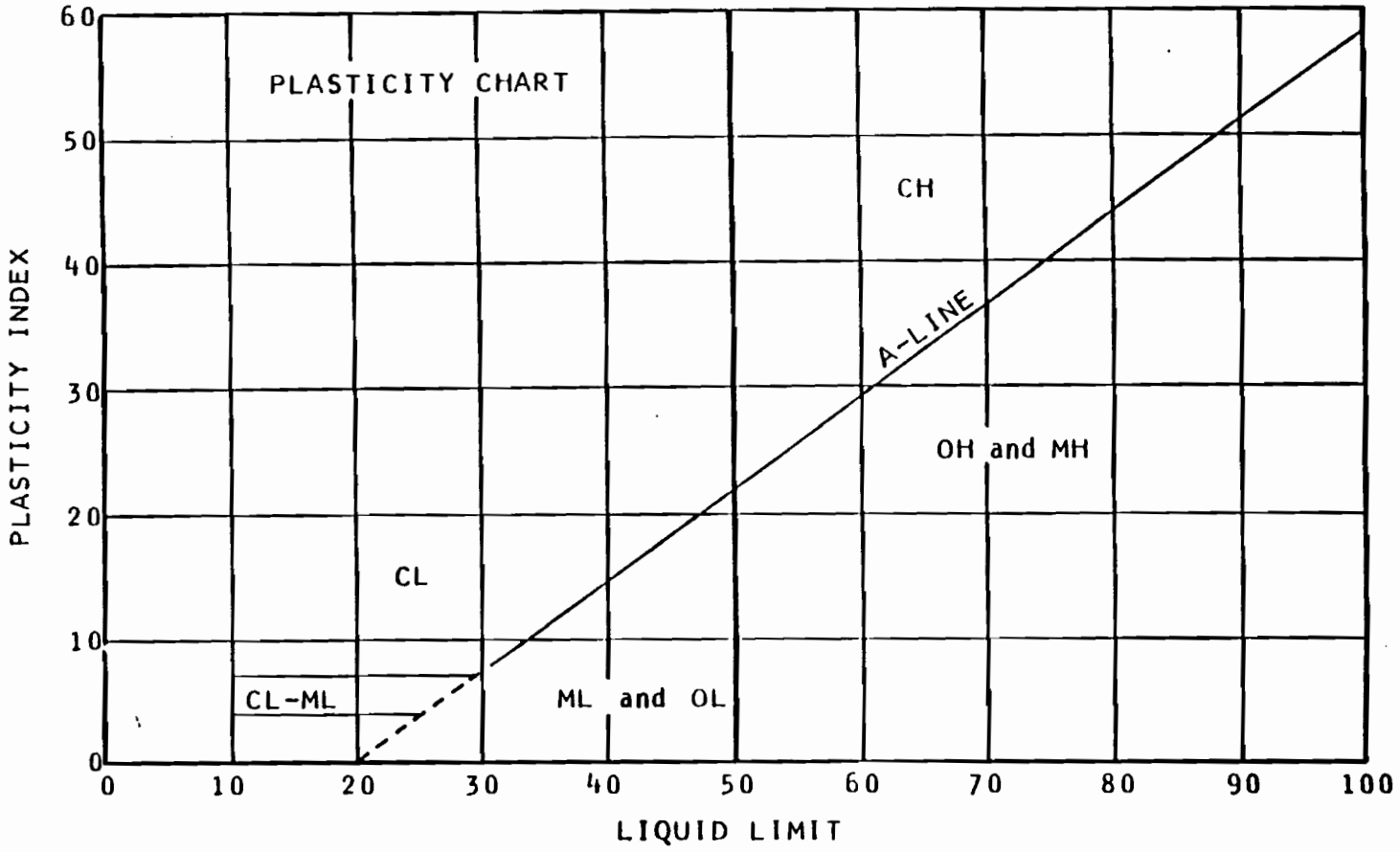
Job Number: 5467-001-27-1130

Date	11/25/96				
Tested by	JR	→	→		
Boring/Test Pit No.	SDN 007		SDN 007		
Sample No.	45-1		45-3		
Depth (ft.)	5'-7' - Composite		5'-7' - Composite		
Pan Number	C1		F-1		
Pan + Wet Soil (g)	116.72		102.03		
Pan + Dry Soil (g)	60.46		59.12		
Moisture Loss (g)	56.26		42.91		
Pan Wt. (g)	50.25		51.27		
Dry Soil Wt. (g)	10.21		7.85		
Moisture Content (%)	551.0%		546.6%		
Pan + Dry Soil After Burn (g)	56.68		56.72		
Wt. Loss Due to Ignition (g)	3.78		2.40		
Ash Content (%)	63.0%		69.4%		
Organic Content (%)	37.0%		30.6%		
Soil Description					

Document ID: MCD-2974.VSD

GeoEngineers, Inc.

ATTERBERG LIMITS TEST RESULTS



EXPLORATION NUMBER	SAMPLE DEPTH	MOISTURE CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	SOIL DESCRIPTION
SDN007 45-1	JAR (COMPOSITE)	551.0	348	192	BLACK ORGANIC SILT (OH) (VERY SOFT, WET)
SDN007 45-3	JAR (COMPOSITE)	546.6	292	133	BLACK ORGANIC SILT (OH) (VERY SOFT, WET)

Project BB&L Job No. 5467-001-06-1130

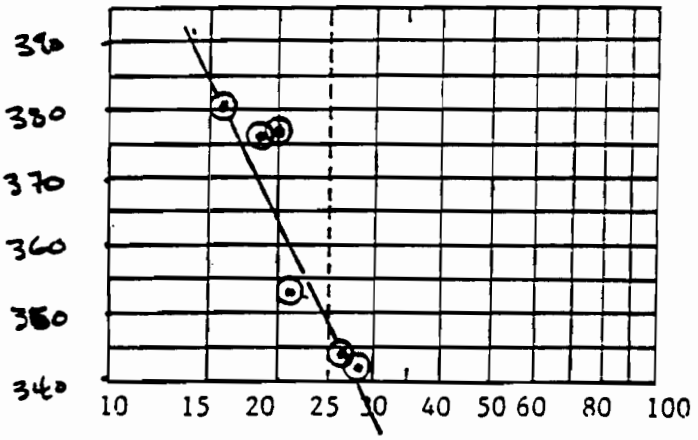
Location of Project _____ Boring No. SDN607 Sample No. 45-1

Description of Soil Black organic SILT (OH) (Very soft, wet)

Depth of Sample JARS/Composite Tested By JT Date 12/3/96

LIQUID LIMIT DETERMINATION

Can no.	K	A	B	BEJ	I	A
Wt. of wet soil + can	39.16	38.24	37.70	38.65	38.23	38.27
Wt. of dry soil + can	33.34	33.00	32.73	32.86	32.75	33.14
Wt. of can	31.81	31.61	31.41	31.22	31.16	31.64
Wt. of dry soil	1.53	1.39	1.32	1.64	1.59	1.50
Wt. of moisture	5.82	5.24	4.97	5.79	5.48	5.13
Water content, w %	380.4%	377.0%	376.5%	353.1%	344.7%	342.0
No. of blows, N	16	20	18	21	26	28



LL = 348

PL = 156

PI = 192

PLASTIC LIMIT DETERMINATION

Can no.	BI=J	I	J	K
Wt. of wet soil + can	32.25	31.99	32.52	
Wt. of dry soil + can	31.64	31.49	31.72	
Wt. of can	31.25	31.18	31.19	31.23
Wt. of dry soil	0.39	0.31	0.53 ~~0.80~~	
Wt. of moisture	0.61	0.50	0.80 ~~0.59~~	
Water content, w% - w_p	156.4%	161.3%	150.9%	

GeoEngineers Inc.

ATTERBERG LIMITS DETERMINATION

Project BB:L Job No. 547-001-06-1130

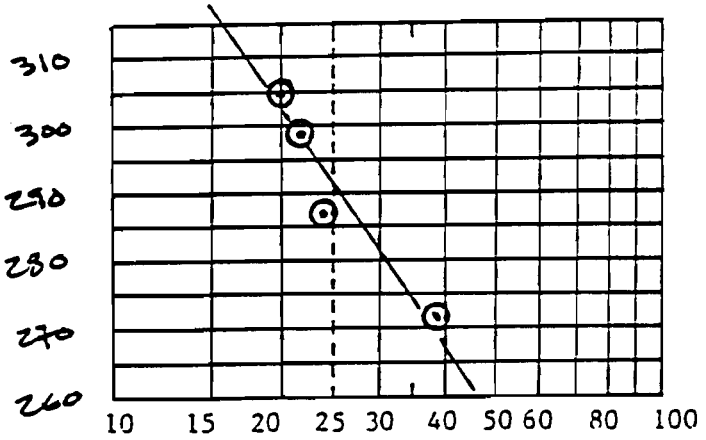
Location of Project _____ Boring No. SDN 007 Sample No. 45-3

Description of Soil BLACK ORGANIC SILT (OH) (VERY SOFT, WET)

Depth of Sample JAR / COMPOSITE Tested By JJ Date 12/3/91

LIQUID LIMIT DETERMINATION

Can no.	D	E	F	G		
Wt. of wet soil + can	37.93	38.90	38.72	39.04		
Wt. of dry soil + can	32.99	33.17	32.88	33.94		
Wt. of can	31.37	31.25	30.84	32.06		
Wt. of dry soil	1.62	1.92	2.04	1.88		
Wt. of moisture	4.94	5.73	5.84	5.10		
Water content, w %	304.9%	298.4%	286.3%	271.3%		
No. of blows, N	20	22	24	39		



LL = 292 %

PL = 159.2

PI = 133

PLASTIC LIMIT DETERMINATION

Can no.	A	B	D	C
Wt. of wet soil + can	32.49	32.37	32.75	
Wt. of dry soil + can	31.97	31.81	31.93	
Wt. of can	31.66	31.45	31.40	31.28
Wt. of dry soil	0.31	0.36	0.53	
Wt. of moisture	0.52	0.56	0.82	
Water content, $w\% - w_p$	167.7 %	155.6 %	154.7 %	

GeoEngineers, Inc.

ATTERBERG LIMITS DETERMINATION

Specific Gravity Test
(ASTM D-854)

Job Name BB&L Date: 12/18/96

Job Number: 5467-001 Tech: PR

Boring #:	SDN007	SDN007
Sample:	4S-1	4S-3
Depth: JAR (COMPOSITE)		
Flask No	A	A
Temperature of Water and Soil (C)	18	20
Pan No.	T-5	V-1
Pan and Dry Soil	332.36	215.2
Pan	329.63	210.79
Dry Soil (Ws)	2.73	4.41
Flask and Water at T (C)(Wbw)	343.73	343.64
Ws + Wbw	346.46	348.05
Flask and Water and Immersed Soil (Wbws)	345.28	346.19
Displaced Water, Ws + Wbw - Wbws	1.18	1.86
Correction Factor (k)	1.004	1
Specific Gravity (GS)=Ws*K/Ws+Wbw-Wbws	2.32	2.37

Data from calibration graph

GeoEngineers

8410 - 154th Avenue NE
Redmond, Washington 98052
Telephone: (206) 861-6000
Fax: (206) 861-6050

LETTER OF TRANSMITTAL

To: BB&L
6723 TOWPATH RD., PO BOX 66
SYRACUSE NEW YORK 13214-0066

Date: 1/8/97

File: 5467-001-27

Attention: MR. JOHN NOVOTNY

Regarding: TEST RESULTS

We are sending: ☒ Attached ☐ Under Separate Cover

Copies	Date	Description

These are transmitted as checked below:

☒ For Your Use ☐ As Requested ☐ Returned
☐ For Review and Comment ☐ Other (see remarks)

Remarks: JOHN - ATTACHED PLEASE FIND SETTLING COLUMN TEST DATA, ALONG WITH "FRESH" COPIES OF THE HYDROMETER AND CONSOL RESULTS.

PLEASE CALL IF YOU HAVE ANY QUESTIONS OR COMMENTS.

THANKS,

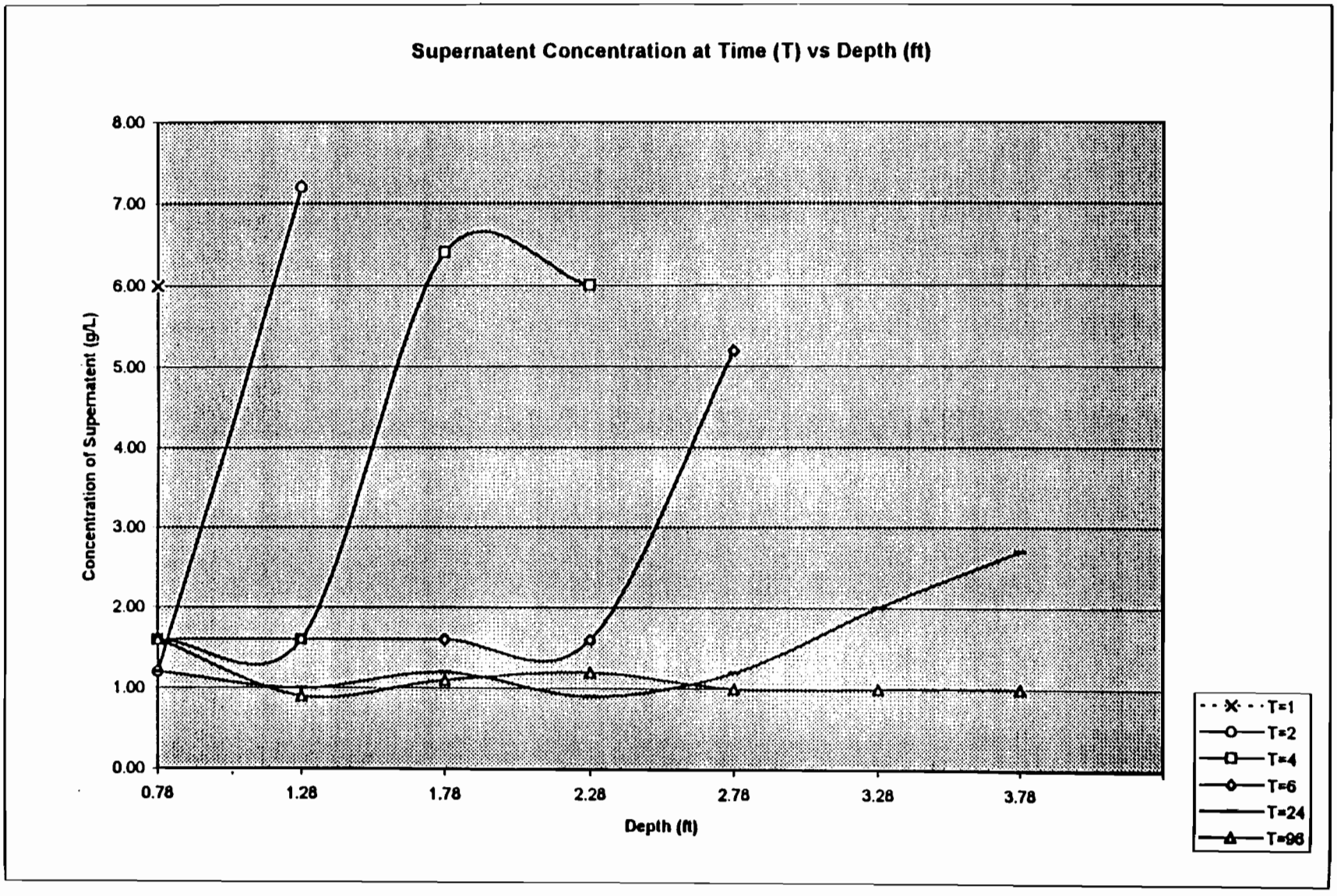
Copy To:

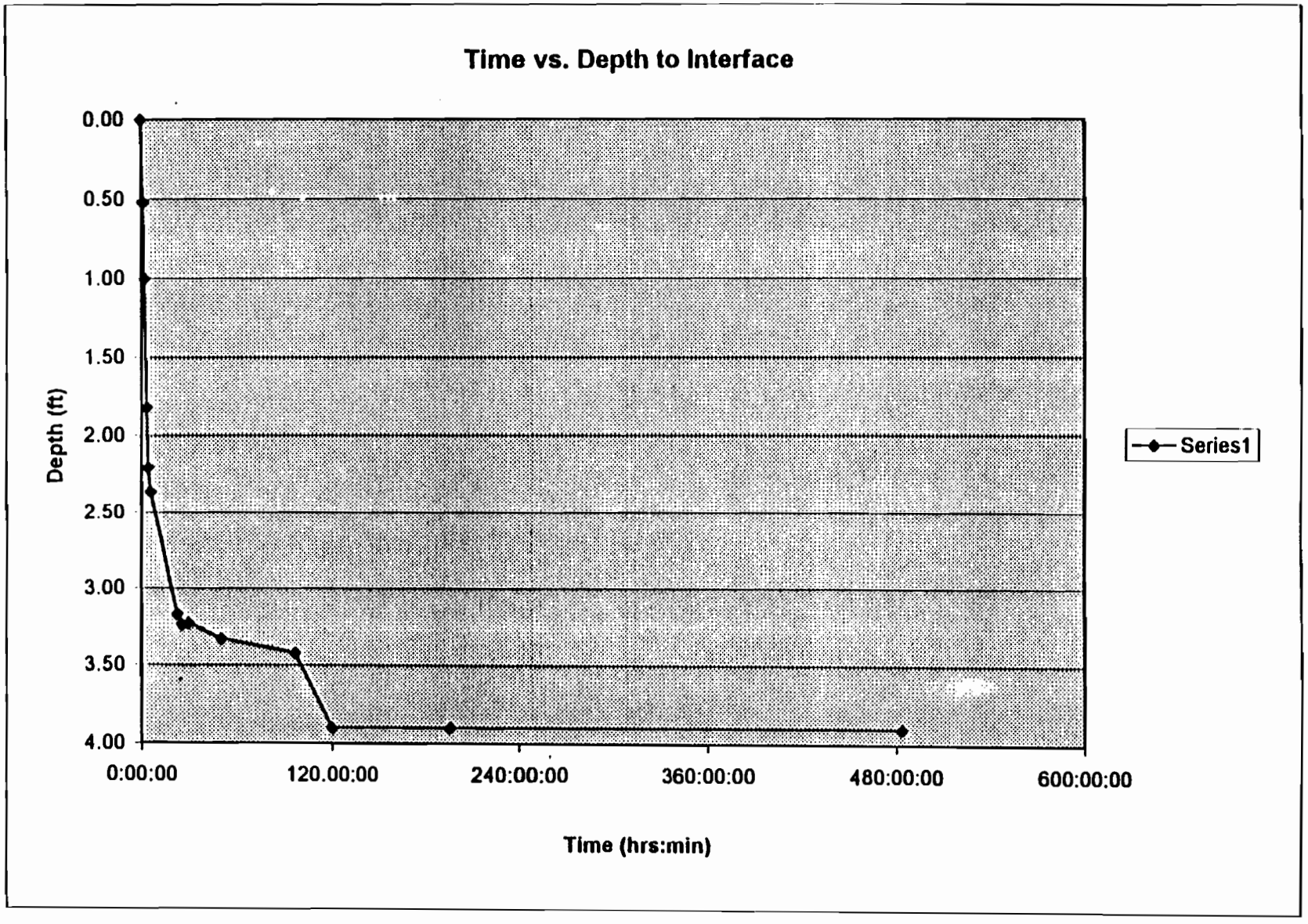
Signed: John Schmertmann

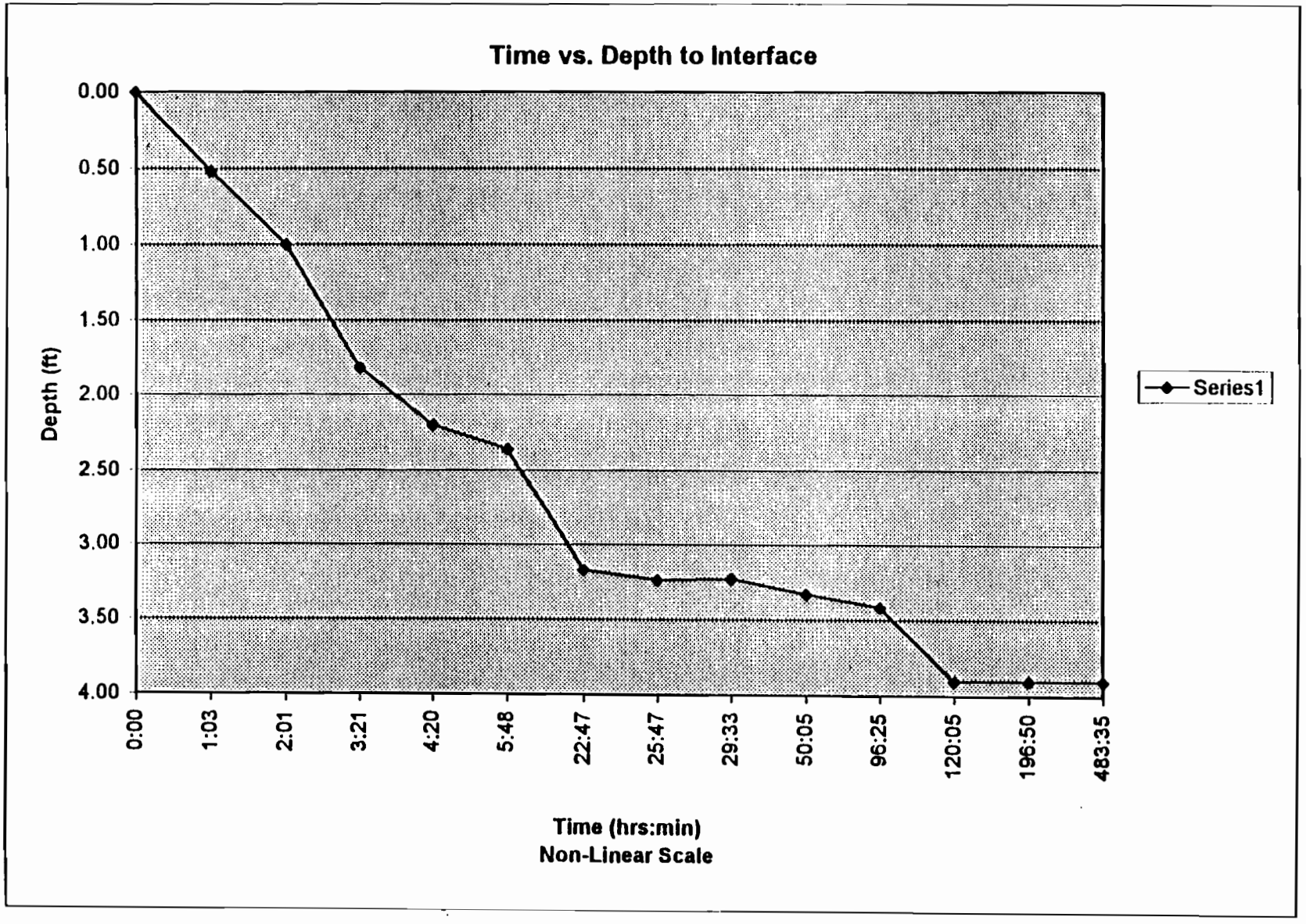
Job: BB&L File No. 5467-001-27-1130
By: JRS Date: 1/7/97

Port	Depth (ft)	Time (hrs)					
		T=1	T=2	T=4	T=6	T=24	T=96
2	0.78	6.00	1.20	1.60	1.60	1.20	1.60
3	1.28		7.20	1.60	1.60	1.00	0.90
4	1.78			6.40	1.60	1.20	1.10
5	2.28			6.00	1.60	0.90	1.20
6	2.78				5.20	1.20	1.00
7	3.28					2.00	1.00
8	3.78					2.70	1.00

Data in Table = Concentration in g/L

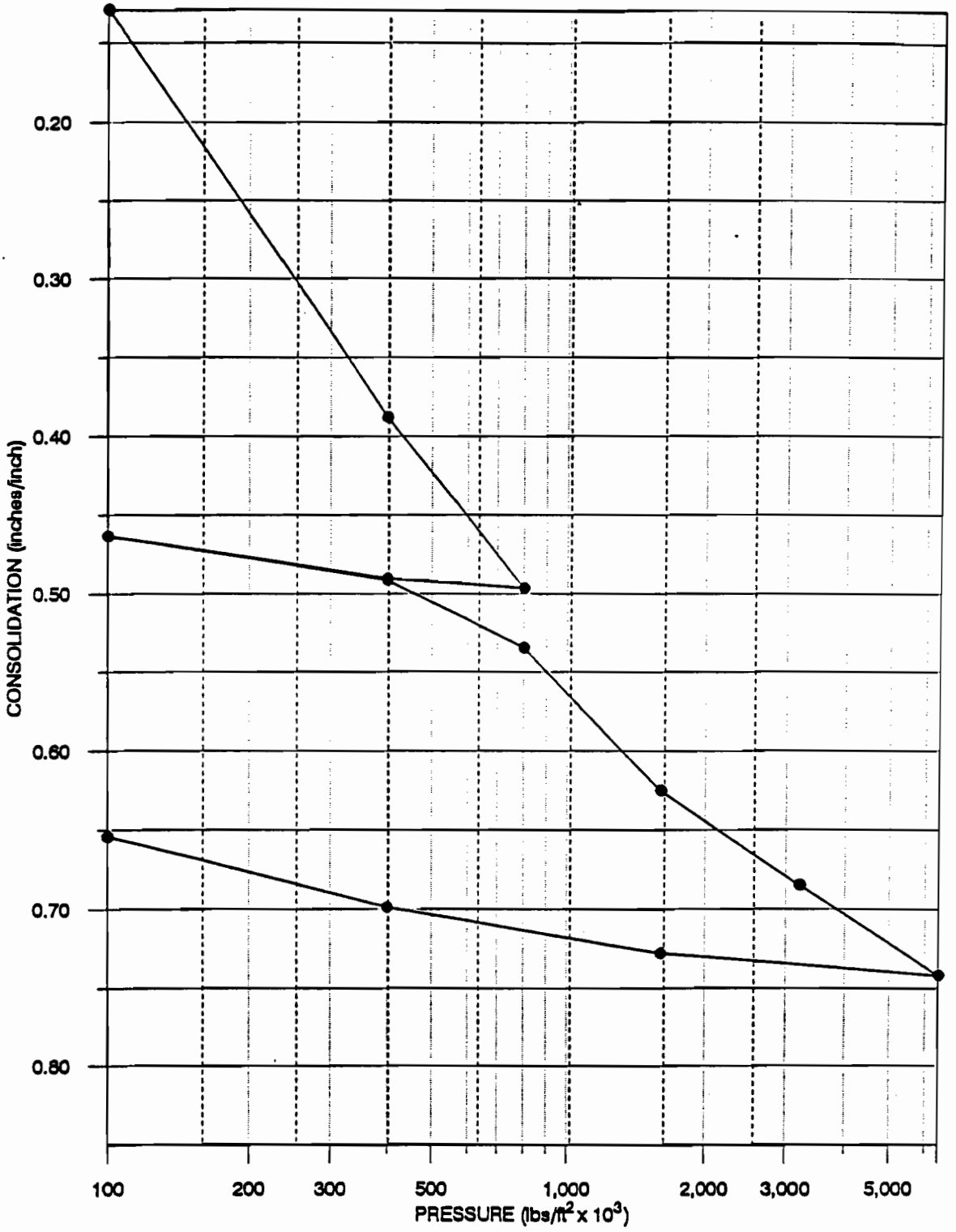

Supernatent Concentration at Time (T) vs Depth (ft)
Concentration of Supernatent (g/L)
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.78
1.28
1.78
2.28
2.78
3.28
3.78
Depth (ft)
T=1
T=2
T=4
T=6
T=24
T=96


Time vs. Depth to Interface
Depth (ft)
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
0:00:00
120:00:00
240:00:00
360:00:00
480:00:00
600:00:00
Time (hrs:min)
Series1


Time vs. Depth to Interface
Depth (ft)
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
0:00
1:03
2:01
3:21
4:20
5:48
22:47
25:47
29:33
50:05
96:25
120:05
196:50
483:35
Time (hrs:min)
Non-Linear Scale
Series1

Job: BB&L File No. 5467-001-27-1130
By: JRS Date: 1/7/96

Date	Time	Elap. Time (Hrs.)	Depth to Interface (ft.)
12/11/96	11:55	0:00:00	0.00
	12:58	1:03:00	0.52
	13:56	2:01:00	1.00
	15:16	3:21:00	1.82
	16:15	4:20:00	2.20
	17:43	5:48:00	2.36
12/12/96	10:42	22:47:00	3.17
	13:42	25:47:00	3.24
	17:28	29:33:00	3.23
12/13/96	14:00	50:05:00	3.33
12/15/96	12:20	96:25:00	3.42
12/16/96	12:00	120:05:00	3.90
12/19/96	16:45	196:50:00	3.90
12/31/96	15:30	483:35:00	3.90



KEY	BORING NUMBER	SAMPLE DEPTH (FEET)	SOIL CLASSIFICATION	INITIAL MOISTURE CONTENT	INITIAL DRY DENSITY (LBS/FT³)
●	4S-1	0.0-2.9	Light brown organic silt (OH) (very soft, wet)	261.7	19.9

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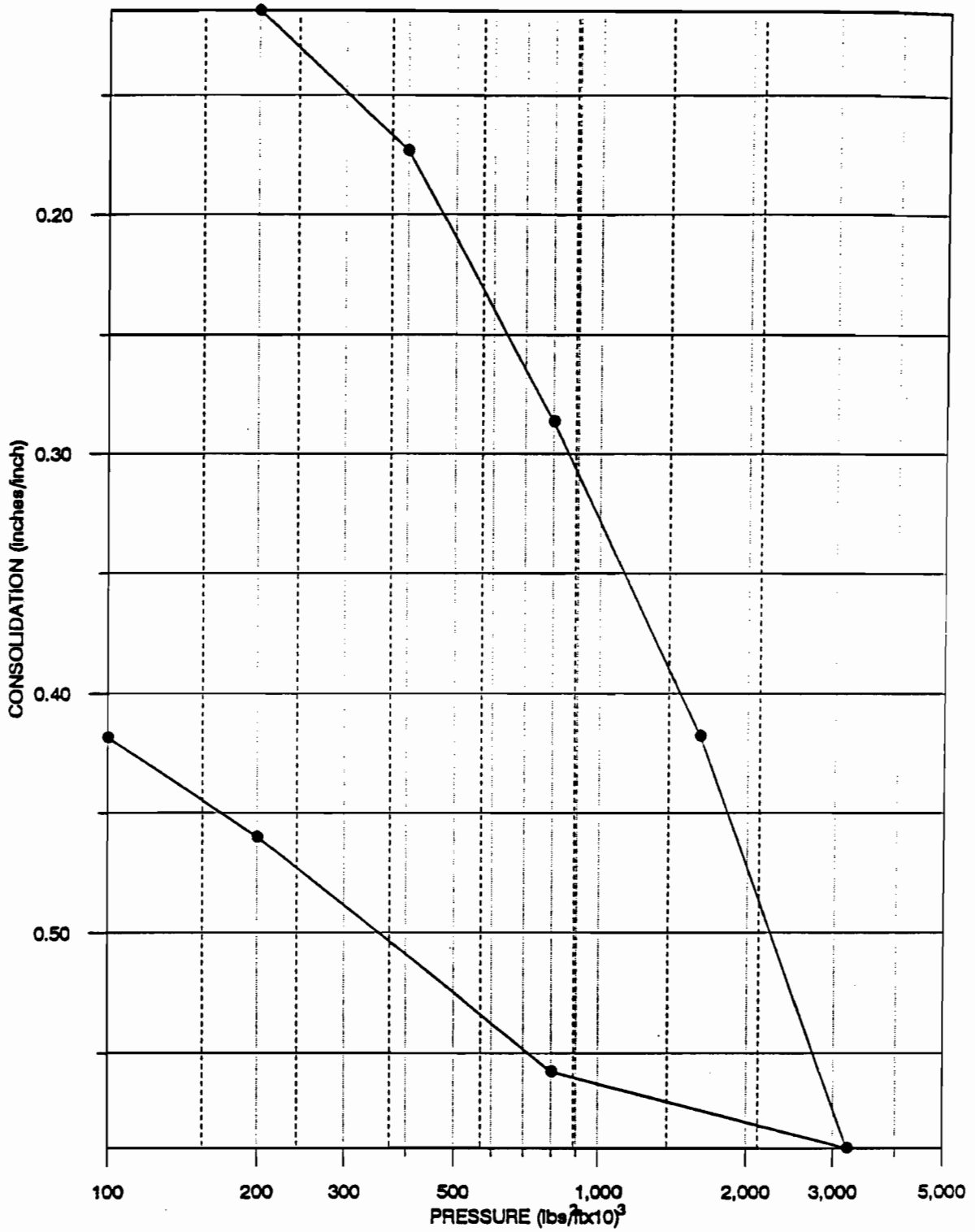
CONSOLIDATION TEST RESULTS

FIGURE

5467-001-27-1130 JRS:dlw 12/23/96



KEY	BORING NUMBER	SAMPLE DEPTH (FEET)	SOIL CLASSIFICATION	INITIAL MOISTURE CONTENT	INITIAL DRY DENSITY (LBS/FT^3)
●	4S-3	0.0-2.4	Black fibrous silty peat (Pt) (very soft, wet)	700.0	8.1

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CONSOLIDATION TEST RESULTS

FIGURE

5467-001-27-1130 JRS:dlw 12/23/98

5467-001 JRS:dlw 12/23/96

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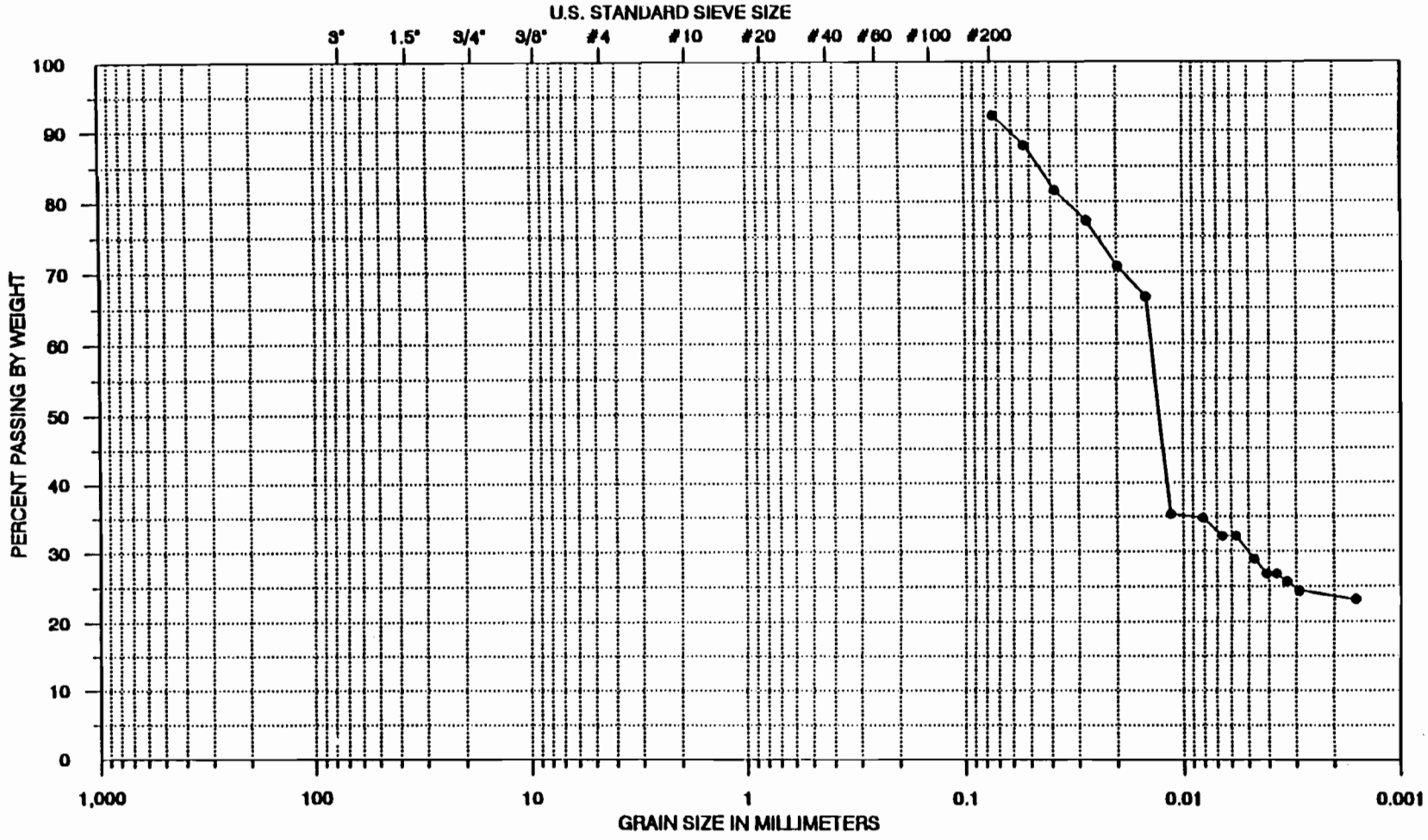
GRADATION CURVES

FIGURE



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SYMBOL	EXPLORATION NUMBER	SAMPLE DEPTH (FEET)	SOIL DESCRIPTION
●	4S-1	Jar (composite)	Black Peaty Organic Silt (OH) (very soft, wet)

5467-001 JRS:dlw 12/23/96

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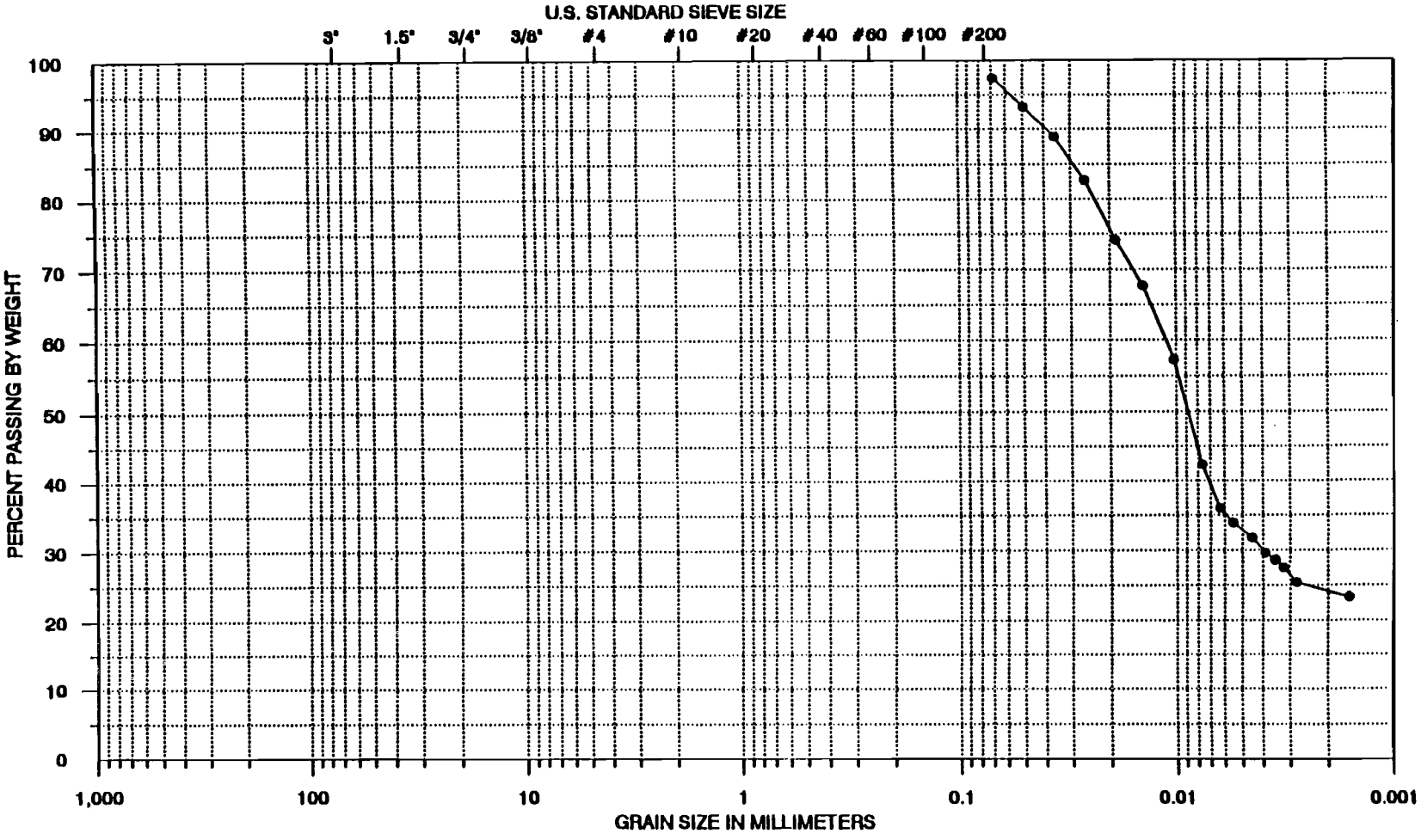
FIGURE

GRADATION CURVES



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

SYMBOL	EXPLORATION NUMBER	SAMPLE DEPTH (FEET)	SOIL DESCRIPTION
●	4S-3	Jar (composite)	Black Peaty Organic Silt (OH)) (very soft, wet)