

GE 159 Plastics Avenue Pittsfield, MA 01201 USA

Transmitted via Overnight Courier

October 6, 2006

Mr. Dean Tagliaferro U.S. Environmental Protection Agency Region I – New England 10 Lyman Street, Suite 2 Pittsfield, MA 01201 Ms. Susan Steenstrup Bureau of Waste Site Cleanup Department of Environmental Protection 436 Dwight Street Springfield, MA 01103

Re: GE-Pittsfield/Housatonic River Site

Monthly Status Report Pursuant to Consent Decree for September 2006 (GECD900)

Dear Mr. Tagliaferro and Ms. Steenstrup:

Enclosed are copies of General Electric's (GE's) monthly progress report for September 2006 activities conducted by GE at the GE-Pittsfield/Housatonic River Site. This monthly report is submitted pursuant to Paragraph 67 of the Consent Decree (CD) for this Site, which was entered by the U.S. District Court on October 27, 2000.

The enclosed monthly report includes not only the activities conducted by GE under the CD, but also other activities conducted by GE at the GE-Pittsfield/Housatonic River Site (as defined in the CD). The report is formatted to apply to the various areas of the Site as defined in the CD, and to provide for each area, the information specified in Paragraph 67 of the CD. The activities conducted specifically pursuant to or in connection with the CD are marked with an asterisk. GE is submitting a separate monthly report to the Massachusetts Department of Environmental Protection (MDEP), with a copy to the United States Environmental Protection Agency (EPA), describing the activities conducted by GE at properties outside the CD Site pursuant to GE's November 2000 Administrative Consent Order from MDEP.

The enclosed monthly report includes, where applicable, tables that list the samples collected during the subject month, summarize the analytical results received during that month from sampling or other testing activities, and summarize other groundwater monitoring and oil recovery information obtained during that month. Also, enclosed for each of you (and for Weston) is a CD-ROM that contains these same tables of the analytical data and monitoring information in electronic form.

Please call Andrew Silfer or me if you have any questions.

Richard W. Yates/gre

Sincerely,

Richard W. Gates

Remediation Project Manager

Enclosure

V/GE\_Pittsfield\_General/Reports and Presentations/Monthly Reports/2006/9-06 CD Monthly/Letter.doc

Mr. Dean Tagliaferro Ms. Susan Streenstrup October 6, 2006 Page 2 of 2

cc: Robert Cianciarulo, EPA (cover letter only)

Tim Conway, EPA (cover letter only)

Rose Howell, EPA (cover letter and CD-ROM of report)

Holly Inglis, EPA (hard copy and CD-ROM of report)

Susan Svirsky, EPA (Items 7, 15, and 20 only)

K.C. Mitkevicius, USACE (CD-ROM of report)

Thomas Angus, MDEP (cover letter only)

Jane Rothchild, MDEP (cover letter only)

Anna Symington, MDEP (cover letter only)

Nancy E. Harper, MA AG

Susan Peterson, CT DEP

Field Supervisor, US FWS, DOI

Kenneth Finkelstein, Ph.D., NOAA (Items 13, 14, and 15 only)

Dale Young, MA EOEA

Mayor James Ruberto, City of Pittsfield

Thomas Hickey, Director, Pittsfield Economic Development Authority

Linda Palmieri, Weston

Richard Nasman, P.E., Berkshire Gas (CD-ROM of report)

Michael Carroll GE (CD-ROM of report)

Andrew Silfer, GE (cover letter only)

Rod McLaren, GE (CD-ROM of report)

James Nuss, BBL

James Bieke, Goodwin Procter

Jim Rhea, QEA (narrative only)

Teresa Bowers, Gradient

Public Information Repositories (1 hard copy, 5 copies of CD-ROM)

GE Internal Repository (1 hard copy)

(w/o separate CD-ROM, except where noted)

### September 2006

# MONTHLY STATUS REPORT PURSUANT TO CONSENT DECREE FOR GE-PITTSFIELD/HOUSATONIC RIVER SITE

GENERAL ELECTRIC COMPANY



PITTSFIELD, MASSACHUSETTS

#### **Background**

The General Electric Company (GE), the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (MDEP), and other governmental entities have entered into a Consent Decree (CD) for the GE-Pittsfield/Housatonic River Site, which was entered by the U.S. Court on October 27, 2000. In accordance with Paragraph 67 of the CD, GE is submitting this monthly report, prepared on GE's behalf by Blasland, Bouck & Lee, Inc. (BBL), which summarizes the status of activities conducted by GE at the GE-Pittsfield/Housatonic River Site ("Site") (as defined in the CD).

This report covers activities in the areas listed below (as defined in the CD and/or the accompanying Statement of Work for Removal Actions Outside the River [SOW]). Only those areas that have had work activities for the month subject to reporting are included. The specific activities conducted pursuant to or in connection with the CD are noted with an asterisk.

#### **General Activities (GECD900)**

#### **GE Plant Area (non-groundwater)**

- 1. 20s, 30s, 40s Complexes (GECD120)
- 2. East Street Area 2 South (GECD150)
- 3. East Street Area 2 North (GECD140)
- 4. East Street Area 1 North (GECD130)
- 5. Hill 78 and Building 71 Consolidation Areas (GECD210/220)
- 6. Hill 78 Area Remainder (GECD160)
- 7. Unkamet Brook Area (GECD170)

#### Former Oxbow Areas (non-groundwater)

- 8. Former Oxbow Areas A & C (GECD410)
- 9. Lyman Street Area (GECD430)
- 10. Newell Street Area I (GECD440)
- 11. Newell Street Area II (GECD450)
- 12. Former Oxbow Areas J & K (GECD420)

#### **Housatonic River**

- 13. Upper ½-Mile Reach (GECD800)
- 14. 1½-Mile Reach (only for activities, if any, conducted by GE) (GECD820)
- 15. Rest of the River (GECD850)

#### **Housatonic River Floodplain**

- 16. Current Residential Properties Adjacent to 1½-Mile Reach (Actual/Potential Lawns) (GECD710)
- 17. Non-Residential Properties Adjacent to 1½-Mile Reach (excluding banks) (GECD720)
- 18. Current Residential Properties Downstream of Confluence (Actual/Potential Lawns) (GECD730)

#### **Other Areas**

- 19. Allendale School Property (GECD500)
- 20. Silver Lake Area (GECD600)

#### **Groundwater Management Areas (GMAs)**

- 21. Plant Site 1 (GECD310)
- 22. Former Oxbows J & K (GECD320)
- 23. Plant Site 2 (GECD330)
- 24. Plant Site 3 (GECD340)
- 25. Former Oxbows A&C (GECD350)

## GENERAL ACTIVITIES GE-PITTSFIELD/HOUSATONIC RIVER SITE (GECD900) SEPTEMBER 2006

#### a. Activities Undertaken/Completed

Continued GE-EPA electronic data exchanges for the Housatonic River Watershed and Areas Outside the River.\*

#### b. Sampling/Test Results Received

- Sample results were received for routine sampling conducted pursuant to GE's NPDES Permit for the GE facility. Sampling records and results are provided in Attachment A to this report.
- NPDES Discharge Monitoring Reports (DMRs) for the period of August 1 through August 31, 2006, are provided in Attachment B to this report.
- GE received a report from Columbia Analytical Services, Inc. (CAS) titled *NPDES Biomonitoring Report for September 2006*, which included analytical results for samples collected for NPDES-related whole effluent toxicity testing, as well as an attached report from Aquatec Biological Sciences providing the results of the whole effluent toxicity testing performed in September 2006. A copy of this document is provided in Attachment C.
- GE received a report from CAS titled *NPDES Chronic Biomonitoring Report for September 2006*, which included analytical results for samples collected for NPDES-related chronic whole effluent testing, as well as an attached report from Aquatec Biological Sciences providing the results of the chronic whole effluent toxicity testing performed in September 2006. A copy of that report is provided in Attachment D.

#### c. Work Plans/Reports/Documents Submitted

None

#### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Continue NPDES sampling and monitoring activities.
- Attend public and Citizens Coordinating Council (CCC) meetings, as appropriate.
- Submit revised *Project Operations Plan* (POP) following receipt of EPA comments on February 2006 draft.\*
- Submit revised *Field Sampling Plan/Quality Assurance Project Plan* (FSP/QAPP) following receipt of EPA comments on February 2006 draft.\*

## GENERAL ACTIVITIES (cont'd) GE-PITTSFIELD/HOUSATONIC RIVER SITE (GECD900) SEPTEMBER 2006

e. <u>General Progress/Unresolved Issues/Potential Schedule Impacts</u>

No issues

f. Proposed/Approved Work Plan Modifications

None

## ITEM 1 PLANT AREA 20s, 30s, 40s COMPLEXES (GECD120) SEPTEMBER 2006

#### a. Activities Undertaken/Completed

- Completed pre-demolition removal activities (e.g., asbestos abatement, equipment/liquids removal) at Building 32 Substation.
- Awarded contract and initiated pre-mobilization activities for the Building 32 Substation Demolition and Site Restoration Program.
- Conducted drum sampling at Building 78 of leaves and debris from the cleanout of the barrel screen located at the Building 31W oil/water separator, as identified in Table 1-1.
- Conducted drum sampling at Building 78 of glycol/water mixture from 40s Complex heating system, as identified in Table 1-1.

#### b. <u>Sampling/Test Results Received</u>

See attached tables.

#### c. Work Plans/Reports/Documents Submitted

- Submitted letter to EPA documenting the final subgrade elevations of the temporary crushed materials stockpile constructed in the western portion of the 40s Complex, and requesting EPA's approval to proceed with the associated final site restoration and landscaping activities (September 6, 2006).
- Submitted letter to EPA describing GE's plans for the removal of the existing concrete floor slab of the Building 32 Substation to approximately 1 foot below grade, and disposition of concrete floor slab materials at the Hill 78 On-Plant Consolidation Area (OPCA) (September 13, 2006).\*

#### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Install vegetative cover and conduct site restoration and landscaping activities associated with the temporary crushed materials stockpile at the 40s Complex, including the activities specified by EPA in the September 14, 2006 conditional approval letter.
- Initiate demolition of Building 32 Substation.
- In November 2006, conduct annual inspections of 20s and 30s Complexes to assess compliance with Grants of Environmental Restrictions and Easements (EREs).\*
- Work on survey plans for ERE for the 40s Complex.\*

## ITEM 1 (cont'd) PLANT AREA 20s, 30s, 40s COMPLEXES (GECD120) SEPTEMBER 2006

#### e. General Progress/Unresolved Issues/Potential Schedule Impacts

At the request of the Pittsfield Economic Development Authority (PEDA), an additional sampling plan may be submitted for the 40s Complex to support certain ERE provisions.\*

#### f. Proposed/Approved Work Plan Modifications

- Received EPA conditional approval of the final subgrade elevations of the temporary stockpile constructed in the 40s Complex, as described in GE's September 6, 2006 submittal (September 14, 2006).
- Received EPA approval of GE's plans for consolidation of the concrete floor slab materials from the Building 32 Substation at the Hill 78 OPCA, as described in GE's September 13, 2006 submittal (September 14, 2006).\*

## 20s, 30s, 40s COMPLEX GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

						Date Received
Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	by GE or BBL
40's Complex Glycol/Water Sampling	A2729-1	9/22/06	Liquid	SGS	PCB	
Building 31W Debris Sampling	A1622-1	9/12/06	Sediment	SGS	PCB	9/28/06
Building 31W Debris Sampling	A2112-1	9/12/06	Sediment	SGS	PCB	9/28/06
Building 31W Debris Sampling	A2204-1	9/12/06	Sediment	SGS	PCB	9/28/06
Building 31W Debris Sampling	A2473-1	9/12/06	Sediment	SGS	PCB	9/28/06
Building 31W Debris Sampling	A2535-1	9/12/06	Sediment	SGS	PCB	9/28/06
Building 31W Debris Sampling	A3019-1	9/12/06	Sediment	SGS	PCB	9/28/06
Building 31W Debris Sampling	A3077-1	9/12/06	Sediment	SGS	PCB	9/28/06
Building 32 Substation Sampling	SUB32-CONC-NW-1	8/30/06	Concrete	SGS	PCB	9/1/06
<b>Building 32 Substation Sampling</b>	SUB32-CONC-SE-1	8/30/06	Concrete	SGS	PCB	9/1/06
<b>Building 32 Substation Sampling</b>	SUB32-TRANS-OIL-1	8/30/06	Oil	SGS	PCB	9/1/06
Building 32 Substation Sampling	SUB32-TRANS-PAINT-1	8/30/06	Paint	SGS	TCLP-LEAD	9/11/06
Pittsfield Sand & Gravel Pond Silt Sampling	PSG-PONDSILT-C1	8/14/06	Soil	SGS	PCB, VOC, SVOC, Metals	9/13/06
Transformer T31-4 Sampling	T31-4-Paint-1	8/14/06	Solid	SGS	TCLP	9/1/06

## TABLE 1-2 PCB DATA RECEIVED DURING SEPTEMBER 2006

## BUILDING 32 SUBSTATION SAMPLING 20s, 30s, 40s COMPLEX

#### **GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**

(Results are presented in parts per million, ppm)

Sample ID	Date Collected	Aroclor-1016, -1221, -1232, -1242, -1248, -1254	Aroclor-1260	Total PCBs
SUB32-CONC-NW-1	8/30/2006	ND(0.032)	0.56	0.56
SUB32-CONC-SE-1	8/30/2006	ND(0.032)	0.52	0.52
SUB32-TRANS-OIL-1	8/30/2006	ND(0.97)	ND(0.97)	ND(0.97)

#### Notes:

- Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.

## TABLE 1-3 TCLP DATA RECEIVED DURING SEPTEMBER 2006

## TRANSFORMER T31-4 SAMPLING 20s, 30s, 40s COMPLEX

## GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in parts per million, ppm)

Parameter	Sample ID: Date Collected:	TCLP Limits	T31-4-Paint-1 8/14/2006
Inorganics			
Arsenic		5	ND(0.200)
Barium		100	1.03 B
Cadmium		1	0.667
Chromium		5	10.2
Lead		5	2.46
Mercury		0.2	0.000164 B
Selenium		1	ND(0.200)
Silver		5	ND(0.100)

#### Notes:

- Sample was collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of TCLP metals.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.
- 3. Shading indicates that value exceeds the TCLP Regulatory Limits.

#### Data Qualifiers:

#### Inorganics

B - Indicates an estimated value between the instrument detection limit (IDL) and practical quantitation limit (PQL).

## TABLE 1-4 TCLP DATA RECEIVED DURING SEPTEMBER 2006

## BUILDING 32 SUBSTATION SAMPLING 20s, 30s, 40s COMPLEX

#### GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

(Results are presented in parts per million, ppm)

Parameter	Sample ID: Date Collected:	• •	SUB32-TRANS-PAINT-1 8/30/2006
Inorganics			
Lead		5	0.255

#### Note:

1. Sample was collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of TCLP lead.

## TABLE 1-5 DATA RECEIVED DURING SEPTEMBER 2006

## PITTSFIELD SAND & GRAVEL POND SILT SAMPLING 20s, 30s, 40s COMPLEX

## GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in dry weight parts per million, ppm)

Parameter	Sample ID: Date Collected:	PSG-Pondsilt-C1 08/14/06
Volatile Organics		
Methylene Chloride		0.0059
Toluene		0.0035 J
PCBs		
None Detected		
Semivolatile Organics		
None Detected		
Inorganics		
Arsenic		4.32
Barium		42.1 B
Beryllium		0.338 B
Cadmium		0.0840 B
Chromium		11.6
Cobalt		11.0
Copper		22.7
Lead		9.75
Mercury		0.0175 B
Nickel		16.8
Vanadium		11.3
Zinc		45.3

#### Notes:

- 1. Sample was collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs, volatiles, semivolatiles, and metals.
- 2. Only detected constituents are summarized.
- 3. -- Indicates that all constituents for the parameter group were not detected.

#### **Data Qualifiers:**

#### Organics (volatiles, PCBs, semivolatiles)

J - Indicates an estimated value less than the practical quantitation limit (PQL).

#### Inorganics

B - Indicates an estimated value between the instrument detection limit (IDL) and PQL.

## TABLE 1-6 PCB DATA RECEIVED DURING SEPTEMBER 2006

#### BUILDING 31W DEBRIS SAMPLING 20s, 30s, 40s COMPLEX

#### GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

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

Sample ID	Date Collected	Aroclor-1016, -1221, -1232, -1242, -1248	Aroclor-1254	Aroclor-1260	Total PCBs
A1622-1	9/12/2006	ND(0.31)	1.7	0.94	2.64
A2112-1	9/12/2006	ND(0.84)	1.3	3.5	4.8
A2204-1	9/12/2006	ND(0.27)	0.85	1.2	2.05
A2473-1	9/12/2006	ND(0.24)	3.4	1.9	5.3
A2535-1	9/12/2006	ND(0.045)	0.19	0.16	0.35
A3019-1	9/12/2006	ND(1.7)	1.4 J	3.6	5.0
A3077-1	9/12/2006	ND(0.059)	0.51	0.38	0.89

#### Notes:

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.

## ITEM 2 PLANT AREA EAST STREET AREA 2-SOUTH (GECD150) SEPTEMBER 2006

#### a. Activities Undertaken/Completed

- Conducted drum sampling at Building 78 of soil and water generated from the installation of monitoring wells 95-7 and 95-7R, as identified in Table 2-1.
- Conducted Liquid-Phase Carbon Absorption (LPCA) sampling at Building 64G, as identified in Table 2-1.
- Conducted drum sampling at Building 78 of oil from the 64T compressor and the 64X compressor, as identified in Table 2-1.
- Conducted sampling of the sediment in the 64Z oil/water separator, as identified in Table 2-1.
- Collected and tankered approximately 3,550 gallons of water from the 64X oil/water separator cleanout and approximately 2,200 gallons of water from the 64W oil/water separator cleanout to Building 64G for treatment.

#### b. Sampling/Test Results Received

See attached tables.

#### c. Work Plans/Reports/Documents Submitted

Submitted to EPA and MDEP a revised draft ERE and survey plans for the City Recreational Area (September 18, 2006).\*

#### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Continue routine process sampling at Buildings 64G and/or 64T.
- In fall 2006, conduct annual inspection of cover at City Recreational Area.\*

#### e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

#### f. Proposed/Approved Work Plan Modifications

None

## EAST STREET AREA 2 - SOUTH GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Depth (feet)	Matrix	Laboratory	Analyses	Date Received by GE or BBL
64Z Oil/Water Separator Sediment Sampling	64Z-1-3	9/18/06	0-0.8	Sediment	Columbia	TCLP-Benzene	.,
64Z Oil/Water Separator Sediment Sampling	64Z-2-3	9/18/06	0-0.2	Sediment	Columbia	TCLP-Benzene	
64Z Oil/Water Separator Sediment Sampling	64Z-3-3	9/18/06	0-0.2	Sediment	Columbia	TCLP-Benzene	
64Z Oil/Water Separator Sediment Sampling	64Z-4-3	9/18/06	0-0.2	Sediment	Columbia	TCLP-Benzene	
64Z Oil/Water Separator Sediment Sampling	64Z-5-3	9/18/06	0-0.1	Sediment	Columbia	TCLP-Benzene	
Building 64G LPCA Monitoring	I6-64G-01	9/26/06	NA	Water	Columbia	VOC	
Building 64G LPCA Monitoring	I6-64G-02	9/26/06	NA	Water	Columbia	SVOC	
Building 64G LPCA Monitoring	I6-64G-03	9/26/06	NA	Water	Accutest	PCB	
Building 64G LPCA Monitoring	I6-64G-04	9/26/06	NA	Water	Columbia	Oil & Grease	
Building 64G LPCA Monitoring	16-64G-05	9/26/06	NA	Water	Columbia	VOC	
Building 64G LPCA Monitoring	16-64G-06	9/26/06	NA	Water	Columbia	SVOC	
Building 64G LPCA Monitoring	I6-64G-07	9/26/06	NA	Water	Accutest	PCB	
Building 64G LPCA Monitoring	16-64G-08	9/26/06	NA	Water	Columbia	Oil & Grease	
Building 64G LPCA Monitoring	I6-64G-09	9/26/06	NA	Water	Columbia	VOC	
Building 64G LPCA Monitoring	I6-64G-10	9/26/06	NA	Water	Columbia	SVOC	
Building 64G LPCA Monitoring	I6-64G-11	9/26/06	NA	Water	Accutest	PCB	
Building 64G LPCA Monitoring	I6-64G-12	9/26/06	NA	Water	Columbia	Oil & Grease	
Building 64G LPCA Monitoring	I6-64G-13	9/26/06	NA	Water	Columbia	VOC	
Building 64G LPCA Monitoring	I6-64G-14	9/26/06	NA	Water	Columbia	SVOC	
Building 64G LPCA Monitoring	I6-64G-15	9/26/06	NA	Water	Accutest	PCB	
Building 64G LPCA Monitoring	I6-64G-16	9/26/06	NA	Water	Columbia	Oil & Grease	
Building 64T Compressor Oil Sampling	64T-Com-Oil-1	9/22/06	NA	Oil	SGS	PCB	
Building 64X Compressor Oil Sampling	C1388-1	9/23/06	NA	Oil	SGS	PCB	
Soil Sampling from Well 95-7	95-7-SOIL-1	9/7/06	NA	Soil	SGS	PCB, TCLP	9/28/06
Soil Sampling from Well 95-7R	95-7R-SOIL-1	9/7/06	NA	Soil	SGS	PCB, TCLP	9/28/06
Water Sampling from Well 95-7	95-7-WATER-1	9/7/06	NA	Water	SGS	PCB, VOC, SVOC, Total Metals	9/25/06

## TABLE 2-2 DATA RECEIVED DURING SEPTEMBER 2006

## WATER SAMPLING FROM WELL 95-7 EAST STREET AREA 2 - SOUTH GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

(Results are presented in parts per million, ppm)

Parameter	Sample ID: Date Collected:	95-7-Water-1 09/07/06
Volatile Organics		
Chlorobenzene		0.018
Chloroethane		0.00061 J
Methylene Chloride		0.00028 J
Toluene		0.00018 J
Xylenes (total)		0.00080 J
PCBs-Unfiltered		
Aroclor-1260		0.13
Total PCBs		0.13
Semivolatile Organics	1	
1,3-Dichlorobenzene		0.0018 J
1,4-Dichlorobenzene		0.0049 J
2-Methylnaphthalene		0.0020 J
Acenaphthene		0.0037 J
Anthracene		0.0026 J
Benzo(a)anthracene		0.0032 J
Benzo(b)fluoranthene		0.0022 J
bis(2-Ethylhexyl)phthala	ate	0.018
Chrysene		0.0020 J
Fluoranthene		0.0074 J
Fluorene		0.0051 J
Naphthalene		0.0063 J
Phenanthrene		0.015
Pyrene		0.0068 J
Inorganics-Unfiltered		
Arsenic		0.0208
Barium		0.328
Cadmium		0.000570 B
Chromium		0.0465
Lead		0.243
Mercury		0.00123

#### Notes:

- 1. Sample was collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs, volatiles, semivolatiles and metals.
- 2. Only detected constituents are summarized.

#### Data Qualifiers:

#### Organics (volatiles, PCBs, semivolatiles)

J - Indicates an estimated value less than the practical quantitation limit (PQL).

#### **Inorganics**

B - Indicates an estimated value between the instrument detection limit (IDL) and PQL.

## TABLE 2-3 PCB DATA RECEIVED DURING SEPTEMBER 2006

#### SOIL SAMPLING FROM WELLS 95-7 AND 95-7R EAST STREET AREA 2 - SOUTH

#### **GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**

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

Sample ID	Date Collected	Aroclor-1016, -1221, -1232, -1242, -1248, -1254	Aroclor-1260	Total PCBs
95-7R-soil-1	9/7/2006	ND(37)	280	280
95-7-soil-1	9/7/2006	ND(3.8)	15	15

#### Notes:

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs and TCLP constituents.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.
- 3. Please refer to Table 2-4 for a summary of TCLP constituents.

## TABLE 2-4 TCLP DATA RECEIVED DURING SEPTEMBER 2006

#### SOIL SAMPLING FROM WELLS 95-7 AND 95-7R EAST STREET AREA 2 - SOUTH

#### GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

(Results are presented in parts per million, ppm)

		TCLP		
	Sample ID:	Regulatory	95-7R-soil-1	95-7-soil-1
Parameter I	Date Collected:	Limits	9/7/2006	9/7/2006
Volatile Organics				
1,1-Dichloroethene		0.7	ND(0.032)	ND(0.010)
1,2-Dichloroethane		0.5	ND(0.032)	ND(0.010)
2-Butanone		200	ND(0.80)	ND(0.25)
Benzene		0.5	ND(0.032)	0.0054 J
Carbon Tetrachloride		0.5	ND(0.032)	ND(0.010)
Chlorobenzene		100	0.66	0.027
Chloroform		6	ND(0.032)	ND(0.010)
Tetrachloroethene		0.7	ND(0.032)	ND(0.010)
Trichloroethene		0.5	ND(0.032)	ND(0.010)
Vinyl Chloride		0.2	ND(0.032)	ND(0.010)
Semivolatile Organics				
1,4-Dichlorobenzene		7.5	0.0080 J	0.0022 J
2,4,5-Trichlorophenol		400	ND(0.014)	ND(0.010)
2,4,6-Trichlorophenol		2	ND(0.014)	ND(0.010)
2,4-Dinitrotoluene		0.13	ND(0.014)	ND(0.010)
Cresol		200	ND(0.014)	0.015
Hexachlorobenzene		0.13	ND(0.014)	ND(0.010)
Hexachlorobutadiene		0.5	ND(0.014)	ND(0.010)
Hexachloroethane		3	ND(0.014)	ND(0.010)
Nitrobenzene		2	ND(0.014)	ND(0.010)
Pentachlorophenol		100	ND(0.070)	ND(0.050)
Pyridine		5	ND(0.014)	ND(0.010)
Inorganics				
Arsenic		5	0.0163 B	0.0131 B
Barium		100	1.16 B	1.05 B
Cadmium		1	0.00670 B	ND(0.100)
Chromium		5	0.0670 B	0.0654 B
Lead		5	0.0880 B	0.162
Mercury		0.2	ND(0.000570)	ND(0.000570)
Selenium		1	ND(0.200)	ND(0.200)
Silver		5	ND(0.100)	ND(0.100)

#### Notes

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs and TCLP constituents.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.
- 3. Please refer to Table 2-3 for a summary of PCBs.

#### Organics (volatiles, PCBs, semivolatiles)

J - Indicates an estimated value less than the practical quantitation limit (PQL).

#### <u>Inorganics</u>

B - Indicates an estimated value between the instrument detection limit (IDL) and PQL.

## ITEM 3 PLANT AREA EAST STREET AREA 2-NORTH (GECD140) SEPTEMBER 2006

#### a. Activities Undertaken/Completed

- Conducted drum sampling at Building 78 of oil drained from piping located in the underground tunnel adjacent to former Building 5, as identified in Table 3-1.
- Collected and tankered approximately 18,000 gallons of water from Building 9 to Building 64G for treatment.
- Completed removal and investigation of piping located in the underground tunnel adjacent to former Building 5, as summarized in the September 28, 2006 letter to EPA, referenced below.
- Conducted sampling of sand sweeping material from intraplant roadways located adjacent to Building 9B, as identified in Table 3-1.
- Conducted sampling of sand from Building 17 vault, as identified in Table 3-1.
- Conducted drum sampling at Building 78 of glycol/water mixture from the Building 19 heating system, as identified in Table 3-1.

#### b. Sampling/Test Results Received

See attached tables.

#### c. Work Plans/Reports/Documents Submitted

Submitted letter to EPA confirming discussions related to an earlier preliminary verbal notification to EPA (made on September 19, 2006) regarding sampling of oil from piping removed from an underground tunnel located adjacent to former Building 5 (letter dated September 25 and sent September 28, 2006).

#### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Schedule initiation of demolition activities associated with Buildings 7, 17, 17C, and 19 following final EPA approval of demolition debris disposition.
- Initiate equipment and liquids removal activities at Buildings 11, 16, and 16X.

#### e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

## ITEM 3 (cont'd) PLANT AREA EAST STREET AREA 2-NORTH (GECD140) SEPTEMBER 2006

#### f. Proposed/Approved Work Plan Modifications

None

## EAST STREET AREA 2 - NORTH GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

						Date Received
Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	by GE or BBL
Building 17 Vault Sand Sampling	17-Vault-1	9/25/06	Soil	SGS	PCB, TCLP	
Building 19 Glycol/Water Sampling	B1473-1	9/22/06	Liquid	SGS	PCB	
Oil Sampling from Tunnel Pipes	Pipe1-OIL-1	9/13/06	Oil	SGS	PCB	9/18/06
Oil Sampling from Tunnel Pipes	Pipe2-Oil-1	9/13/06	Oil	SGS	PCB	9/18/06
Oil Sampling from Tunnel Pipes	Pipe3-Oil-1	9/13/06	Oil	SGS	PCB	9/18/06
Oil Sampling from Tunnel Pipes	Pipe4-Oil-1	9/13/06	Oil	SGS	PCB	9/18/06
Sampling of Building 9B Sand Sweepings	Bldg9B-Sweepings-C1	9/12/06	Soil	SGS	PCB	9/28/06

## TABLE 3-2 PCB DATA RECEIVED DURING SEPTEMBER 2006

## OIL SAMPLING FROM TUNNEL PIPES EAST STREET AREA 2 - NORTH

#### GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

(Results are presented in parts per million, ppm)

Sample ID	Date Collected	Aroclor-1016, -1221, -1232, -1242, -1248	Aroclor-1254	Aroclor-1260	Total PCBs
Pipe1-Oil-1	9/13/2006	ND(98)	ND(98)	350	350
Pipe2-Oil-1	9/13/2006	ND(0.94)	ND(0.94)	ND(0.94)	ND(0.94)
Pipe3-Oil-1	9/13/2006	ND(94)	160	110	270
Pipe4-Oil-1	9/13/2006	ND(0.82)	ND(0.82)	ND(0.82)	ND(0.82)

#### Notes:

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.

## TABLE 3-3 PCB DATA RECEIVED DURING SEPTEMBER 2006

#### SAMPLING OF BUILDING 9B SAND SWEEPINGS EAST STREET AREA 2 - NORTH

#### GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

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

Sample ID	Date Collected	Aroclor-1016, -1221, -1232, -1242, -1248	Aroclor-1254	Aroclor-1260	Total PCBs
Bldg9B-Sweepings-C1	9/12/2006	ND(3.3)	5.3	15	20.3

#### Notes:

1. Sample was collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.

2.

## ITEM 4 PLANT AREA EAST STREET AREA 1-NORTH (GECD130) SEPTEMBER 2006

#### a. Activities Undertaken/Completed

None

#### b. Sampling/Test Results Received

None

#### c. Work Plans/Reports/Documents Submitted

None

#### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

In fall 2006, conduct annual determination of any change in ownership of properties with Conditional Solutions, and conduct annual inspection of those properties.\*

#### e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

#### f. Proposed/Approved Work Plan Modifications

None

## ITEM 5 PLANT AREA HILL 78 & BUILDING 71 CONSOLIDATION AREAS (GECD210/220) SEPTEMBER 2006

\* All activities described below for this item were conducted pursuant to the Consent Decree.

#### a. Activities Undertaken/Completed

- Continued consolidation of excavated materials from Former Oxbow Areas A and C into the OPCAs.
- Consolidated excavated materials from the Lyman Street Area, Building 100 utility excavation, and the Gate 25 excavation into the OPCAs.
- Completed final grading of consolidated materials in Building 71 OPCA in preparation for installation of final cover system.
- Initiated Phase II final cover construction for Building 71 OPCA.
- Conducted air monitoring for particulates and PCBs, as identified in Table 5-1.
- Conducted wipe sampling of equipment used in association with grading of consolidated materials in Building 71 OPCA, as identified in Table 5-1.
- Continued transfer of leachate from Building 71 OPCA to Building 64G for treatment. The total amount transferred in September 2006 was 110,000 gallons (see Table 5-5).
- Conducted semi-annual inspection of capped portion of Building 71 OPCA.

#### b. Sampling/Test Results Received

See attached tables.

#### c. Work Plans/Reports/Documents Submitted

None

#### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Submit report presenting results of semi-annual inspection of capped portion of Building 71 OPCA.
- Continue consolidation activities at Hill 78 OPCA and continue Phase II final cover construction for Building 71 OPCA.

## ITEM 5 (cont'd) PLANT AREA HILL 78 & BUILDING 71 CONSOLIDATION AREAS (GECD210/220) SEPTEMBER 2006

#### d. <u>Upcoming Scheduled and Anticipated Activities (next six weeks)</u> (cont'd)

- Prepare and submit plan to address the blockage within the storm sewer line located beneath the Hill 78 OPCA; and following EPA approval, mobilize Contractor to site to address blockage. (This matter is discussed further in Item 6.)
- e. <u>General Progress/Unresolved Issues/Potential Schedule Impacts</u>

No issues

f. Proposed/Approved Work Plan Modifications

None

		Sample				Date Received
Project Name	Field Sample ID	Date	Matrix	Laboratory	Analyses	by GE or BBL
Building 71 OPCA Flat Drum Roller Wipe Sampling	71-DRUMROLLER-W1	9/28/06	Wipe	SGS	PCB	
Building 71 OPCA Flat Drum Roller Wipe Sampling	71-DRUMROLLER-W2	9/28/06	Wipe	SGS	PCB	
Building 71 OPCA Flat Drum Roller Wipe Sampling	71-DRUMROLLER-W3	9/28/06	Wipe	SGS	PCB	
Building 71 OPCA Flat Drum Roller Wipe Sampling	71-DRUMROLLER-W4	9/28/06	Wipe	SGS	PCB	
Building 71 OPCA Flat Drum Roller Wipe Sampling	71-DRUMROLLER-W5	9/28/06	Wipe	SGS	PCB	
Building 71 OPCA Flat Drum Roller Wipe Sampling	71-DRUMROLLER-W6	9/28/06	Wipe	SGS	PCB	
Building 71 OPCA Flat Drum Roller Wipe Sampling	71-DRUMROLLER-W7	9/28/06	Wipe	SGS	PCB	
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W1	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W10	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W11	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W12	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W13	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W14	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W15	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W16	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W17	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W18	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W2	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W3	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W4	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W5	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W6	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W7	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W8	9/15/06	Wipe	SGS	PCB	9/21/06
Dresser Dozer Wipe Sampling	DOZER-TD-15C-W9	9/15/06	Wipe	SGS	PCB	9/21/06
Samsung 210 Excavator Sampling	SAMSUNG-CAB-W1	9/26/06	Wipe	SGS	PCB	
Samsung 210 Excavator Sampling	SAMSUNG-CAB-W2	9/26/06	Wipe	SGS	PCB	
Samsung 210 Excavator Sampling	SAMSUNG-CAB-W3	9/26/06	Wipe	SGS	PCB	
Samsung 210 Excavator Sampling	SAMSUNG-LTRACK-W1	9/26/06	Wipe	SGS	PCB	
Samsung 210 Excavator Sampling	SAMSUNG-LTRACK-W2	9/26/06	Wipe	SGS	PCB	
Samsung 210 Excavator Sampling	SAMSUNG-LTRACK-W3	9/26/06	Wipe	SGS	PCB	
Samsung 210 Excavator Sampling	SAMSUNG-RTRACK-W1	9/26/06	Wipe	SGS	PCB	
Samsung 210 Excavator Sampling	SAMSUNG-RTRACK-W2	9/26/06	Wipe	SGS	PCB	
Samsung 210 Excavator Sampling	SAMSUNG-RTRACK-W3	9/26/06	Wipe	SGS	PCB	
Ambient Air Particulate Matter Sampling	North of OPCAs	9/1/06	Air	Berkshire Environmental	Particulate Matter	9/5/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/1/06	Air	Berkshire Environmental	Particulate Matter	9/5/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/1/06	Air	Berkshire Environmental	Particulate Matter	9/5/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/1/06	Air	Berkshire Environmental	Particulate Matter	9/5/06

		Sample				Date Received
Project Name	Field Sample ID	Date	Matrix	Laboratory	Analyses	by GE or BBL
Ambient Air Particulate Matter Sampling	West of OPCAs	9/1/06	Air	Berkshire Environmental	Particulate Matter	9/5/06
Ambient Air Particulate Matter Sampling	Background Location	9/1/06	Air	Berkshire Environmental	Particulate Matter	9/5/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/5/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/5/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/5/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/5/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/5/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Background Location	9/5/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/6/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/6/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/6/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/6/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/6/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Background Location	9/6/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/7/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/7/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/7/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/7/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/7/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Background Location	9/7/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/8/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/8/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/8/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/8/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/8/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Background Location	9/8/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/11/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/11/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/11/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/11/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/11/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Background Location	9/11/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/12/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/12/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/12/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/12/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/12/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Background Location	9/12/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/13/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/13/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
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		Sample				Date Received
Project Name	Field Sample ID	Date	Matrix	Laboratory	Analyses	by GE or BBL
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/13/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/13/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/13/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Background Location	9/13/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/14/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/14/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/14/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/14/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/14/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Background Location	9/14/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/15/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/15/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/15/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/15/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/15/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Background Location	9/15/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/18/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/18/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/18/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/18/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/18/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Background Location	9/18/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/19/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/19/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/19/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/19/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/19/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Background Location	9/19/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/20/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/20/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/20/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/20/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/20/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Background Location	9/20/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/21/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/21/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/21/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/21/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/21/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Background Location	9/21/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
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		Sample				Date Received
Project Name	Field Sample ID	Date	Matrix	Laboratory	Analyses	by GE or BBL
Ambient Air Particulate Matter Sampling	North of OPCAs	9/22/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/22/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/22/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/22/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/22/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Background Location	9/22/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/25/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/25/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/25/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/25/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/25/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Background Location	9/25/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/26/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/26/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/26/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/26/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/26/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Background Location	9/26/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/27/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/27/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/27/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/27/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/27/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Background Location	9/27/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/28/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/28/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/28/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/28/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/28/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Background Location	9/28/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	North of OPCAs	9/29/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/29/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/29/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Northwest of OPCAs	9/29/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	West of OPCAs	9/29/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
Ambient Air Particulate Matter Sampling	Background Location	9/29/06	Air	Berkshire Environmental	Particulate Matter	10/2/06
PCB Ambient Air Sampling	Field Blank	8/21 - 8/22/06	Air	Berkshire Environmental	PCB	9/12/06
PCB Ambient Air Sampling	Northwest of OPCAs	8/21 - 8/22/06	Air	Berkshire Environmental	PCB	9/12/06
	West of OPCAs	8/21 - 8/22/06	Air	Berkshire Environmental	PCB	9/12/06
PCB Ambient Air Sampling	WEST OF CAS	0/21 - 0/22/00	/ 111	Donkoniio Environiinoniai	1 00	3/12/00

	Sample								
Project Name	Field Sample ID	Date	Matrix	Laboratory	Analyses	by GE or BBL			
PCB Ambient Air Sampling	North of OPCAs	8/21 - 8/22/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Southeast of OPCAs	8/21 - 8/22/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Pittsfield Generating (PGE)	8/21 - 8/22/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Background East of Building 9B	8/21 - 8/22/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Field Blank	8/29 - 8/30/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Northwest of OPCAs	8/29 - 8/30/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	West of OPCAs	8/29 - 8/30/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	West of OPCAs colocated	8/29 - 8/30/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	North of OPCAs	8/29 - 8/30/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Southeast of OPCAs	8/29 - 8/30/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Pittsfield Generating (PGE)	8/29 - 8/30/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Background East of Building 9B	8/29 - 8/30/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Field Blank	8/31 - 9/01/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Northwest of OPCAs	8/31 - 9/01/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	West of OPCAs	8/31 - 9/01/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	West of OPCAs colocated	8/31 - 9/01/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	North of OPCAs	8/31 - 9/01/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Southeast of OPCAs	8/31 - 9/01/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Pittsfield Generating (PGE)	8/31 - 9/01/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Background East of Building 9B	8/31 - 9/01/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Field Blank	9/05 - 9/06/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Northwest of OPCAs	9/05 - 9/06/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	West of OPCAs	9/05 - 9/06/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	West of OPCAs colocated	9/05 - 9/06/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	North of OPCAs	9/05 - 9/06/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Southeast of OPCAs	9/05 - 9/06/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Pittsfield Generating (PGE)	9/05 - 9/06/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Background East of Building 9B	9/05 - 9/06/06	Air	Berkshire Environmental	PCB	9/12/06			
PCB Ambient Air Sampling	Field Blank	9/07 - 9/08/06	Air	Berkshire Environmental	PCB	9/14/06			
PCB Ambient Air Sampling	Northwest of OPCAs	9/07 - 9/08/06	Air	Berkshire Environmental	PCB	9/14/06			
PCB Ambient Air Sampling	West of OPCAs	9/07 - 9/08/06	Air	Berkshire Environmental	PCB	9/14/06			
PCB Ambient Air Sampling	West of OPCAs colocated	9/07 - 9/08/06	Air	Berkshire Environmental	PCB	9/14/06			
PCB Ambient Air Sampling	North of OPCAs	9/07 - 9/08/06	Air	Berkshire Environmental	PCB	9/14/06			
PCB Ambient Air Sampling	Southeast of OPCAs	9/07 - 9/08/06	Air	Berkshire Environmental	PCB	9/14/06			
PCB Ambient Air Sampling	Pittsfield Generating (PGE)	9/07 - 9/08/06	Air	Berkshire Environmental	PCB	9/14/06			
PCB Ambient Air Sampling	Background East of Building 9B	9/07 - 9/08/06	Air	Berkshire Environmental	PCB	9/14/06			
PCB Ambient Air Sampling	Field Blank	9/12 - 9/13/06	Air	Berkshire Environmental	PCB	9/25/06			
PCB Ambient Air Sampling	Northwest of OPCAs	9/12 - 9/13/06	Air	Berkshire Environmental	PCB	9/25/06			
PCB Ambient Air Sampling	West of OPCAs	9/12 - 9/13/06	Air	Berkshire Environmental	PCB	9/25/06			
PCB Ambient Air Sampling	West of OPCAs colocated	9/12 - 9/13/06	Air	Berkshire Environmental	PCB	9/25/06			

		Sample				Date Received
Project Name	Field Sample ID	Date	Matrix	Laboratory	Analyses	by GE or BBL
PCB Ambient Air Sampling	North of OPCAs	9/12 - 9/13/06	Air	Berkshire Environmental	PCB	9/25/06
PCB Ambient Air Sampling	Southeast of OPCAs	9/12 - 9/13/06	Air	Berkshire Environmental	PCB	9/25/06
PCB Ambient Air Sampling	Pittsfield Generating (PGE)	9/12 - 9/13/06	Air	Berkshire Environmental	PCB	9/25/06
PCB Ambient Air Sampling	Background East of Building 9B	9/12 - 9/13/06	Air	Berkshire Environmental	PCB	9/25/06
PCB Ambient Air Sampling	Field Blank	9/14 - 9/15/06	Air	Berkshire Environmental	PCB	9/25/06
PCB Ambient Air Sampling	Northwest of OPCAs	9/14 - 9/15/06	Air	Berkshire Environmental	PCB	9/25/06
PCB Ambient Air Sampling	West of OPCAs	9/14 - 9/15/06	Air	Berkshire Environmental	PCB	9/25/06
PCB Ambient Air Sampling	West of OPCAs colocated	9/14 - 9/15/06	Air	Berkshire Environmental	PCB	9/25/06
PCB Ambient Air Sampling	North of OPCAs	9/14 - 9/15/06	Air	Berkshire Environmental	PCB	9/25/06
PCB Ambient Air Sampling	Southeast of OPCAs	9/14 - 9/15/06	Air	Berkshire Environmental	PCB	9/25/06
PCB Ambient Air Sampling	Pittsfield Generating (PGE)	9/14 - 9/15/06	Air	Berkshire Environmental	PCB	9/25/06
PCB Ambient Air Sampling	Background East of Building 9B	9/14 - 9/15/06	Air	Berkshire Environmental	PCB	9/25/06
PCB Ambient Air Sampling	Field Blank	9/19 - 9/20/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	Northwest of OPCAs	9/19 - 9/20/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	West of OPCAs	9/19 - 9/20/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	West of OPCAs colocated	9/19 - 9/20/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	North of OPCAs	9/19 - 9/20/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	Southeast of OPCAs	9/19 - 9/20/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	Pittsfield Generating (PGE)	9/19 - 9/20/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	Background East of Building 9B	9/19 - 9/20/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	Field Blank	9/21 - 9/22/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	Northwest of OPCAs	9/21 - 9/22/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	West of OPCAs	9/21 - 9/22/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	West of OPCAs colocated	9/21 - 9/22/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	North of OPCAs	9/21 - 9/22/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	Southeast of OPCAs	9/21 - 9/22/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	Pittsfield Generating (PGE)	9/21 - 9/22/06	Air	Berkshire Environmental	PCB	9/27/06
PCB Ambient Air Sampling	Background East of Building 9B	9/21 - 9/22/06	Air	Berkshire Environmental	PCB	9/27/06

### TABLE 5-2 PCB DATA RECEIVED DURING SEPTEMBER 2006

## DRESSER DOZER WIPE SAMPLING HILL 78/BUILDING 71 ON PLANT CONSOLIDATION AREAS GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in µg/100cm²)

Sample ID	Date Collected	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Total PCBs
Dozer-TD-15C-W1	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W2	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W3	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W4	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W5	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W6	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W7	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W8	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W9	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W10	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W11	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W12	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W13	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W14	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W15	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W16	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W17	9/15/2006	ND(1.0)	ND(1.0)						
Dozer-TD-15C-W18	9/15/2006	ND(1.0)	ND(1.0)						

#### Notes:

1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs.

2. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.

#### TABLE 5-3 **SUMMARY OF 2006 PCB AMBIENT AIR SAMPLING RESULTS**

#### HILL 78/BUILDING 71 ON PLANT CONSOLIDATION AREAS **GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS** (all results are ug/m<sup>3</sup>)

Date	Northwest of OPCAs	Northwest of OPCAs colocated	West of OPCAs	West of OPCAs colocated	North of OPCAs	Southeast of OPCAs	Pittsfield Generating (PGE)	Background Sample Location - East of Building 9B	Data Validated?
01/10/06 - 01/11/06	0.0005	ND	0.0020		0.0005	ND	0.0005	0.0003	No
02/07/06 - 02/08/06	ND	0.0002 J	ND		ND	0.0003	0.0003	0.0002 J	No
03/07/06 - 03/08/06	ND	ND	ND		ND	0.0006	0.0006	0.0008	No
04/06/06 - 04/07/06	0.0006		0.0004	0.0005	0.0005	0.0009	0.0014	0.0005	No
04/18/06 - 04/19/06	0.0010		0.0011	0.0009	0.0040	0.0019	0.0148	0.0031	No
04/25/06 - 04/26/06	0.0009		0.0010	0.0009	0.0007	0.0013	0.0019	0.0007	No
04/27/06 - 04/28/06	0.0006		0.0006	0.0007	0.0004	0.0009	0.0020	0.0005	No
05/02/06 - 05/03/06 <sup>1</sup>	NA		NA	NA	NA	NA	NA	NA	NA
05/04/06 - 05/05/06	0.0019		0.0037	0.0030	0.0017	0.0041	0.0069	0.0026	No
05/09/06 - 05/10/06	0.0003		0.0004	0.0004	ND	0.0005	0.0004	0.0050	No
05/11/06 - 05/12/06	0.0014		0.0024	0.0026	0.0010	0.0005	0.0006	0.0011	No
05/16/06 - 05/17/06	0.0004		0.0007	0.0011	0.0006	0.0009	0.0014	0.0009	No
05/18/06 - 05/19/06	0.0018		0.0015	0.0021	0.0017	0.0015	0.0017	0.0019	No
05/23/06 - 05/24/06	0.0003		ND	0.0004	ND	0.0011	0.0017	0.0005	No
05/25/06 - 05/26/06	$0.0032^2$		0.0018	0.0056	0.0041	0.0015	0.0044	0.0010	No
05/31/06 - 06/01/06	0.0069		0.0056	0.0060	0.0069	0.0030	0.0062	0.0024	No
06/01/06 - 06/02/06	0.0031		0.0028	0.0043	0.0034	0.0038	0.0087	0.0030	No
06/06/06 - 06/07/06	0.0006		ND	ND	ND	ND	ND	0.0018	No
06/12/06 - 06/13/06	0.0017		0.0046	0.0037	0.0041	0.0013	0.0388	0.0009	No
06/13/06 - 06/14/06	0.0010		0.0010	0.0007	0.0009	0.0022	0.0061	0.0014	No
06/20/06 - 06/21/06	0.0027		0.0020	0.0030	0.0031	0.0024	0.0047	0.0012	No
06/22/06 - 06/23/06	0.0028		0.0029	0.0027	0.0036	0.0022	0.0032	0.0025	No
06/27/06 - 06/28/06	0.0036 J		0.0021 J	0.0019 J	0.0026 J	0.0006 J	0.0018 J	0.0019 J	PDR <sup>3</sup>
06/29/06 - 06/30/06	0.0013 J		0.0014 J	0.0010 J	0.0020 J	0.0006 J	0.0021 J	0.0036 J	PDR <sup>3</sup>
07/06/06 - 07/07/06	0.0008 J		0.0003 J	0.0007 J	0.0006 J	0.0005 J	0.0029 J	0.0004 J	PDR <sup>3</sup>
07/11/06 - 07/12/06	0.0024		0.0018	0.0018	0.0016	0.0011	0.0045	0.0017	PDR <sup>3</sup>
07/13/06 - 07/14/06	0.0008 J		0.0014 J	0.0010 J	0.0007 J	0.0008 J	0.0023 J	0.0012 J	PDR <sup>3</sup>
07/18/06 - 07/19/06	0.0018 J		0.0026 J	0.0021 J	0.0020 J	0.0033 J	0.0089 J	0.0022 J	PDR <sup>3</sup>
07/20/06 - 07/21/06	0.0033		0.0024	0.0031	0.0010	0.0008	0.0025	0.0021	PDR <sup>3</sup>
07/24/06 - 07/25/06	0.0014		0.0016	0.0016	0.0017	0.0014	0.0045	0.0014	PDR <sup>3</sup>
07/31/06 - 08/01/06	0.0017		0.0016 J	0.0011 J	0.0005 J	0.0015	0.0070	0.0023	PDR <sup>3</sup>
08/03/06 - 08/04/06	0.0010		0.0017	0.0023	0.0013	0.0030	0.0107	0.0026	PDR <sup>3</sup>
08/08/06 - 08/09/06	ND		0.0005	0.0004 J	NA <sup>4</sup>	NA <sup>4</sup>	NA <sup>4</sup>	NA <sup>4</sup>	PDR <sup>3</sup>
08/10/06 - 08/11/06	0.0011 J		0.0011 J	0.0010 J	0.0004 J	0.0006 J	0.0020 J	0.0005 J	PDR <sup>3</sup>
08/14/06 - 08/15/06	0.0024		NA <sup>5</sup>	0.0019	0.0017	0.0008	0.0024	0.0016 J	PDR <sup>3</sup>

## TABLE 5-3 SUMMARY OF 2006 PCB AMBIENT AIR SAMPLING RESULTS

# HILL 78/BUILDING 71 ON PLANT CONSOLIDATION AREAS GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS (all results are ug/m³)

Date	Northwest of OPCAs	Northwest of OPCAs colocated	West of OPCAs	West of OPCAs colocated	North of OPCAs	Southeast of OPCAs	Pittsfield Generating (PGE)	Background Sample Location - East of Building 9B	Data Validated?
08/21/06 - 08/22/06	0.0016 J <sup>6,7</sup>		0.0015 J <sup>6,7</sup>	0.0013 J <sup>6,7</sup>	0.0011 J <sup>6,7</sup>	0.0019 J <sup>6,7</sup>	0.0066 J <sup>6,7</sup>	0.0013 J <sup>6,7</sup>	PDR <sup>3</sup>
08/29/06 - 08/30/06	$0.0008^{6,7}$		0.0013 <sup>6,7</sup>	0.0010 <sup>6,7</sup>	$0.0006^{6,7}$	$0.0009^{6,7}$	0.0012 <sup>6,7</sup>	0.0031 <sup>6,7</sup>	PDR <sup>3</sup>
08/31/06 - 09/01/06	$0.0009^{6,7}$		0.0011 <sup>6,7</sup>	0.0013 <sup>6,7</sup>	$0.0004^6$	0.0014 <sup>6,7</sup>	0.0058 <sup>6,7</sup>	0.0012 <sup>6,7</sup>	PDR <sup>3</sup>
09/05/06 - 09/06/06	$0.0027^{6,7}$		$0.0025^{6,7,8}$	0.0019 <sup>6,7</sup>	$0.0029^{6,7}$	0.0012 <sup>6,7</sup>	$0.0037^{6,7}$	$0.0028^{6,7}$	PDR <sup>3</sup>
09/07/06 - 09/08/06	0.0018 <sup>6,7</sup>		$0.0020^{6,7}$	0.0018 <sup>6,7</sup>	0.0016 <sup>6,7</sup>	0.0021 <sup>6,7</sup>	0.0063 <sup>6,7</sup>	0.0015 <sup>6,7</sup>	PDR <sup>3</sup>
09/12/06 - 09/13/06	0.0015 <sup>6,7</sup>		0.0014 <sup>6,7</sup>	0.0013 <sup>6,7</sup>	$0.0009^{6,7}$	$0.0006^{6,7}$	0.0014 <sup>6,7</sup>	0.0016 <sup>6,7</sup>	PDR <sup>3</sup>
09/14/06 - 09/15/06	0.0017 <sup>6,7</sup>		0.0021 <sup>6,7</sup>	$0.0020^{6,7}$	0.0014 <sup>6,7</sup>	$0.0010^{6,7}$	0.0018 <sup>6,7</sup>	$0.0020^{6,7}$	PDR <sup>3</sup>
09/19/06 - 09/20/06	$0.0030^{6,7}$		0.0027 <sup>6,7,8</sup>	0.0024 <sup>6,7,8</sup>	$0.0058^{6,7}$	0.0016 <sup>6,7</sup>	0.0042 <sup>6,7</sup>	0.0025 <sup>6,7</sup>	PDR <sup>3</sup>
09/21/06 - 09/22/06	$0.0005^6$		$0.0007^{6,7}$	$0.0006^{6,7}$	$0.0004^6$	0.0015 <sup>6,7</sup>	$0.0030^{6,7}$	$0.0008^{6,7}$	PDR <sup>3</sup>
Exceedances of Notification Level (0.05 µg/m³)	None	None	None	None	None	None	None	None	

(See Notes on Pages 3 and 4)

## TABLE 5-3 SUMMARY OF 2006 PCB AMBIENT AIR SAMPLING RESULTS

# HILL 78/BUILDING 71 ON PLANT CONSOLIDATION AREAS GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS (all results are ug/m³)

#### Notes:

All sampling and analytical activities performed and/or coordinated by Berkshire Environmental Consultants, Inc.

NA - Not Available

ND - Non Detect (<0.0003)

- J Sample results were qualified as estimated.
- No data available due to laboratory error.
- Data provided for information purposes only. Sampling period did not meet QA/QC criteria of 24 hours ± 60 minutes due to an interruption in street power.
- Preliminary data review (PDR) was conducted based on the following data quality indicators associated with the tabulated data set above: sampling collection time, sampling calibration check, temperature receipt, associated blanks, laboratory control samples recoveries, and surrogate recoveries.
- During the extraction step one of the SGS lab extractionists reported ethyl ether fumes. The analyst doing the extraction confirmed that the soxtherm had leaked and the extract volumes were low for a number of samples. The samples were analyzed but QA/QC review showed that the results were unacceptable.
  SGS' Lab Director and QA/QC group also confirmed that the low volume results were unacceptable. The lab only reported the validated results.
- 5 Sample result for the W location from 08/14/06 to 08/15/06 not available due to equipment malfunction.
- Laboratory qualification (PE): Aroclor 1248 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1248 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.
- <sup>7</sup> Laboratory qualification (AF): Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
- Laboratory qualification (PG): Aroclor 1260 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1260 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.

#### **Qualification Notes:**

- 1. Samples collected from the NW and Background locations from 02/07/06 to 02/08/06 are estimated values detected between the MDL and the PQL.
- 2. Samples collected from 06/27/06 to 06/28/06 were qualified as estimated due to surrogate recovery and/or laboratory control sample recovery deviations.
- 3. Samples collected from 06/29/06 to 06/30/06 were qualified as estimated due to surrogate recovery and/or laboratory control sample recovery deviations.
- Samples collected from 07/06/06 to 07/07/06 were qualified as estimated due to surrogate recovery deviation.
- 5. All samples collected from 07/11/06 to 07/12/06 were greater than 4°C (PUF temperature was 20.2°C) upon laboratory receipt. The temperature of the temperature blank was recorded as less than 4°C. Following an investigation of the laboratory concerning the temperature receipt of PUF samples exhibiting a temperature greater than 6°C, the laboratory has discovered that the laboratory receipt technician was taking the temperature of the PUF while still wrapped in foil. The foil wrapped around the PUF caused an erroneous temperature reading from the IR thermometer. This was confirmed by 1) the temperature blank exhibiting a temperature less than 4°C and 2) the laboratory receipt technician peeled back the foil of the of PUF samples receipt on 8/1/06 and a temperature reading of less than 5°C was observed; therefore, none of the data were qualified due to the documented PUF temperature deviation.
- 6. Samples collected from 07/13/06 to 07/14/06 were qualified as estimated due to the laboratory not recording the temperature of the PUF upon receipt and laboratory control sample recovery deviations. The temperature of the temperature blank was recorded as less than 4°C.
- 7. Samples collected from 07/18/06 to 07/19/06 were qualified as estimated due to the laboratory not recording the temperature of the PUF upon receipt.
- 8. All samples collected from 07/20/06 to 07/21/06 were greater than 4°C (PUF temperature was 21.4°C) upon laboratory receipt. The temperature of the temperature blank was recorded as less than 4°C. Following an investigation of the laboratory concerning the temperature receipt of PUF samples exhibiting a temperature greater than 6°C, the laboratory has discovered that the laboratory receipt technician was taking the temperature of the PUF while still wrapped in foil. The foil wrapped around the PUF caused an erroneous temperature reading from the IR thermometer. This was confirmed by 1) the temperature blank exhibiting a temperature less

## TABLE 5-3 SUMMARY OF 2006 PCB AMBIENT AIR SAMPLING RESULTS

# HILL 78/BUILDING 71 ON PLANT CONSOLIDATION AREAS GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS (all results are ug/m³)

than 4°C and 2) the laboratory receipt technician peeled back the foil of the of PUF samples receipt on 8/1/06 and a temperature reading of less than 5°C was observed; therefore, none of the data were qualified due to the documented PUF temperature deviation.

- 9. Samples collected from the W, W colocated and N locations from 07/31/06 to 08/01/06 were qualified as estimated due to one surrogate recovery less than the lower control limit and less than 10%.
- 10. Sample location W from the 08/08/06 to 08/09/06 event was qualified as estimated due to low surrogate recoveries.
- 11. Samples collected from 08/10/06 to 08/11/06 were qualified as estimated due to low laboratory control sample and laboratory control sample duplicate (LCS/LCSD) recovery less than the lower control limit.
- 12. Sample collected from the Background location from 08/14/06 to 08/15/06 was qualified due to the sampling calibration check.
- 13. Samples collected from 08/21/06 to 08/22/06 were qualified as estimated due to the laboratory not recording the temperature of the PUF upon receipt.

Sampling Date <sup>1</sup>	Sampler Location	Average Site Concentration (mg/m³)	Background Site Concentration (mg/m³)	Average Period (Hours:Min)	Predominant Wind Direction
01/10/06	North of OPCAs	0.016*	0.010*	10:30	WNW
	Pittsfield Generating Co.	0.023		10:30	
	Southeast of OPCAs	0.017		10:30	
	Northwest of OPCAs	0.023*		10:30	
	West of OPCAs	0.016*		10:30	
02/07/06	North of OPCAs	0.006*	0.005*	10:30	WNW
	Pittsfield Generating Co.	$NA^2$		$NA^2$	
	Southeast of OPCAs	0.046 <sup>3</sup>		13:45 <sup>4</sup>	
	Northwest of OPCAs	0.012*		10:15	
	West of OPCAs	0.008*		11:00	
04/17/06	North of OPCAs	0.003*	0.004*	9:45	NNW
	Pittsfield Generating Co.	0.005*		10:15	
	Southeast of OPCAs	0.004*		10:00	
	Northwest of OPCAs	0.002*		10:30	
	West of OPCAs	0.003*		10:30	
04/18/06	North of OPCAs	0.003*	0.003*	9:15 <sup>5</sup>	NNW
	Pittsfield Generating Co.	0.003*		10:45	
	Southeast of OPCAs	0.020*		10:45	
	Northwest of OPCAs	0.001*		10:30	
	West of OPCAs	0.003*		10:45	
04/19/06	North of OPCAs	0.001*	0.003*	6:15 <sup>5</sup>	NNW
	Pittsfield Generating Co.	0.004*		10:45	
	Southeast of OPCAs	0.005*		10:45	
	Northwest of OPCAs	0.001*		11:00	
	West of OPCAs	0.004*		11:00	
04/20/06	North of OPCAs	0.004*	0.005*	11:30	WNW, NNW
	Pittsfield Generating Co.	0.008*		12:00	
	Southeast of OPCAs	0.006*		11:30	
	Northwest of OPCAs	0.003*		11:30	
	West of OPCAs	0.006*		11:30	
04/21/06	North of OPCAs	0.004*	0.007*	10:30	Variable
	Pittsfield Generating Co.	0.010*		10:45	
	Southeast of OPCAs	0.008*		10:30	
	Northwest of OPCAs	0.004*		10:30	
	West of OPCAs	0.006*		10:30	
04/24/06	North of OPCAs	0.006*	0.007*	10:45	Calm
	Pittsfield Generating Co.	0.008*		10:45	
	Southeast of OPCAs	0.011*		10:45	
	Northwest of OPCAs	0.005*		10:45	
	West of OPCAs	0.007*		10:45	
04/25/06	North of OPCAs	0.015*	0.018*	10:45	WNW
	Pittsfield Generating Co.	0.025*		10:30	
	Southeast of OPCAs	0.022*		10:30	
	Northwest of OPCAs	0.013*		10:45	
04/20/00	West of OPCAs	0.019*	0.005*	10:45	COM
04/26/06	North of OPCAs	0.003*	0.005"	11:00	SSW
	Pittsfield Generating Co.	0.005*		10:45	
	Southeast of OPCAs	0.004*		10:45	
	Northwest of OPCAs	0.002*		11:00	I

Sampling Date <sup>1</sup>	Sampler Location	Average Site Concentration (mg/m³)	Background Site Concentration (mg/m³)	Average Period (Hours:Min)	Predominant Wind Direction
04/27/06	North of OPCAs	0.009*	0.013*	10:30	WNW
	Pittsfield Generating Co.	0.014*		10:30	
	Southeast of OPCAs	0.014*		10:30	
	Northwest of OPCAs	0.007*		10:30	
	West of OPCAs	0.012*		10:45	
04/28/06	North of OPCAs	0.003*	0.005*	10:45	NNW
	Pittsfield Generating Co.	0.006*		10:30	
	Southeast of OPCAs	0.006*		10:45	
	Northwest of OPCAs	0.003*		10:45	
	West of OPCAs	0.005*		10:45	
05/01/06	North of OPCAs	0.006*	0.009*	10:30	ENE
	Pittsfield Generating Co.	0.009*		10:30	
	Southeast of OPCAs	0.010*		10:30	
	Northwest of OPCAs	0.005*		10:30	
	West of OPCAs	0.010*		10:30	
05/02/06	North of OPCAs	0.007*	0.011*	11:00	Variable
	Pittsfield Generating Co.	0.010*		11:00	
	Southeast of OPCAs	0.014*		11:00	
	Northwest of OPCAs	0.005*		11:00	
	West of OPCAs	0.009*		11:00	
05/03/06	North of OPCAs	0.001*	0.002*	10:00	NNW
	Pittsfield Generating Co.	0.002*		10:15	
	Southeast of OPCAs	0.001*		5:30 <sup>5</sup>	
	Northwest of OPCAs	0.001*		10:15	
	West of OPCAs	0.002*		10:30	
05/04/06	North of OPCAs	0.003*	0.006*	11:00	WNW
	Pittsfield Generating Co.	0.011*		11:00	
	Southeast of OPCAs	0.004*		11:00	
	Northwest of OPCAs	0.001*		11:30	
	West of OPCAs	0.006*		11:30	
05/05/06	North of OPCAs	0.004*	0.007*	10:30	WNW
	Pittsfield Generating Co.	0.007*		10:30	
	Southeast of OPCAs	0.005*		10:30	
	Northwest of OPCAs	0.005*		10:30	
	West of OPCAs	0.006*		10:30	
05/08/06	North of OPCAs	0.006*	0.010*	10:45	Variable
	Pittsfield Generating Co.	0.010*		10:45	
	Southeast of OPCAs	0.007*		10:45	
	Northwest of OPCAs	0.007*		10:45	
	West of OPCAs	0.009*		10:45	
05/09/06	North of OPCAs	0.005*	0.013*	11:45	NNE
	Pittsfield Generating Co.	0.009*		11:45	
	Southeast of OPCAs	0.008*		11:45	
	Northwest of OPCAs	0.005*		11:45	
	West of OPCAs	0.009*		11:45	
05/10/06	North of OPCAs	0.004*	0.008*	10:45	ENE
	Pittsfield Generating Co.	0.009*		10:45	
	Southeast of OPCAs	0.005*		10:45	
	Northwest of OPCAs	0.004*		10:45	
	West of OPCAs	0.009*		10:45	1

Sampling Date <sup>1</sup>	Sampler Location	Average Site Concentration (mg/m³)	Background Site Concentration (mg/m³)	Average Period (Hours:Min)	Predominant Wind Direction
05/11/06	North of OPCAs	0.002*	0.006*	11:15	Variable
	Pittsfield Generating Co.	0.007*		11:15	
	Southeast of OPCAs	0.004*		11:15	
	Northwest of OPCAs	0.002*		11:15	
	West of OPCAs	0.007*		11:15	
05/12/06	North of OPCAs	0.006*	0.008*	11:45	Variable
	Pittsfield Generating Co.	0.001*		11:45	
	Southeast of OPCAs	0.004*		11:45	
	Northwest of OPCAs	0.010*		12:00	
	West of OPCAs	0.007*		12:00	
05/15/06	North of OPCAs	0.002*	0.002*	10:45	Variable
	Pittsfield Generating Co.	0.003*		9:30 <sup>5</sup>	
	Southeast of OPCAs	0.001*		11:15	
	Northwest of OPCAs	0.001*		11:00	
	West of OPCAs	0.002*		11:15	
05/16/06	North of OPCAs	0.007*	0.008*	11:30	W
30,10,22	Pittsfield Generating Co.	0.008*		11:00	
	Southeast of OPCAs	0.007*		11:00	
	Northwest of OPCAs	0.005*		10:15	
	West of OPCAs	0.005*		11:15	
05/17/06	North of OPCAs	0.016*	0.015*	11:15	SSW
00/11/00	Pittsfield Generating Co.	0.025*	0.010	11:15	
	Southeast of OPCAs	0.014*		11:15	
	Northwest of OPCAs	0.013*		11:15	
	West of OPCAs	0.011*		11:15	
05/18/06	North of OPCAs	0.022*	0.024*	11:00	SSW
00/10/00	Pittsfield Generating Co.	0.029*	0.024	10:45	0011
	Southeast of OPCAs	0.023*		11:00	
	Northwest of OPCAs	0.020*		11:15	
	West of OPCAs	0.018*		11:30	
05/19/06	North of OPCAs	0.015*	0.022*	10:45	WSW
00/10/00	Pittsfield Generating Co.	0.019*	0.022	10:00	""
	Southeast of OPCAs	0.019		10:45	
	Northwest of OPCAs	0.014*		10:45	
	West of OPCAs	0.014*		10:45	
05/22/06	North of OPCAs	0.001*	0.002*	8:15 <sup>6</sup>	WNW
00/22/00	Pittsfield Generating Co.	0.014*	0.002	11:15	
	Southeast of OPCAs	0.002*		11:15	
	Northwest of OPCAs	0.001*		11:15	
	West of OPCAs	0.001*		11:15	
05/23/06	North of OPCAs	0.005*	0.008*	11:45	WNW
00,20,00	Pittsfield Generating Co.	0.005*	0.000	11:30	441444
	Southeast of OPCAs	0.005*		11:45	
	Northwest of OPCAs	0.006*		11:45	
	West of OPCAs	0.002*		12:00	
05/24/06	North of OPCAs	0.002	0.006*	11:30	WNW
00/24/00	Pittsfield Generating Co.	0.004	0.000	11:30	V V I V V
	Southeast of OPCAs	0.004*		11:30	
	Northwest of OPCAs	0.004*		11:30	
	INDITIONEST OF OLUMB	0.004		11.30	ĺ

Sampling Date <sup>1</sup>	Sampler Location	Average Site Concentration (mg/m³)	Background Site Concentration (mg/m³)	Average Period (Hours:Min)	Predominant Wind Direction
05/25/06	North of OPCAs	0.014*	0.014*	10:15	SSW
	Pittsfield Generating Co.	0.021*		10:00	
	Southeast of OPCAs	0.016*		10:15	
	Northwest of OPCAs	0.015*		10:30	
	West of OPCAs	0.011*		10:45	
05/26/06	North of OPCAs	0.028*	0.030*	10:45	Calm
	Pittsfield Generating Co.	0.035*		11:30	
	Southeast of OPCAs	0.028*		11:30	
	Northwest of OPCAs	0.031*		11:45	
	West of OPCAs	0.027*		11:15	
05/30/06	North of OPCAs	0.023*	0.023*	11:00	Variable
	Pittsfield Generating Co.	0.040*		10:30	
	Southeast of OPCAs	0.024*		9:00 <sup>5</sup>	
	Northwest of OPCAs	0.026*		11:00	
	West of OPCAs	0.012*		11:00	
05/31/06	North of OPCAs	0.046*	0.053*	11:15	WSW
	Pittsfield Generating Co.	0.057*		11:00	
	Southeast of OPCAs	0.046*		11:15	
	Northwest of OPCAs	0.049*		11:30	
	West of OPCAs	0.035*		11:30	
06/01/06	North of OPCAs	0.057*	0.072*	11:15	WSW, SSW
	Pittsfield Generating Co.	0.078*		11:15	
	Southeast of OPCAs	0.059*		11:15	
	Northwest of OPCAs	0.058*		11:15	
	West of OPCAs	0.042*		11:30	
06/02/06	North of OPCAs	0.014*	0.019*	10:30	WSW
	Pittsfield Generating Co.	0.020*		10:30	
	Southeast of OPCAs	0.016*		10:30	
	Northwest of OPCAs	0.016*		10:30	
	West of OPCAs	0.013*		10:30	
06/06/06	North of OPCAs	0.008*	0.010*	11:30	Calm
	Pittsfield Generating Co.	0.012*		11:30	
	Southeast of OPCAs	0.010*		11:30	
	Northwest of OPCAs	0.008*		11:45	
	West of OPCAs	0.007*		11:45	
06/12/06	North of OPCAs	0.005*	0.005*	10:15	WNW
	Pittsfield Generating Co.	0.014*		10:45	
	Southeast of OPCAs	0.009*		10:30	
	Northwest of OPCAs	0.003*		10:30	
	West of OPCAs	0.003*		11:15	
06/13/06	North of OPCAs	0.009*	0.009*	11:00	WNW
	Pittsfield Generating Co.	0.026*		10:30	
	Southeast of OPCAs	0.011*		11:00	
	Northwest of OPCAs	0.009*		11:00	
	West of OPCAs	0.003*		10:45	
06/14/06	North of OPCAs	0.013*	0.018*	10:45	Calm
	Pittsfield Generating Co.	0.024*		10:45	
	Southeast of OPCAs	0.013*		11:00	
	Northwest of OPCAs	0.014*		11:00	
	West of OPCAs	0.011*		11:00	

Sampling Date <sup>1</sup>	Sampler Location	Average Site Concentration (mg/m³)	Background Site Concentration (mg/m³)	Average Period (Hours:Min)	Predominant Wind Direction
06/15/06	North of OPCAs	0.009*	0.010*	10:30	NNW
	Pittsfield Generating Co.	0.014*		10:30	
	Southeast of OPCAs	0.010*		10:30	
	Northwest of OPCAs	0.008*		10:30	
	West of OPCAs	0.011*		10:30	
06/16/06	North of OPCAs	0.015*	0.017*	9:45 <sup>5</sup>	WNW
	Pittsfield Generating Co.	0.022*		11:45	
	Southeast of OPCAs	0.017*		11:45	
	Northwest of OPCAs	0.016*		11:45	
	West of OPCAs	0.026*		6:45 <sup>5</sup>	
06/19/06 <sup>7</sup>	North of OPCAs	0.113*	0.136*	10:30	WSW, SSW
	Pittsfield Generating Co.	0.153*		10:45	
	Southeast of OPCAs	0.119*		10:45	
	Northwest of OPCAs	0.119*		10:30	
	West of OPCAs	0.187*		10:30	
06/20/06	North of OPCAs	0.022*	0.028*	10:30	WSW
	Pittsfield Generating Co.	0.031*		10:30	
	Southeast of OPCAs	0.018*		10:45	
	Northwest of OPCAs	0.020*		10:45	
	West of OPCAs	0.038*		10:45	
06/21/06	North of OPCAs	0.007*	0.007*	10:45	Variable
	Pittsfield Generating Co.	0.012*		10:45	
	Southeast of OPCAs	0.009*		10:45	
	Northwest of OPCAs	0.007*		10:45	
	West of OPCAs	0.013*		10:45	
06/22/06	North of OPCAs	0.029*	0.034*	11:30	SSW
00/22/00	Pittsfield Generating Co.	0.041*	0.004	10:45	0011
	Southeast of OPCAs	0.035*		11:30	
	Northwest of OPCAs	0.030*		11:30	
	West of OPCAs	0.051*		11:30	
06/23/06	North of OPCAs	0.027*	0.037*	10:45	WNW
00/23/00	Pittsfield Generating Co.	0.046*	0.037	10:45	VVIAVV
	Southeast of OPCAs	0.036*		10:45	
	Northwest of OPCAs	0.029*		10:45	
	West of OPCAs	0.029		10:45	
06/26/06	North of OPCAs	0.012*	0.015*	8:45 <sup>8</sup>	SSW
00/20/00	Pittsfield Generating Co.	0.012	0.010	8:30 <sup>8</sup>	JOVV
	Southeast of OPCAs	0.020		8:30 <sup>8</sup>	
	Northwest of OPCAs	0.021		8:45 <sup>8</sup>	
		0.014*		8:45 <sup>8</sup>	
06/27/06	West of OPCAs  North of OPCAs		0.011*	10:45	SSW
00/21/00		0.012* 0.015*	0.011	10:45	SSVV
	Pittsfield Generating Co. Southeast of OPCAs			10:30	
	Northwest of OPCAs	0.012* 0.013*		10:45	
		0.013			
06/20/00	West of OPCAs		0.008*	11:00	Variable
06/28/06	North of OPCAs	0.004* 0.007*	0.008	11:30 10:45	Variable
	Pittsfield Generating Co.				
	Southeast of OPCAs	0.003*		11:30	
	Northwest of OPCAs	0.007*		11:15	
	West of OPCAs	0.011*		11:30	1

Sampling Date <sup>1</sup>	Sampler Location	Average Site Concentration (mg/m³)	Background Site Concentration (mg/m³)	Average Period (Hours:Min)	Predominant Wind Direction
06/29/06	North of OPCAs	0.055*	0.057*	10:30	SSW
	Pittsfield Generating Co.	0.074*		10:00	
	Southeast of OPCAs	0.047*		11:00	
	Northwest of OPCAs	0.064*		10:30	
	West of OPCAs	0.062*		11:00	
06/30/06	North of OPCAs	0.030*	0.037*	11:00	WNW
	Pittsfield Generating Co.	0.046*		10:30	
	Southeast of OPCAs	0.046*		10:45	
	Northwest of OPCAs	0.039*		11:00	
	West of OPCAs	0.055*		10:45	
07/05/06	North of OPCAs	0.016*	0.021*	11:00	WNW
	Pittsfield Generating Co.	0.024*		11:00	
	Southeast of OPCAs	0.026*		10:45	
	Northwest of OPCAs	0.022*		10:45	
	West of OPCAs	0.032*		11:00	
07/06/06	North of OPCAs	0.002*	0.006*	11:00	WNW
	Pittsfield Generating Co.	0.007*		10:45	
	Southeast of OPCAs	0.021*		11:00	
	Northwest of OPCAs	0.006*		11:00	
	West of OPCAs	0.010*		11:15	
07/07/06	North of OPCAs	0.007*	0.008*	10:45	WNW
	Pittsfield Generating Co.	0.012*		10:45	
	Southeast of OPCAs	0.019*		10:45	
	Northwest of OPCAs	0.010*		10:45	
	West of OPCAs	0.017*		10:45	
07/10/06	North of OPCAs	0.030*	0.056*	10:45	Variable
	Pittsfield Generating Co.	0.046*		10:30	
	Southeast of OPCAs	0.044*		10:45	
	Northwest of OPCAs	0.037*		10:30	
	West of OPCAs	0.056*		10:45	
07/11/06	North of OPCAs	0.048 <sup>9</sup>	0.070*	11:15	NNW, WNW
	Pittsfield Generating Co.	0.088*		10:15	
	Southeast of OPCAs	0.085*		10:30	
	Northwest of OPCAs	0.071*		10:00	
	West of OPCAs	0.049 <sup>9</sup>		11:15	
07/12/06	North of OPCAs	0.026**	0.040*	11:15	Calm
	Pittsfield Generating Co.	0.066*		10:30	
	Southeast of OPCAs	0.063*		10:45	
	Northwest of OPCAs	0.054*		10:30	
	West of OPCAs	0.022**		11:15	
07/13/06	North of OPCAs	0.010**	0.007*	11:15	NNE, W
07/13/06	Pittsfield Generating Co.	0.004*		11:00	,
	Southeast of OPCAs	0.002*		10:30	
	Northwest of OPCAs	0.004*		11:00	
	West of OPCAs	0.013**		11:15	
07/14/06	North of OPCAs	0.011**	0.021*	11:00	WNW
2:700	Pittsfield Generating Co.	0.030*	0.02.	10:30	
	Southeast of OPCAs	0.028*		10:30	
	Northwest of OPCAs	0.026*		10:30	
	West of OPCAs	0.011**		11:00	

		Average Site	Background Site	A B. d. I	Due Levelin and Miles I
Sampling Date <sup>1</sup>	Sampler Location	Concentration (mg/m³)	Concentration (mg/m³)	Average Period (Hours:Min)	Predominant Wind Direction
07/47/00	N. II. CODOA			44.45	V . 11
07/17/06	North of OPCAs	0.022**	0.013*	11:15	Variable
	Pittsfield Generating Co.	0.025*		10:30	
	Southeast of OPCAs	0.029* 0.021 <sup>9</sup>		11:00	
	Northwest of OPCAs			10:45	
07/10/00	West of OPCAs	0.0189	0.0044	8:15 <sup>10</sup>	140.047
07/18/06	North of OPCAs	0.018**	0.024*	11:15	WNW
	Pittsfield Generating Co.	0.031*		10:15	
	Southeast of OPCAs	0.036*		11:00	
	Northwest of OPCAs	0.018**		11:15	
	West of OPCAs	0.037*		10:45	
07/19/06	North of OPCAs	0.015**	0.013*	11:15	Calm
	Pittsfield Generating Co.	0.017*		10:30	
	Southeast of OPCAs	0.019*		10:30	
	Northwest of OPCAs	0.009**		11:15	
	West of OPCAs	0.019*		10:30	
07/20/06	North of OPCAs	0.011**	0.004*	11:15	Calm
	Pittsfield Generating Co.	0.020*		11:15	
	Southeast of OPCAs	0.021*		11:15	
	Northwest of OPCAs	0.012**		11:15	
	West of OPCAs	0.019*		11:15	
07/21/06	North of OPCAs	0.018**	0.056*	11:00	Variable
	Pittsfield Generating Co.	0.052*		11:30	
	Southeast of OPCAs	0.052*		11:15	
	Northwest of OPCAs	0.018**		11:00	
	West of OPCAs	0.050*		11:30	
07/24/06	North of OPCAs	0.009**	0.009*	11:15	Variable
	Pittsfield Generating Co.	0.010*		10:30	
	Southeast of OPCAs	0.010*		10:30	
	Northwest of OPCAs	0.007**		11:15	
	West of OPCAs	0.007*		11:00	
07/25/06	North of OPCAs	0.025**	0.038*	9:45 <sup>8</sup>	SSW
	Pittsfield Generating Co.	0.046*		9:15 <sup>8</sup>	
	Southeast of OPCAs	0.046*		9:008	
	Northwest of OPCAs	0.024**		9:45 <sup>8</sup>	
	West of OPCAs	0.051*		9:15 <sup>8</sup>	
07/26/06	North of OPCAs	0.025**	0.045*	11:15	Variable
	Pittsfield Generating Co.	0.063*		10:30	
	Southeast of OPCAs	0.062*		10:30	
	Northwest of OPCAs	0.025**		11:15	
	West of OPCAs	0.064*		10:30	
07/27/06	North of OPCAs	0.037**	0.082*	11:15	SSW
	Pittsfield Generating Co.	0.108*		10:45	
	Southeast of OPCAs	0.101*		10:45	
	Northwest of OPCAs	0.035**		11:15	
	West of OPCAs	0.113*		10:30	
07/28/06	North of OPCAs	0.026**	0.041*	9:00 <sup>6</sup>	SSW
	Pittsfield Generating Co.	0.053*		10:30	
	Southeast of OPCAs	0.052*		10:30	
	Northwest of OPCAs	0.022**		11:00	
	West of OPCAs	0.060*		10:30	

Sampling Date <sup>1</sup>	Sampler Location	Average Site Concentration (mg/m³)	Background Site Concentration (mg/m³)	Average Period (Hours:Min)	Predominant Wind Direction
07/31/06	North of OPCAs	0.012*	0.015*	10:30	Variable
	Pittsfield Generating Co.	0.020*		10:30	
	Southeast of OPCAs	0.021*		11:30	
	Northwest of OPCAs	0.010**		11:15	
	West of OPCAs	0.013*		10:45	
08/01/06	North of OPCAs	0.050*	0.048*	10:45	WSW
	Pittsfield Generating Co.	0.065*		10:45	
	Southeast of OPCAs	0.064*		10:45	
	Northwest of OPCAs	0.025**		11:15	
	West of OPCAs	0.051*		10:45	
08/02/06	North of OPCAs	0.049*	0.049*	10:30	WNW
	Pittsfield Generating Co.	0.068*		10:30	
	Southeast of OPCAs	0.070*		10:30	
	Northwest of OPCAs	0.031**		11:15	
	West of OPCAs	0.040*		10:00	
08/03/06	North of OPCAs	0.035*	0.034*	11:15	WNW
	Pittsfield Generating Co.	0.044*		10:45	
	Southeast of OPCAs	0.045*		11:15	
	Northwest of OPCAs	0.018**		11:15	
	West of OPCAs	0.037*		10:45	
08/04/06	North of OPCAs	0.005*	0.008*	10:15	NNW
	Pittsfield Generating Co.	0.010*		10:15	
	Southeast of OPCAs	0.010*		10:00	
	Northwest of OPCAs	0.006**		10:45	
	West of OPCAs	0.005*		10:00	
08/07/06	North of OPCAs	0.030*	0.024*	11:15	SSW
	Pittsfield Generating Co.	0.044*		11:15	
	Southeast of OPCAs	0.043*		11:15	
	Northwest of OPCAs	0.022**		11:15	
	West of OPCAs	0.022*		11:00	
08/08/06	North of OPCAs	0.007*	0.010*	11:15	NNW
	Pittsfield Generating Co.	0.013*		10:45	
	Southeast of OPCAs	0.014*		11:15	
	Northwest of OPCAs	0.008**		11:15	
	West of OPCAs	0.008*		11:30	
08/09/06	North of OPCAs	0.007*	0.006*	10:30	Calm
	Pittsfield Generating Co.	0.007*		10:15	
	Southeast of OPCAs	0.008*		10:30	
	Northwest of OPCAs	0.007**		11:15	
	West of OPCAs	0.007*		10:30	
08/10/06	North of OPCAs	0.018*	0.012*	11:00	SSW
	Pittsfield Generating Co.	0.015*		10:30	
	Southeast of OPCAs	0.016*		11:15	
	Northwest of OPCAs	0.016**		11:15	
	West of OPCAs	0.014*		10:45	
08/11/06	North of OPCAs	0.004*	0.004*	10:45	NNW
	Pittsfield Generating Co.	0.004*		11:00	
	Southeast of OPCAs	0.004*		11:00	
	Northwest of OPCAs	0.006**		11:15	
	West of OPCAs	0.004*		10:45	

Sampling Date <sup>1</sup>	Sampler Location	Average Site Concentration (mg/m³)	Background Site Concentration (mg/m³)	Average Period (Hours:Min)	Predominant Wind Direction
08/14/06	North of OPCAs	0.025**	0.011*	11:00	SSW
	Pittsfield Generating Co.	0.014*		10:30	
	Southeast of OPCAs	0.016*		10:45	
	Northwest of OPCAs	0.018**		11:15	
	West of OPCAs	0.013*		11:00	
08/15/06	North of OPCAs	0.013**	0.007*	11:15	WSW
	Pittsfield Generating Co.	0.014*		10:15	
	Southeast of OPCAs	0.013*		11:30	
	Northwest of OPCAs	0.012**		11:15	
	West of OPCAs	0.012*		10:15	
08/16/06	North of OPCAs	0.007**	0.006*	11:15	NNW
	Pittsfield Generating Co.	0.007*		10:45	
	Southeast of OPCAs	0.009*		11:00	
	Northwest of OPCAs	0.007**		11:15	
	West of OPCAs	0.008*		10:45	
08/17/06	North of OPCAs	0.005**	0.005*	11:15	Calm
	Pittsfield Generating Co.	0.006*		11:00	
	Southeast of OPCAs	0.006*		11:00	
	Northwest of OPCAs	0.007**		11:15	
	West of OPCAs	0.005*		11:00	
08/18/06	North of OPCAs	0.011**	0.005*	11:00	SSW
33/13/33	Pittsfield Generating Co.	0.012*	0.000	10:30	
	Southeast of OPCAs	0.014*		11:00	
	Northwest of OPCAs	0.010**		11:15	
	West of OPCAs	0.011*		10:45	
08/21/06	North of OPCAs	0.012**	0.005*	11:15	WNW
	Pittsfield Generating Co.	0.004*		10:30	
	Southeast of OPCAs	0.005*		10:45	
	Northwest of OPCAs	0.003**		11:15	
	West of OPCAs	0.003*		10:15	
08/22/06	North of OPCAs	0.008**	0.006*	11:15	WNW
	Pittsfield Generating Co.	0.006*		10:45	
	Southeast of OPCAs	0.006*		10:45	
	Northwest of OPCAs	0.007**		11:15	
	West of OPCAs	0.006*		10:30	
08/23/06	North of OPCAs	0.009**	0.012*	11:15	WNW
	Pittsfield Generating Co.	0.010*		10:45	
	Southeast of OPCAs	0.011*		10:15	
	Northwest of OPCAs	0.009**		11:15	
	West of OPCAs	0.010*		10:15	
08/24/06	North of OPCAs	0.005**	0.005*	11:15	Calm
	Pittsfield Generating Co.	0.007*		10:45	
	Southeast of OPCAs	0.005*		11:00	
	Northwest of OPCAs	0.004**		11:15	
	West of OPCAs	0.005*		10:45	
08/25/06	North of OPCAs	0.012**	0.031*	10:45	Calm
	Pittsfield Generating Co.	0.012*		10:45	
	Southeast of OPCAs	0.011*		10:45	
	Northwest of OPCAs	0.008**		10:45	
	West of OPCAs	0.011*		10:30	

		Average Site	Background Site	Average Period	Predominant Wind
Sampling Date <sup>1</sup>	Sampler Location	Concentration (mg/m³)	Concentration (mg/m³)	(Hours:Min)	Direction
08/28/06	North of OPCAs	0.016**	0.019*	10:30	Calm
	Pittsfield Generating Co.	0.023*		10:30	
	Southeast of OPCAs	0.023*		10:15	
	Northwest of OPCAs	0.010**		10:30	
	West of OPCAs	0.021*		10:30	
08/29/06	North of OPCAs	0.011**	0.019*	10:15	Calm
	Pittsfield Generating Co.	0.015*		10:15	
	Southeast of OPCAs	0.017*		10:15	
	Northwest of OPCAs	0.022**		10:15	
	West of OPCAs	0.018*		10:00	
08/30/06	North of OPCAs	0.007**	0.011*	10:45	NNW
	Pittsfield Generating Co.	0.008*		10:45	
	Southeast of OPCAs	0.010*		10:45	
	Northwest of OPCAs	0.006**		10:45	
	West of OPCAs	0.007*		10:30	
08/31/06	North of OPCAs	0.005**	0.003*	10:15	Variable
	Pittsfield Generating Co.	0.003*		10:15	
	Southeast of OPCAs	0.004*		10:15	
	Northwest of OPCAs	0.004**		10:15	
	West of OPCAs	0.004*		10:00	
09/01/06	North of OPCAs	0.007**	0.008*	11:00	Variable
00/01/00	Pittsfield Generating Co.	0.004*	0.000	11:30	T dilidalio
	Southeast of OPCAs	0.005*		11:30	
	Northwest of OPCAs	0.006**		11:00	
	West of OPCAs	0.005*		11:30	
09/05/06	North of OPCAs	0.012**	0.017*	11:15	WSW
	Pittsfield Generating Co.	0.015*		11:00	
	Southeast of OPCAs	0.016*		11:00	
	Northwest of OPCAs	0.009**		11:15	
	West of OPCAs	0.015*		11:00	
09/06/06	North of OPCAs	0.011**	0.016*	10:30	Variable
33,33,33	Pittsfield Generating Co.	0.013*		10:15	
	Southeast of OPCAs	0.014*		10:30	
	Northwest of OPCAs	0.009**		10:30	
	West of OPCAs	0.012*		10:15	
09/07/06	North of OPCAs	0.011**	0.018*	11:45	Calm
	Pittsfield Generating Co.	0.014*		11:30	
	Southeast of OPCAs	0.016*		11:30	
	Northwest of OPCAs	0.008**		11:45	
	West of OPCAs	0.016*		11:45	
09/08/06	North of OPCAs	0.017**	0.033*	11:45	WSW
	Pittsfield Generating Co.	0.025*		11:30	
	Southeast of OPCAs	0.026*		11:30	
	Northwest of OPCAs	0.013**		11:30	
	West of OPCAs	0.028*		11:30	
09/11/06	North of OPCAs	0.007**	0.004*	11:00	Calm
	Pittsfield Generating Co.	0.003*		11:00	
	Southeast of OPCAs	0.004*		11:00	
	Northwest of OPCAs	0.007**		11:00	
	West of OPCAs	0.003*		10:45	

Sampling Date <sup>1</sup>	Sampler Location	Average Site Concentration (mg/m³)	Background Site Concentration (mg/m³)	Average Period (Hours:Min)	Predominant Wind Direction
09/12/06	North of OPCAs	0.004**	0.005*	10:30	Calm
	Pittsfield Generating Co.	0.003*		10:30	
	Southeast of OPCAs	0.006*		10:30	
	Northwest of OPCAs	0.007**		10:30	
	West of OPCAs	0.004*		10:00	
09/13/06	North of OPCAs	0.012**	0.011*	10:45	SSW
	Pittsfield Generating Co.	0.008*		10:30	
	Southeast of OPCAs	0.017*		10:45	
	Northwest of OPCAs	0.013**		10:45	
	West of OPCAs	0.014*		10:30	
09/14/06	North of OPCAs	0.012**	0.011*	10:45	Calm
	Pittsfield Generating Co.	0.009*		10:30	
	Southeast of OPCAs	0.011*		10:15	
	Northwest of OPCAs	0.012**		10:45	
	West of OPCAs	0.009*		10:15	
09/15/06	North of OPCAs	0.008**	0.012*	11:30	Calm
	Pittsfield Generating Co.	0.011*		11:15	
	Southeast of OPCAs	0.011*		11:15	
	Northwest of OPCAs	0.009**		11:30	
	West of OPCAs	0.010*		11:15	
09/18/06	North of OPCAs	0.014**	0.020*	10:45	SSW
	Pittsfield Generating Co.	0.017*		10:45	
	Southeast of OPCAs	0.019*		11:00	
	Northwest of OPCAs	0.010**		10:45	
	West of OPCAs	0.016*		10:45	
09/19/06	North of OPCAs	0.036**	0.081*	11:30	SSW
	Pittsfield Generating Co.	0.065*		11:30	
	Southeast of OPCAs	0.091*		10:15	
	Northwest of OPCAs	0.041**		11:30	
	West of OPCAs	0.065*		11:30	
09/20/06	North of OPCAs	0.011**	0.010*	10:45	WNW
	Pittsfield Generating Co.	0.008*		10:45	
	Southeast of OPCAs	0.011*		10:15	
	Northwest of OPCAs	0.011**		10:45	
	West of OPCAs	0.005*		10:30	
09/21/06	North of OPCAs	0.005**	0.002*	10:30	WNW
	Pittsfield Generating Co.	0.002*		10:15	
	Southeast of OPCAs	0.004*		10:45	
	Northwest of OPCAs	0.005**		10:30	
	West of OPCAs	0.003*		10:15	
09/22/06	North of OPCAs	0.011**	0.014*	11:15	SSW
	Pittsfield Generating Co.	0.011*		11:00	
	Southeast of OPCAs	0.017*		10:45	
	Northwest of OPCAs	0.010**		11:15	
	West of OPCAs	0.014*		11:00	
09/25/06	North of OPCAs	0.003**	0.004*	10:15	WNW
	Pittsfield Generating Co.	0.004*		10:00	
	Southeast of OPCAs	0.006*		10:00	
	Northwest of OPCAs	0.005**		10:15	
	West of OPCAs	0.004*		10:15	1

# PARTICULATE AMBIENT AIR CONCENTRATIONS HILL 78/BUILDING 71 ON-PLANT CONSOLIDATION AREAS GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Sampling Date <sup>1</sup>	Sampler Location	Average Site Concentration (mg/m³)	Background Site Concentration (mg/m³)	Average Period (Hours:Min)	Predominant Wind Direction
09/26/06	North of OPCAs	0.005**	0.005*	11:00	WNW
	Pittsfield Generating Co.	0.005*		10:00	
	Southeast of OPCAs	0.007*		11:15	
	Northwest of OPCAs	0.006**		11:00	
	West of OPCAs	0.006*		10:45	
09/27/06	North of OPCAs	0.011**	0.010*	10:30	SSW
	Pittsfield Generating Co.	0.009*		10:15	
	Southeast of OPCAs	0.015*		10:15	
	Northwest of OPCAs	0.012**		10:30	
	West of OPCAs	0.010*		10:15	
09/28/06	North of OPCAs	0.016**	0.019*	10:45	Variable
	Pittsfield Generating Co.	0.019*		11:00	
	Southeast of OPCAs	0.026*		10:30	
	Northwest of OPCAs	0.016**		10:45	
	West of OPCAs	0.017*		10:30	
09/29/06	North of OPCAs	0.006**	0.005*	10:45	WNW
	Pittsfield Generating Co.	0.003*		10:00	
	Southeast of OPCAs	0.004*		10:45	
	Northwest of OPCAs	0.006**		10:45	
	West of OPCAs	0.003*		10:15	
Notification Level		0.120			
Action Level		0.150			

#### Notes:

NA - Not Available

Concentrations with no asterisk measured with a pDR-1000.

- \* Measured with a DR-2000 or DR-4000
- \*\* Measured with an EBAM.

Background monitoring station is located east of Building 9B, between Building 9B and New York Avenue.

Predominant wind direction determined using hourly wind direction data from the Pittsfield Municipal Airport Weather Station.

- <sup>1</sup> The particulate monitors obtain real-time data. The sampling data were obtained by BEC on the sampling date.
- <sup>2</sup> Sampling data invalid interference from cooling tower.
- <sup>3</sup> Reading reflects average concentration manually recorded from the monitor at the end of the day.
- <sup>4</sup> Estimated logging period.
- $^{\rm 5}$  Sampling period was shortened due to instrument malfunction.
- <sup>6</sup> Sampling period was shortened due to a power failure.
- <sup>7</sup> The exceedances (bold concentrations) and overall high site values on this day are likely related to regional ambient pollutant and atmospheric conditions as reported by EPA and measured at several other sites in Pittsfield and other parts of New England. The relative difference between the background site concentration and the OPCAs site concentrations indicate that the OPCAs were not the significant contributor to these high values.
- <sup>8</sup> Sampling period was shortened due to mid-morning notification of monitors needed.
- <sup>9</sup> Represents data from a DR-4000 and an EBAM.
- <sup>10</sup> Sampling period was shortened due to relocation of DR and EBAM monitors.

# TABLE 5-5 BUILDING 71 CONSOLIDATION AREA LEACHATE TRANSFER SUMMARY PLANT AREA - HILL 78 & BUILDING 71 CONSOLIDATION AREAS

# CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Month / Year	Total Volume of Leachate Transferred (Gallons)
September 2005	55,000
October 2005	378,000
November 2005	162,500
December 2005	168,000
January 2006	185,000
February 2006	125,000
March 2006	70,000
April 2006	104,000
May 2006	137,000
June 2006	139,000
July 2006	111,000
August 2006	121,000
September 2006	110,000

Leachate is transferred from the Building 71 On-Plant Consolidation Area to Building 64G for treatment.

# ITEM 6 PLANT AREA HILL 78 AREA - REMAINDER (GECD160) SEPTEMBER 2006

#### a. Activities Undertaken/Completed

Conducted drum sampling at Building 78 of oil from Building 78 forklift, as identified in Table 6-1.

### b. <u>Sampling/Test Results Received</u>

See attached tables.

#### c. Work Plans/Reports/Documents Submitted

Submitted Supplemental Data Letter Report on supplemental pre-design soil investigations (September 18, 2006).\*

#### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

Prepare and submit plan to address the blockage within the storm sewer line located beneath the Hill 78 Area.

#### e. General Progress/Unresolved Issues/Potential Schedule Impacts

During cleaning of the 48-inch-diameter storm sewer line beneath Hill 78, a blockage in the pipe was encountered. After additional investigation activities, the blockage was determined to be approximately 42 feet long, located approximately 162 feet from the southern outlet of the pipe, and appeared to consist of construction and demolition debris. As noted above, GE will submit a plan to address this blockage.

### f. Proposed/Approved Work Plan Modifications

None

## TABLE 6-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 200€

## HILL 78 AREA-REMAINDER GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

		Sample	Depth				Date Received
Project Name	Field Sample ID	Date	(feet)	Matrix	Laboratory	Analyses	by GE or BBL
Building 78 Drum Sampling	C1352-1	9/22/06	NA	Oil	SGS	PCB	
Supplemental Pre-Design Investigation	RAA9-DUP-2 (RAA9-J21)	8/17/06	4-6	Soil	SGS	VOC	9/11/06
Supplemental Pre-Design Investigation	RAA9-I14	8/17/06	6-8	Soil	SGS	Cyanide, Sulfide	9/14/06
Supplemental Pre-Design Investigation	RAA9-I14	8/17/06	6-8	Soil	SGS	VOC, SVOC, Inorganics, PCDD/PCDF	9/11/06
Supplemental Pre-Design Investigation	RAA9-I22	8/17/06	0-1	Soil	SGS	VOC	9/11/06
Supplemental Pre-Design Investigation	RAA9-J21	8/17/06	4-6	Soil	SGS	VOC	9/11/06
Supplemental Pre-Design Investigation	RAA9-J22	8/17/06	6-8	Soil	SGS	VOC	9/11/06

#### Note:

1. Field duplicate sample locations are presented in parenthesis.

## TABLE 6-2 APPENDIX IX+3 SOIL DATA RECEIVED DURING SEPTEMBER 2006

#### SUPPLEMENTAL PRE-DESIGN INVESTIGATION HILL 78 AREA REMAINDER

## GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in dry weight parts per million, ppm)

Sample ID:	RAA9-I14	RAA9-I22	RAA9-J21	RAA9-J22
Sample Depth (Feet):	6-8	0-1	4-6	6-8
Parameter Date Collected:	08/17/06	08/17/06	08/17/06	08/17/06
Volatile Organics				
2-Butanone	ND(0.0055)	0.0044 J	ND(0.0046) [ND(0.0046)]	ND(0.0048)
Acetone	0.015	0.035	0.020 [0.012]	0.0092
Methylene Chloride	0.0042 J	ND(0.0044)	ND(0.0046) [0.0039 J]	0.0035 J
Toluene	0.0037 J	ND(0.0044)	ND(0.0046) [0.0035 J]	0.0034 J
Semivolatile Organics				
None Detected		NA	NA	NA
Furans				L
2,3,7,8-TCDF	0.00000025 J	NA	NA	NA
TCDFs (total)	0.00000066 J	NA	NA	NA
1,2,3,7,8-PeCDF	ND(0.00000040)	NA	NA	NA
2,3,4,7,8-PeCDF	ND(0.00000040)	NA	NA NA	NA
PeCDFs (total)	ND(0.00000040)	NA NA	NA NA	NA
1,2,3,4,7,8-HxCDF	ND(0.00000040)	NA NA	NA NA	NA NA
1,2,3,6,7,8-HxCDF	ND(0.00000040)	NA NA	NA NA	NA
1,2,3,7,8,9-HxCDF	ND(0.00000040)	NA NA	NA NA	NA
2,3,4,6,7,8-HxCDF	ND(0.00000040)	NA NA	NA NA	NA
HxCDFs (total)	ND(0.00000040)	NA NA	NA	NA
1,2,3,4,6,7,8-HpCDF	ND(0.00000040)	NA NA	NA NA	NA
1,2,3,4,7,8,9-HpCDF	ND(0.00000040)	NA NA	NA	NA
HpCDFs (total)	ND(0.00000040)	NA	NA NA	NA
OCDF	ND(0.00000079)	NA NA	NA NA	NA NA
Dioxins	112 (0.000000.0)			
2,3,7,8-TCDD	ND(0.00000019)	NA	NA	NA
TCDDs (total)	ND(0.00000019)	NA NA	NA NA	NA NA
1,2,3,7,8-PeCDD	ND(0.00000010)	NA NA	NA NA	NA NA
PeCDDs (total)	ND(0.00000040)	NA NA	NA NA	NA NA
1,2,3,4,7,8-HxCDD	ND(0.00000040)	NA NA	NA NA	NA NA
1,2,3,6,7,8-HxCDD	ND(0.00000040)	NA NA	NA NA	NA NA
1,2,3,7,8,9-HxCDD	ND(0.00000040)	NA NA	NA NA	NA NA
HxCDDs (total)	ND(0.00000040)	NA NA	NA NA	NA NA
1,2,3,4,6,7,8-HpCDD	ND(0.00000040)	NA NA	NA NA	NA NA
HpCDDs (total)	0.0000005 J	NA NA	NA NA	NA NA
OCDD	0.00000005 J	NA NA	NA NA	NA
Total TEQs (WHO TEFs)	0.00000450	NA NA	NA NA	NA NA
Inorganics	0.0000000	14/ (	14/1	14/ (
Antimony	1.15 B	NA	NA	NA
Arsenic	2.08	NA NA	NA NA	NA NA
Barium	24.7 B	NA NA	NA NA	NA NA
Beryllium	0.234 B	NA NA	NA NA	NA NA
Chromium	8.03	NA NA	NA NA	NA NA
Cobalt	7.15	NA NA	NA NA	NA NA
Copper	13.2 B	NA NA	NA NA	NA NA
Lead	5.75	NA NA	NA NA	NA NA
Mercury	0.0240 B	NA NA	NA NA	NA NA
Nickel	0.0240 B 13.2	NA NA	NA NA	NA NA
Vanadium	8.66	NA NA	NA NA	NA NA
	8.66 41.4	NA NA	NA NA	NA NA
Zinc	41.4	NA	NA	NA

## TABLE 6-2 APPENDIX IX+3 SOIL DATA RECEIVED DURING SEPTEMBER 2006

# SUPPLEMENTAL PRE-DESIGN INVESTIGATION HILL 78 AREA REMAINDER GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in dry weight parts per million, ppm)

#### Notes:

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of Appendix IX+3 constituents.
- 2. ND Analyte was not detected. The number in parentheses is the associated detection limit.
- 3. Total 2,3,7,8-TCDD toxicity equivalents (TEQs) were calculated using Toxicity Equivalency Factors (TEFs) derived by the World Health Organization (WHO) and published by Van den Berg et al. in Environmental Health Perspectives 106(2), December 1998.
- 4. With the exception of dioxin/furans, only those constituents detected in one or more samples are summarized.
- 5. Field duplicate sample results are presented in brackets.

#### **Data Qualifiers:**

#### Organics (volatiles, semivolatiles, dioxin/furans)

J - Indicates an estimated value less than the practical quantitation limit (PQL).

#### **Inorganics**

B - Indicates an estimated value between the instrument detection limit (IDL) and PQL.

# ITEM 7 PLANT AREA UNKAMET BROOK AREA (GECD170) SEPTEMBER 2006

#### a. Activities Undertaken/Completed

- Continued activities related to the detailed surveys (including metes and bounds and topographic surveys) of the Unkamet Brook Area (being performed by Hill Engineers, Architects & Planners, Inc.).\*
- Conducted sampling of Unkamet Brook sediment directly south of Dalton Avenue based on discussions/requests from the City of Pittsfield and Mass Highway Dept., as identified in Table 7-1.

#### b. Sampling/Test Results Received

None

#### c. Work Plans/Reports/Documents Submitted

Submitted pre-excavation notice for installation of new sign posts (September 20, 2006).

### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Continue performing detailed surveys of the Unkamet Brook Area.\*
- Submit to EPA surveyed line for top-of-bank of Unkamet Brook south of Merrill Road.\*
- Submit plan for collecting information related to channel flow in Unkamet Brook.\*
- Submit results of detailed topographic survey of Unkamet Brook Area.\*

### e. <u>General Progress/Unresolved Issues/Potential Schedule Impacts</u>

No issues

### f. Proposed/Approved Work Plan Modifications

In a letter dated August 15, 2005, GE proposed to remove Parcel L12-1-2 from the Unkamet Brook Area RAA. That proposal is pending approval from EPA.\*

## TABLE 7-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

## UNKAMET BROOK AREA GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

		Sample	Depth				Date Received
Project Name	Field Sample ID	Date	(feet)	Matrix	Laboratory	Analyses	by GE or BBL
Building 51 Catch Basin Liquid Drum Sampling	BLDG51-BASIN-LIQUID	8/16/06	NA	Liquid	SGS	PCB, VOC, SVOC, Total Metals, Inorganics	9/12/06
Building 51 Catch Basin Soil Drum Sampling	BLDG51-BASIN-SLUDGE	8/16/06	NA	Soil	SGS	PCB, TCLP	9/18/06
Unkamet Brook Sediment Sampling	UB-Sed-CR-1	9/21/06	0-1	Sediment	SGS	PCB	9/28/06
Unkamet Brook Sediment Sampling	UB-Sed-CR-1	9/21/06	1-2	Sediment	SGS	PCB	9/28/06
Unkamet Brook Sediment Sampling	UB-Sed-CR-2	9/21/06	0-1	Sediment	SGS	PCB	9/28/06
Unkamet Brook Sediment Sampling	UB-Sed-CR-2	9/21/06	1-2	Sediment	SGS	PCB	9/28/06
Unkamet Brook Sediment Sampling	UB-Sed-CR-3	9/21/06	0-1	Sediment	SGS	PCB	9/28/06
Unkamet Brook Sediment Sampling	UB-Sed-CR-3	9/21/06	1-2	Sediment	SGS	PCB	9/28/06

## TABLE 7-2 DATA RECEIVED DURING SEPTEMBER 2006

## BUILDING 51 CATCH BASIN LIQUID DRUM SAMPLING UNKAMET BROOK AREA

## GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in parts per million, ppm)

	Sample ID:	BLDG51-Basin-Liquid
Parameter	Date Collected:	08/16/06
Volatile Organics		
Acetone		0.0039 J
Carbon Disulfide		0.00035 J
Methylene Chloride		0.00051 J
Toluene		0.00019 J
PCBs-Unfiltered		
Aroclor-1254		0.034
Aroclor-1260		0.050
Total PCBs		0.084
Semivolatile Organ	ics	
2-Methylnaphthalen	Э	0.0040 J
Benzo(a)anthracene	)	0.0032 J
Benzo(b)fluoranthen	e	0.0035 J
Benzo(k)fluoranthen	е	0.0015 J
bis(2-Ethylhexyl)phtl		0.0095 J
Chrysene		0.0052 J
Fluoranthene		0.0074 J
Fluorene		0.0013 J
Phenanthrene		0.0053 J
Pyrene		0.0094 J
Inorganics-Unfilter	ed	
Arsenic		0.0323
Barium		0.192
Cadmium		0.0119
Chromium		0.121
Lead		0.806
Mercury		0.00392

#### Notes:

- 1. Sample was collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs, volatiles, semivolatiles, and metals.
- 2. Only detected constituents are summarized.

### Data Qualifiers:

#### Organics (volatiles, PCBs, semivolatiles)

J - Indicates an estimated value less than the practical quantitation limit (PQL).

## TABLE 7-3 PCB DATA RECEIVED DURING SEPTEMBER 2006

## BUILDING 51 CATCH BASIN SOIL DRUM SAMPLING UNKAMET BROOK AREA

#### **GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**

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

Sample ID	Date Collected	Aroclor-1016, -1221, -1232, -1242, -1248	Aroclor-1254	Aroclor-1260	Total PCBs
Bldg51-Basin-Sludge	8/16/2006	ND(2.1)	5.7	11	16.7

#### Notes:

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs and TCLP constituents.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.
- 3. Please refer to Table 7-4 for a summary of TCLP constituents.

## TABLE 7-4 TCLP DATA RECEIVED DURING SEPTEMBER 2006

## BUILDING 51 CATCH BASIN SOIL DRUM SAMPLING UNKAMET BROOK AREA

## GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

(Results are presented in parts per million, ppm)

Sample ID:	TCLP Regulatory	Bldg51-Basin-Sludge
Parameter Date Collected:		8/16/2006
Volatile Organics		
1,1-Dichloroethene	0.7	ND(0.010)
1,2-Dichloroethane	0.5	ND(0.010)
2-Butanone	200	ND(0.25)
Benzene	0.5	ND(0.010)
Carbon Tetrachloride	0.5	ND(0.010)
Chlorobenzene	100	ND(0.010)
Chloroform	6	ND(0.010)
Tetrachloroethene	0.7	ND(0.010)
Trichloroethene	0.5	ND(0.010)
Vinyl Chloride	0.2	ND(0.010)
Semivolatile Organics		
1,4-Dichlorobenzene	7.5	ND(0.010)
2,4,5-Trichlorophenol	400	ND(0.010)
2,4,6-Trichlorophenol	2	ND(0.010)
2,4-Dinitrotoluene	0.13	ND(0.010)
Cresol	200	ND(0.010)
Hexachlorobenzene	0.13	ND(0.010)
Hexachlorobutadiene	0.5	ND(0.010)
Hexachloroethane	3	ND(0.010)
Nitrobenzene	2	ND(0.010)
Pentachlorophenol	100	ND(0.050)
Pyridine	5	ND(0.010)
Inorganics		
Arsenic	5	ND(0.200)
Barium	100	0.187 B
Cadmium	1	0.00740 B
Chromium	5	0.00860 B
Lead	5	ND(0.100)
Mercury	0.2	0.000136 B
Selenium	1	ND(0.200)
Silver	5	ND(0.100)

#### Notes:

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs and TCLP constituents.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.
- 3. Please refer to Table 7-3 for a summary of TCLP constituents.

#### Data Qualifiers:

#### Inorganics

B - Indicates an estimated value between the instrument detection limit (IDL) and practical quantitation limit (PQL).

## TABLE 7-5 PCB DATA RECEIVED DURING SEPTEMBER 2006

## UNKAMET BROOK SEDIMENT SAMPLING UNKAMET BROOK AREA

#### **GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**

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

Sample ID	Depth (Feet)	Date Collected	Aroclor-1016, -1221, -1232, -1242, -1248, -1254	Aroclor-1260	Total PCBs
UB-Sed-CR-1	0-1	9/21/2006	ND(0.036)	0.11	0.11
	1-2	9/21/2006	ND(0.038)	0.18	0.18
UB-Sed-CR-2	0-1	9/21/2006	ND(0.034)	0.62	0.62
	1-2	9/21/2006	ND(0.038)	0.15	0.15
UB-Sed-CR-3	0-1	9/21/2006	ND(0.038)	0.23	0.23
	1-2	9/21/2006	ND(0.46)	3.6	3.6

#### Notes:

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.

# ITEM 8 FORMER OXBOW AREAS A & C (GECD410) SEPTEMBER 2006

#### a. Activities Undertaken/Completed

- Continued soil remediation actions.\*
- Conducted Toxicity Characteristic Leaching Procedure (TCLP) sampling of soil within Parcels I8-23-4 and I8-23-5, as identified in Table 8-1.
- Conducted air monitoring for particulates and PCBs in connection with remediation actions, as identified in Table 8-1.\*
- Obtained access to Parcel I8-23-5 (owned by Exxon Mobil Oil Corporation) to conduct remediation activities.\*
- Shipped TSCA material from remediation activities to Chemical Waste Management, Inc. facility in Model City, NY.

#### b. Sampling/Test Results Received

See attached tables.

#### c. Work Plans/Reports/Documents Submitted

None

#### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Continue shipment of TSCA material from remediation activities to the Chemical Waste Management, Inc. facility in Model City, NY.
- Continue soil remediation and restoration actions.\*
- Submit Addendum to Supplemental Information Package showing modified vegetation restoration plans as agreed with property owners.\*

#### e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

#### f. Proposed/Approved Work Plan Modifications

None

## TABLE 8-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

## FORMER OXBOW AREAS A AND C GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

		Sample	Depth				Date Received
Project Name	Field Sample ID	Date	(feet)	Matrix	Laboratory	Analyses	by GE or BBL
TCLP Sampling	TCLP-I8-23-5N	9/20/06	0-1	Soil	SGS	TCLP	
TCLP Soil Sampling	TCLP-I8-23-4	8/29/06	0-1	Soil	SGS	TCLP - VOC, SVOC, Metals,	9/13/06
						Mercury, Pest, Herb	
Ambient Air Particulate Matter Sampling	OX-1	9/1/06	NA	Air	Berkshire Environmental	Particulate Matter	09/05/06
Ambient Air Particulate Matter Sampling	OX-2C	9/1/06	NA	Air	Berkshire Environmental	Particulate Matter	09/05/06
Ambient Air Particulate Matter Sampling	OX-3	9/1/06	NA	Air	Berkshire Environmental	Particulate Matter	09/05/06
Ambient Air Particulate Matter Sampling	Background Location	9/1/06	NA	Air	Berkshire Environmental	Particulate Matter	09/05/06
Ambient Air Particulate Matter Sampling	OX-1	9/5/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	OX-2C	9/5/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	OX-3	9/5/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Background Location	9/5/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	OX-1	9/6/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	OX-1A	9/6/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	OX-2C	9/6/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	OX-3	9/6/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Background Location	9/6/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	OX-1A	9/7/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	OX-2C	9/7/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	OX-3	9/7/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Background Location	9/7/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	OX-1A	9/8/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	OX-2C	9/8/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	OX-3	9/8/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Background Location	9/8/06	NA	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	OX-1A	9/11/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-2C	9/11/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-3	9/11/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Background Location	9/11/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-1A	9/12/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-2C	9/12/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-3	9/12/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Background Location	9/12/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-1A	9/13/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-2C	9/13/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-3	9/13/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-3A8	9/13/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Background Location	9/13/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-1A	9/14/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-2C	9/14/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-3	9/14/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-3A	9/14/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06

## TABLE 8-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

## FORMER OXBOW AREAS A AND C GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

		Sample	Depth				Date Received
Project Name	Field Sample ID	Date	(feet)	Matrix	Laboratory	Analyses	by GE or BBL
Ambient Air Particulate Matter Sampling	Background Location	9/14/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-1A	9/15/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-2C	9/15/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-3	9/15/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-3A	9/15/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Background Location	9/15/06	NA	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	OX-1A	9/18/06	NA	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	OX-2C	9/18/06	NA	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	OX-3	9/18/06	NA	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	OX-3A	9/18/06	NA	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Background Location	9/18/06	NA	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	OX-1A	9/19/06	NA	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	OX-2C	9/19/06	NA	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	OX-3	9/19/06	NA	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Background Location	9/19/06	NA	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	OX-1A	9/20/06	NA	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	OX-2C	9/20/06	NA	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	OX-3	9/20/06	NA	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Background Location	9/20/06	NA	Air	Berkshire Environmental	Particulate Matter	9/25/06
PCB Ambient Air Sampling	Field Blank	8/31 - 9/01/06	NA	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	OX-2C	8/31 - 9/01/06	NA	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	OX-1	8/31 - 9/01/06	NA	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	OX-1 (colocated)	8/31 - 9/01/06	NA	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	OX-3	8/31 - 9/01/06	NA	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	Background - East of Building 9B	8/31 - 9/01/06	NA	Air	Berkshire Environmental	PCB	9/15/06

## TABLE 8-2 TCLP DATA RECEIVED DURING SEPTEMBER 2006

# SOIL SAMPLING FORMER OXBOW AREAS A & C GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in parts per million, ppm)

Parameter         Date Collected:         Limits         8/29/2006           Volatile Organics         1,1-Dichloroethene         0.7         ND(0.010)           1,2-Dichloroethane         0.5         ND(0.010)           2-Butanone         200         ND(0.25)           Benzene         0.5         ND(0.010)           Carbon Tetrachloride         0.5         ND(0.010)           Chloroform         6         ND(0.010)           Chloroform         6         ND(0.010)           Tetrachloroethene         0.7         ND(0.010)           Tichloroethene         0.5         ND(0.010)           Tirchloroethene         0.5         ND(0.010)           Semivolatile Organics         1,4-Dichlorobenzene         7.5         ND(0.010)           Semivolatile Organics         1,4-Frichlorophenol         400         ND(0.010)           2,4,5-Trichlorophenol         400         ND(0.010)         ND(0.010)           2,4-6-Trichlorophenol         2         ND(0.010)         ND(0.010)           2,4-Dinitrotoluene         0.13         ND(0.010)         ND(0.010)           Hexachlorobenzene         0.13         ND(0.010)         ND(0.010)           Hexachlorobutadiene         0.13         ND(0	Sample ID:	TCLP	TCLP-I8-23-4
Volatile Organics	Sample Depth (Feet):	Regulatory	_ ·
1,1-Dichloroethene         0.7         ND(0.010)           1,2-Dichloroethane         0.5         ND(0.010)           2-Butanone         200         ND(0.25)           Benzene         0.5         ND(0.010)           Carbon Tetrachloride         0.5         ND(0.010)           Chloroform         6         ND(0.010)           Chloroform         6         ND(0.010)           Tetrachloroethene         0.7         ND(0.010)           Trichloroethene         0.5         ND(0.010)           Vinyl Chloride         0.2         ND(0.010)           Semivolatile Organics         ND(0.010)           1,4-Dichlorobenzene         7.5         ND(0.010)           2,4,5-Trichlorophenol         2         ND(0.010)           2,4,6-Trichlorophenol         2         ND(0.010)           2,4-Frichlorophenol         2         ND(0.010)           2,4-Frichlorophenol         2         ND(0.010)           2,4-Frichlorophenol         2         ND(0.010)           2,4-Frichlorophenol         2         ND(0.010)           Hexachlorobutadiene         0.13         ND(0.010)           Hexachlorobutadiene         0.5         ND(0.010)           Pentachlorophenol	Parameter Date Collected:	Limits	8/29/2006
1,2-Dichloroethane	Volatile Organics		
2-Butanone         200         ND(0.25)           Benzene         0.5         ND(0.010)           Carbon Tetrachloride         0.5         ND(0.010)           Chlorobenzene         100         ND(0.010)           Chloroform         6         ND(0.010)           Tetrachloroethene         0.7         ND(0.010)           Trichloroethene         0.5         ND(0.010)           Vinyl Chloride         0.2         ND(0.010)           Semivolatile Organics         1,4-Dichlorobenzene         7.5         ND(0.010)           4,4-Dichlorobenzene         7.5         ND(0.010)         ND(0.010)           2,4,5-Trichlorophenol         2         ND(0.010)         ND(0.010)           2,4-Dinitrotoluene         0.13         ND(0.010)         ND(0.010)           4-Evachlorophenol         2         ND(0.010)         ND(0.010)           Hexachlorobutadiene         0.5         ND(0.010)           Hexachlorophenol         3         ND(0.010)           Hexachlorophenol         100         ND(0.010)           Pentachlorophenol         100         ND(0.010)           Pyridine         5         ND(0.010)           Organochlorine Pesticides           Endrin	1,1-Dichloroethene	0.7	ND(0.010)
Benzene         0.5         ND(0.010)           Carbon Tetrachloride         0.5         ND(0.010)           Chlorobenzene         100         ND(0.010)           Chloroform         6         ND(0.010)           Tetrachloroethene         0.7         ND(0.010)           Trichloroethene         0.5         ND(0.010)           Vinyl Chloride         0.2         ND(0.010)           Semivolatile Organics         ND(0.010)           1,4-Dichlorobenzene         7.5         ND(0.010)           2,4,5-Trichlorophenol         2         ND(0.010)           2,4,6-Trichlorophenol         2         ND(0.010)           2,4-S-Trichlorophenol         2         ND(0.010)           2,4-Dinitrotoluene         0.13         ND(0.010)           Cresol         200         ND(0.010)           Hexachlorobenzene         0.13         ND(0.010)           Hexachlorobutadiene         0.5         ND(0.010)           Hexachloroethane         3         ND(0.010)           Nitrobenzene         2         ND(0.010)           Pertachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.0010)           Organochlorine Pesticides	1,2-Dichloroethane	0.5	
Benzene         0.5         ND(0.010)           Carbon Tetrachloride         0.5         ND(0.010)           Chlorobenzene         100         ND(0.010)           Chloroform         6         ND(0.010)           Tetrachloroethene         0.7         ND(0.010)           Trichloroethene         0.5         ND(0.010)           Vinyl Chloride         0.2         ND(0.010)           Semivolatile Organics         ND(0.010)           1,4-Dichlorobenzene         7.5         ND(0.010)           2,4,5-Trichlorophenol         2         ND(0.010)           2,4,6-Trichlorophenol         2         ND(0.010)           2,4-S-Trichlorophenol         2         ND(0.010)           2,4-Dinitrotoluene         0.13         ND(0.010)           Cresol         200         ND(0.010)           Hexachlorobenzene         0.13         ND(0.010)           Hexachlorobutadiene         0.5         ND(0.010)           Hexachloroethane         3         ND(0.010)           Nitrobenzene         2         ND(0.010)           Pertachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.0010)           Organochlorine Pesticides	2-Butanone	200	ND(0.25)
Chlorobenzene         100         ND(0.010)           Chloroform         6         ND(0.010)           Tetrachloroethene         0.7         ND(0.010)           Trichloroethene         0.5         ND(0.010)           Viryl Chloride         0.2         ND(0.010)           Semivolatile Organics	Benzene	0.5	
Chloroform         6         ND(0.010)           Tetrachloroethene         0.7         ND(0.010)           Trichloroethene         0.5         ND(0.010)           Vinyl Chloride         0.2         ND(0.010)           Semivolatile Organics         1,4-Dichlorobenzene         7.5         ND(0.010)           2,4,5-Trichlorophenol         400         ND(0.010)         2,4,6-Trichlorophenol         2         ND(0.010)           2,4-Dinitrotoluene         0.13         ND(0.010)         ND(0.010)           Cresol         200         ND(0.010)         ND(0.010)           Hexachlorobenzene         0.13         ND(0.010)         ND(0.010)           Hexachloroethane         3         ND(0.010)         ND(0.010)           Nitrobenzene         2         ND(0.010)         ND(0.050)           Pentachlorophenol         100         ND(0.050)         ND(0.050)           Pyridine         5         ND(0.010)         ND(0.050)           Pyridine         5         ND(0.010)         ND(0.050)           Pyridine         5         ND(0.0020)         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.0020)         ND(0.0040)           Heptachlor Epoxide         0.008	Carbon Tetrachloride	0.5	ND(0.010)
Tetrachloroethene         0.7         ND(0.010)           Trichloroethene         0.5         ND(0.010)           Vinyl Chloride         0.2         ND(0.010)           Semivolatile Organics         1,4-Dichlorobenzene         7.5         ND(0.010)           2,4,5-Trichlorophenol         400         ND(0.010)         2,4,6-Trichlorophenol         2         ND(0.010)           2,4,5-Trichlorophenol         2         ND(0.010)         1,7,7,7,7,7,7,7,7,7,7,7,7,7,7,7,7,7,7,7	Chlorobenzene	100	ND(0.010)
Trichloroethene         0.5         ND(0.010)           Vinyl Chloride         0.2         ND(0.010)           Semivolatile Organics         1,4-Dichlorobenzene         7.5         ND(0.010)           2,4,5-Trichlorophenol         400         ND(0.010)           2,4-G-Trichlorophenol         2         ND(0.010)           2,4-Dinitrotoluene         0.13         ND(0.010)           Cresol         200         ND(0.010)           Hexachlorobenzene         0.13         ND(0.010)           Hexachlorobutadiene         0.5         ND(0.010)           Hexachloroethane         3         ND(0.010)           Nitrobenzene         2         ND(0.010)           Pentachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.010)           Organochlorine Pesticides         Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.040)           Heptachlor         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         1         0         ND(0.0040)           Technical Chlordane         0.5         ND(0.0030)           Toxaphene	Chloroform	6	ND(0.010)
Vinyl Chloride         0.2         ND(0.010)           Semivolatile Organics         1,4-Dichlorobenzene         7.5         ND(0.010)           2,4,5-Trichlorophenol         400         ND(0.010)           2,4-Dinitrotoluene         0.13         ND(0.010)           2,4-Dinitrotoluene         0.13         ND(0.010)           Cresol         200         ND(0.010)           Hexachlorobenzene         0.13         ND(0.010)           Hexachlorobutadiene         0.5         ND(0.010)           Hexachlorobethane         3         ND(0.010)           Nitrobenzene         2         ND(0.010)           Pentachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.010)           Organochlorine Pesticides         Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.040)           Heptachlor         0.008         ND(0.040)           Heptachlor Epoxide         0.008         ND(0.040)           Methoxychlor         10         ND(0.0040)           Technical Chlordane         0.5         ND(0.0030)           Toxaphene         0.5         ND(0.0030)           Herbicides         2,4-D	Tetrachloroethene	0.7	ND(0.010)
Semivolatile Organics	Trichloroethene	0.5	ND(0.010)
Semivolatile Organics	Vinyl Chloride	0.2	ND(0.010)
1,4-Dichlorobenzene         7.5         ND(0.010)           2,4,5-Trichlorophenol         400         ND(0.010)           2,4,6-Trichlorophenol         2         ND(0.010)           2,4-Dinitrotoluene         0.13         ND(0.010)           Cresol         200         ND(0.010)           Hexachlorobenzene         0.13         ND(0.010)           Hexachlorobutadiene         0.5         ND(0.010)           Hexachloroethane         3         ND(0.010)           Hexachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.010)           Pentachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.010)           Organochlorine Pesticides         Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.10)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.0030)           Ferbicides         2,4,5-TP         1         ND			· · · · · · · · · · · · · · · · · · ·
2,4,5-Trichlorophenol         400         ND(0.010)           2,4,6-Trichlorophenol         2         ND(0.010)           2,4-Dinitrotoluene         0.13         ND(0.010)           Cresol         200         ND(0.010)           Hexachlorobenzene         0.13         ND(0.010)           Hexachlorobutadiene         0.5         ND(0.010)           Hexachlorothane         3         ND(0.010)           Nitrobenzene         2         ND(0.010)           Pentachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.010)           Organochlorine Pesticides         ND(0.010)           Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.040)           Heptachlor Epoxide         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.0040)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.0030)           Herbicides         2,4,5-TP         1         ND(0.0050)           Herbicides         5         ND(0.0050)           Barium		7.5	ND(0.010)
2,4,6-Trichlorophenol         2         ND(0.010)           2,4-Dinitrotoluene         0.13         ND(0.010)           Cresol         200         ND(0.010)           Hexachlorobenzene         0.13         ND(0.010)           Hexachlorobethane         0.5         ND(0.010)           Hexachloroethane         3         ND(0.010)           Nitrobenzene         2         ND(0.010)           Pentachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.010)           Organochlorine Pesticides         Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.040)           Heptachlor         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.0040)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.0030)           Herbicides         2,4,5-TP         1         ND(0.040)           Inorganics         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B			
2,4-Dinitrotoluene         0.13         ND(0.010)           Cresol         200         ND(0.010)           Hexachlorobenzene         0.13         ND(0.010)           Hexachlorobutadiene         0.5         ND(0.010)           Hexachloroethane         3         ND(0.010)           Nitrobenzene         2         ND(0.010)           Pentachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.010)           Organochlorine Pesticides         ND(0.0020)           Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.0040)           Heptachlor         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.10)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.0030)           Herbicides         2,4,5-TP         1         ND(0.050)           Herbicides         2,4-D         10         ND(0.40)           Inorganics         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1 <td></td> <td></td> <td>` '</td>			` '
Cresol         200         ND(0.010)           Hexachlorobenzene         0.13         ND(0.010)           Hexachlorobutadiene         0.5         ND(0.010)           Hexachloroethane         3         ND(0.010)           Nitrobenzene         2         ND(0.010)           Pentachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.010)           Organochlorine Pesticides         ND(0.0010)           Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.0040)           Heptachlor         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.0040)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.0030)           Herbicides         2,4,5-TP         1         ND(0.0050)           Herbicides         2,4-D         10         ND(0.40)           Inorganics         5         ND(0.200)           Barium         10         0.661 B           Cadmium         1         0.0121 B           Chromium         5         <			, ,
Hexachlorobenzene         0.13         ND(0.010)           Hexachlorobutadiene         0.5         ND(0.010)           Hexachloroethane         3         ND(0.010)           Nitrobenzene         2         ND(0.010)           Pentachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.010)           Organochlorine Pesticides           Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.040)           Heptachlor         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.10)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.0030)           Herbicides         2,4,5-TP         1         ND(0.050)           Herbicides         2,4-D         10         ND(0.40)           Inorganics         5         ND(0.200)           Arsenic         5         ND(0.200)           Barium         10         0.0661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B	·		· · · · · · · · · · · · · · · · · · ·
Hexachlorobutadiene         0.5         ND(0.010)           Hexachloroethane         3         ND(0.010)           Nitrobenzene         2         ND(0.010)           Pentachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.010)           Organochlorine Pesticides           Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.040)           Heptachlor         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.10)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.0030)           Herbicides         2,4,5-TP         1         ND(0.050)           Herbicides         2,4-D         10         ND(0.40)           Inorganics         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)			
Hexachloroethane         3         ND(0.010)           Nitrobenzene         2         ND(0.010)           Pentachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.010)           Organochlorine Pesticides           Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.040)           Heptachlor         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.10)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.050)           Herbicides         2,4,5-TP         1         ND(0.050)           Herbicides         2,4-D         10         ND(0.40)           Inorganics           Arsenic         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(			· · · · · · · · · · · · · · · · · · ·
Nitrobenzene         2         ND(0.010)           Pentachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.010)           Organochlorine Pesticides           Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.040)           Heptachlor         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.10)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.050)           Herbicides         2,4,5-TP         1         ND(0.10)           2,4-D         10         ND(0.40)           Inorganics         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)			` '
Pentachlorophenol         100         ND(0.050)           Pyridine         5         ND(0.010)           Organochlorine Pesticides           Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.040)           Heptachlor         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.10)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.050)           Herbicides         2,4,5-TP         1         ND(0.40)           2,4-D         10         ND(0.40)           Inorganics         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)			· ,
Pyridine         5         ND(0.010)           Organochlorine Pesticides           Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.040)           Heptachlor         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.10)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.050)           Herbicides         2,4,5-TP         1         ND(0.40)           2,4-D         10         ND(0.40)           Inorganics         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)			
Organochlorine Pesticides           Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.040)           Heptachlor         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.10)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.050)           Herbicides         2,4,5-TP         1         ND(0.10)           2,4-D         10         ND(0.40)           Inorganics         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)	·		` '
Endrin         0.02         ND(0.0020)           Gamma-BHC (Lindane)         0.4         ND(0.040)           Heptachlor         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.10)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.050)           Herbicides         2,4,5-TP         1         ND(0.10)           2,4-D         10         ND(0.40)           Inorganics         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)			112 (0.010)
Gamma-BHC (Lindane)         0.4         ND(0.040)           Heptachlor         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.10)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.050)           Herbicides         2,4,5-TP         1         ND(0.10)           2,4-D         10         ND(0.40)           Inorganics         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)		0.02	ND(0.0020)
Heptachlor         0.008         ND(0.0040)           Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.10)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.050)           Herbicides         2,4,5-TP         1         ND(0.10)           2,4-D         10         ND(0.40)           Inorganics           Arsenic         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)	Gamma-BHC (Lindane)	0.4	
Heptachlor Epoxide         0.008         ND(0.0040)           Methoxychlor         10         ND(0.10)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.050)           Herbicides           2,4,5-TP         1         ND(0.10)           2,4-D         10         ND(0.40)           Inorganics           Arsenic         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)		0.008	
Methoxychlor         10         ND(0.10)           Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.050)           Herbicides           2,4,5-TP         1         ND(0.10)           2,4-D         10         ND(0.40)           Inorganics           Arsenic         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)		0.008	` '
Technical Chlordane         0.03         ND(0.0030)           Toxaphene         0.5         ND(0.050)           Herbicides           2,4,5-TP         1         ND(0.10)           2,4-D         10         ND(0.40)           Inorganics           Arsenic         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)		10	ND(0.10)
Toxaphene         0.5         ND(0.050)           Herbicides         2,4,5-TP         1         ND(0.10)           2,4-D         10         ND(0.40)           Inorganics           Arsenic         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)		0.03	
Herbicides           2,4,5-TP         1         ND(0.10)           2,4-D         10         ND(0.40)           Inorganics           Arsenic         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)		0.5	
2,4,5-TP     1     ND(0.10)       2,4-D     10     ND(0.40)       Inorganics       Arsenic     5     ND(0.200)       Barium     100     0.661 B       Cadmium     1     0.0121 B       Chromium     5     0.0171 B       Lead     5     0.147       Mercury     0.2     ND(0.000570)       Selenium     1     ND(0.200)	•		,
2,4-D     10     ND(0.40)       Inorganics       Arsenic     5     ND(0.200)       Barium     100     0.661 B       Cadmium     1     0.0121 B       Chromium     5     0.0171 B       Lead     5     0.147       Mercury     0.2     ND(0.000570)       Selenium     1     ND(0.200)	2.4.5-TP	1	ND(0.10)
Inorganics         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)			
Arsenic         5         ND(0.200)           Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)	,		(*****)
Barium         100         0.661 B           Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)		5	ND(0.200)
Cadmium         1         0.0121 B           Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)			
Chromium         5         0.0171 B           Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)			
Lead         5         0.147           Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)			
Mercury         0.2         ND(0.000570)           Selenium         1         ND(0.200)			
Selenium         1         ND(0.200)			
	•		
Silver   5   ND(0.100)	Silver	5	ND(0.100)

#### Notes:

- Sample was collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, lnc for analysis of TCLP constituents.
- Inc. for analysis of TCLP constituents.

  2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.

### Data Qualifiers:

#### Inorganics

B - Indicates an estimated value between the instrument detection limit (IDL) and practical quantitation limit (PQL).

## TABLE 8-3 AMBIENT AIR PCB DATA RECEIVED DURING SEPTEMBER 2006

## PCB AMBIENT AIR CONCENTRATIONS FORMER OXBOW AREAS A & C GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Sampling Event Period	Date Analytical Results Received by BEC, Inc.	Field Blank (µg/PUF)	ΟΧ-2C (μg/m³)	ΟΧ-1 (μg/m³)	ΟΧ-1 (colocated) (μg/m³)	ΟΧ-3 (μg/m³)	Background - East of Building 9B (µg/m³)
08/31 - 09/01/06	09/15/06	ND (<0.10)	0.0019 <sup>1,2</sup>	0.0025 <sup>1,2</sup>	0.0021 <sup>1,2</sup>	0.0020 <sup>1,2</sup>	0.0012 <sup>1,2</sup>
Notification Level		0.05	0.05	0.05	0.05	0.05	0.05

#### Notes:

ND - Non-Detect

**NOTE**: Preliminary data review was conducted based on the following data quality indicators associated with the tabulated dataset above: sampling collection time, sampling calibration check, temperature receipt, associated blanks, laboratory control sample recoveries, and surrogate recoveries. The total PCB reported for these samples includes the sum of PCB quantified as Aroclor 1248, 1254, and/or 1260, as footnoted.

<sup>&</sup>lt;sup>1</sup> Laboratory qualification (PE): Aroclor 1248 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1248 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.

<sup>&</sup>lt;sup>2</sup> Laboratory qualification (AF): Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

## PARTICULATE AMBIENT AIR CONCENTRATIONS FORMER OXBOW AREAS A & C GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Sampling Date <sup>2</sup>	Sampler Location	Average Site Concentration (mg/m³)	Background Site Concentration (mg/m³)	Average Period (Hours:Min)	Predominant Wind Direction
09/01/06	OX-1	0.007*	0.008*	11:00	Variable
	OX-2C	0.004*		11:00	
	OX-3	0.002*		10:45	
09/05/06	OX-1	0.004*	0.017*	11:15	WSW
	OX-2C	0.018*		11:15	
	OX-3	0.017*		11:15	
09/06/06 <sup>3</sup>	OX-1	0.004*	0.016*	7:45 <sup>4</sup>	Variable
	OX-1A	0.003*		2:45 <sup>4</sup>	
	OX-2C	0.017*		10:30	
	OX-3	0.014*		10:30	
09/07/06	OX-1A	0.005*	0.018*	11:15	Calm
	OX-2C	0.016*		11:15	
	OX-3	0.014*		11:15	
09/08/06	OX-1A	0.010*	0.033*	11:00	WSW
	OX-2C	0.036*		11:15	
	OX-3	0.017*		11:00	
09/11/06	OX-1A	0.001*	0.004*	4:30 <sup>5</sup>	Calm
	OX-2C	NA <sup>6</sup>		NA <sup>6</sup>	
	OX-3	0.005*		4:15 <sup>5</sup>	
09/12/06	OX-1A	0.001*	0.005*	11:15	Calm
	OX-2C	0.003*		9:00 <sup>7</sup>	
	OX-3	0.004*		11:15	
09/13/06	OX-1A	0.006*	0.011*	10:30	SSW
	OX-2C	0.010*		5:45 <sup>7</sup>	
	OX-3	0.022*		10:30	
	OX-3A <sup>8</sup>	0.006*		6:15 <sup>5</sup>	
09/14/06	OX-1A	0.005*	0.011*	11:15	Calm
	OX-2C	0.011*		10:15	
	OX-3	0.013*		11:30	
	OX-3A	0.007*		11:15	
09/15/06	OX-1A	0.018*	0.012*	10:45	Calm
	OX-2C	0.042*		10:45	
	OX-3	0.011*		10:30	
	OX-3A	0.009*		10:30	
09/18/06	OX-1A	0.015*	0.020*	10:30	SSW
	OX-2C	0.017*		10:30	
	OX-3	0.017*		10:30	
	OX-3A	0.018*		10:30	
09/19/06 <sup>3</sup>	OX-1A	0.062*	0.081*	11:30	SSW
	OX-2C	0.105*		11:30	
	OX-3	0.083*		11:45	
09/20/06	OX-1A	0.005*	0.010*	10:30	WNW
	OX-2C	0.033*		9:00 <sup>7</sup>	
	OX-3	0.008*		10:15	
Notification Level		0.120			
		1		1	1

## PARTICULATE AMBIENT AIR CONCENTRATIONS FORMER OXBOW AREAS A & C GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

#### Notes:

\* Measured with DR-2000 or DR-4000.

Background monitoring station is located east of Building 9B, between 9B and New York Avenue.

Predominant wind direction determined using hourly wind direction data from the Pittsfield Municipal Airport Weather Station. Site activity completed on September 20, 2006.

- <sup>1</sup> Monitoring was performed only on days when site activities occurred.
- <sup>2</sup> The particulate monitors obtain real-time data. The sampling data were obtained by BEC on the sampling date.
- <sup>3</sup> Monitoring locations changed due to site progression.
- <sup>4</sup> Sampling period was shortened due to mid-day relocation of monitor.
- <sup>5</sup> Sampling period was shortened due to mid-day notification of sampling needs.
- <sup>6</sup> Data not available due to instrument malfunction.
- <sup>7</sup> Sampling period was shortened due to instrument malfunction.
- <sup>8</sup> Monitoring location added due to additional location of site work.

## ITEM 9 LYMAN STREET AREA (GECD430) SEPTEMBER 2006

\* All activities described below for this item were conducted pursuant to the Consent Decree.

#### a. Activities Undertaken/Completed

- Completed soil remediation actions at properties west of Lyman Street.
- Conducted air monitoring for particulates and PCBs in connection with remediation activities, as identified in Table 9-1.
- Shipped TSCA material from remediation activities to Chemical Waste Management, Inc. facility in Model City, NY.

## b. Sampling/Test Results Received

See attached tables.

#### c. Work Plans/Reports/Documents Submitted

None

#### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Continue shipment of TSCA material from remediation activities to the Chemical Waste Management, Inc. facility in Model City, NY.
- Submit Addendum to Supplemental Information Package showing modified vegetation restoration plans reflecting EPA's comments in a conditional approval letter of July 7, 2006.
- Complete restoration activities at properties west of Lyman Street.

#### e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

#### f. Proposed/Approved Work Plan Modifications

None

## TABLE 9-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

## LYMAN STREET AREA GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

		Sample				Date Received
Project Name	Field Sample ID	Date	Matrix	Laboratory	Analyses	by GE or BBL
Ambient Air Particulate Matter Sampling	LY-1	9/1/06	Air	Berkshire Environmental	Particulate Matter	9/5/06
Ambient Air Particulate Matter Sampling	LY-2B	9/1/06	Air	Berkshire Environmental	Particulate Matter	9/5/06
Ambient Air Particulate Matter Sampling	LY-4	9/1/06	Air	Berkshire Environmental	Particulate Matter	9/5/06
Ambient Air Particulate Matter Sampling	Background Location	9/1/06	Air	Berkshire Environmental	Particulate Matter	9/5/06
Ambient Air Particulate Matter Sampling	LY-1	9/5/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	LY-2B	9/5/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	LY-4	9/5/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Background Location	9/5/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	LY-1	9/6/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	LY-2B	9/6/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	LY-4	9/6/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Background Location	9/6/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	LY-1	9/7/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	LY-2B	9/7/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	LY-4	9/7/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Background Location	9/7/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	LY-1	9/8/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	LY-2B	9/8/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	LY-4	9/8/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	Background Location	9/8/06	Air	Berkshire Environmental	Particulate Matter	9/11/06
Ambient Air Particulate Matter Sampling	LY-1	9/11/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	LY-2B	9/11/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	LY-4	9/11/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Background Location	9/11/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	LY-1	9/12/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	LY-2B	9/12/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	LY-4	9/12/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Background Location	9/12/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	LY-1	9/13/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	LY-2B	9/13/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	LY-4	9/13/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Background Location	9/13/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	LY-1	9/14/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	LY-2B	9/14/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	LY-4	9/14/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Background Location	9/14/06	Air	Berkshire Environmental	Particulate Matter	9/18/06

## TABLE 9-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

## LYMAN STREET AREA GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

		Sample				Date Received
Project Name	Field Sample ID	Date	Matrix	Laboratory	Analyses	by GE or BBL
Ambient Air Particulate Matter Sampling	LY-1	9/15/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	LY-2B	9/15/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	LY-4	9/15/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	Background Location	9/15/06	Air	Berkshire Environmental	Particulate Matter	9/18/06
Ambient Air Particulate Matter Sampling	LY-1	9/18/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	LY-2B	9/18/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	LY-4	9/18/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Background Location	9/18/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	LY-1	9/19/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	LY-2B	9/19/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	LY-4	9/19/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Background Location	9/19/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	LY-1	9/20/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	LY-2B	9/20/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	LY-4	9/20/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
Ambient Air Particulate Matter Sampling	Background Location	9/20/06	Air	Berkshire Environmental	Particulate Matter	9/25/06
PCB Ambient Air Sampling	Field Blank	8/21 - 8/22/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	LY-1	8/21 - 8/22/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	LY-3	8/21 - 8/22/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	LY-3 (colocated)	8/21 - 8/22/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	LY-4	8/21 - 8/22/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	Background - East of Building 9B	8/21 - 8/22/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	Field Blank	8/22 - 8/23/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	LY-1	8/22 - 8/23/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	LY-3	8/22 - 8/23/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	LY-3 (colocated)	8/22 - 8/23/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	LY-4	8/22 - 8/23/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	Background - East of Building 9B	8/22 - 8/23/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	Field Blank	8/29 - 8/30/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	LY-1	8/29 - 8/30/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	LY-1 (colocated)	8/29 - 8/30/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	LY-2B	8/29 - 8/30/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	LY-4	8/29 - 8/30/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	Background - East of Building 9B	8/29 - 8/30/06	Air	Berkshire Environmental	PCB	9/15/06

## TABLE 9-2 AMBIENT AIR PCB DATA RECEIVED DURING SEPTEMBER 2006

## BACKGROUND PCB AMBIENT AIR CONCENTRATIONS LYMAN STREET AREA GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Sampling Event Period	Date Analytical Results Received by BEC, Inc.	Field Blank (μg/PUF)	LΥ-1 (μg/m³)	LY-3 (μg/m³)	LY-3 (colocated) (μg/m³)	LY-4 (µg/m³)	Background - East of Building 9B (µg/m³)
08/21 - 08/22/06	21 - 08/22/06 09/13/06		0.0018 J <sup>1,2</sup>	0.0043 J <sup>1,2</sup>	0.0039 J <sup>1,2</sup>	0.0029 J <sup>1,2</sup>	0.0013 J <sup>1,2</sup>
08/22 - 08/23/06 09/11/06		ND (<0.10) J	0.0026 J <sup>1,2</sup>	0.0047 J <sup>1,2,3</sup>	0.0041 J <sup>1,2</sup>	0.0034 J <sup>1,2,3</sup>	0.0038 J <sup>1,2,3</sup>
Notification Level		0.05	0.05	0.05	0.05	0.05	0.05

### Notes:

ND - Non-Detect

J - Detected sample results were qualified as estimated.

### **Qualification Notes:**

- Samples collected from 08/21/06 to 08/22/06 were qualified as estimated due to the laboratory not recording the temperature of the PUF upon receipt.
   The temperature of the temperature blank was recorded as less than 4 °C.
- 2. Samples collected from 08/22/06 to 08/23/06 were qualified as estimated due to the laboratory not recording the temperature of the PUF upon receipt. The temperature of the temperature blank was recorded as 4.4 °C.

**NOTE**: Preliminary data review was conducted based on the following data quality indicators associated with the tabulated dataset above: sampling collectic time, sampling calibration check, temperature receipt, associated blanks, laboratory control sample recoveries, and surrogate recoveries.

The total PCB reported for these samples includes the sum of PCB quantified as Aroclor 1248, 1254, and/or 1260, as footnoted.

<sup>&</sup>lt;sup>1</sup> Laboratory qualification (PE): Aroclor 1248 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1248 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.

<sup>&</sup>lt;sup>2</sup> Laboratory qualification (AF): Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

<sup>&</sup>lt;sup>3</sup> Laboratory qualification (PG): Aroclor 1260 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1260 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.

## TABLE 9-3 AMBIENT AIR PCB DATA RECEIVED DURING SEPTEMBER 2006

## PCB AMBIENT AIR CONCENTRATIONS LYMAN STREET AREA GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Sampling Event Period	Date Analytical Results Received by BEC, Inc.	Field Blank (μg/PUF)	LΥ-1 (μg/m³)	LY-1 (colocated) (μg/m³)	LY-2B (μg/m³)	LY-4 (μg/m³)	Background - East of Building 9B (µg/m³)
08/29 - 08/30/06	09/14/06	ND (<0.10)	0.0089 <sup>1,2,3</sup>	0.0091 <sup>1,2,3</sup>	0.0107 <sup>1,2,3</sup>	0.0151 <sup>1,2,3</sup>	0.0031 <sup>1,2</sup>
Notification Level		0.05	0.05	0.05	0.05	0.05	0.05

### Notes:

ND - Non-Detect

**NOTE**: Preliminary data review was conducted based on the following data quality indicators associated with the tabulated data set above: sampling collection time, sampling calibration check, temperature receipt, associated blanks, laboratory control sample recoveries, and surrogate recoveries.

The total PCB reported for these samples includes the sum of PCB quantified as Aroclor 1248, 1254, and/or 1260, as footnoted.

<sup>&</sup>lt;sup>1</sup> Laboratory qualification (PE): Aroclor 1248 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1248 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.

<sup>&</sup>lt;sup>2</sup> Laboratory qualification (AF): Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

<sup>&</sup>lt;sup>3</sup> Laboratory qualification (PG): Aroclor 1260 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1260 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.

## TABLE 9-4 AMBIENT AIR PARTICULATE MATTER DATA RECEIVED DURING SEPTEMBER 2006

## PARTICULATE AMBIENT AIR CONCENTRATIONS LYMAN STREET AREA GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Sampling Date <sup>2</sup>	Sampler Location	Average Site Concentration (mg/m³)	Background Site Concentration (mg/m³)	Average Period (Hours:Min)	Predominant Wind Direction
09/01/06	LY-1	0.010*	0.008*	11:30	Variable
	LY-2B	0.003*		11:15	
	LY-4	0.007*		11:15	
09/05/06	LY-1	0.027*	0.017*	10:45	WSW
	LY-2B	0.014*		10:45	
	LY-4	0.017*		10:45	
09/06/06	LY-1	0.021*	0.016*	11:00	Variable
	LY-2B	0.015*		11:00	
	LY-4	0.006*		10:45	
09/07/06	LY-1	0.020*	0.018*	11:45	Calm
	LY-2B	0.015*		11:45	
	LY-4	0.006*		11:15	
09/08/06	LY-1	0.030*	0.033*	11:45	WSW
	LY-2B	0.028*		11:45	
	LY-4	0.017*		11:45	
09/11/06	LY-1	0.009*	0.004*	11:00	Calm
	LY-2B	0.005*		11:00	
	LY-4	0.001*		11:00	
09/12/06	LY-1	0.006*	0.005*	11:15	Calm
	LY-2B	0.005*		11:15	
	LY-4	0.002*		11:00	
09/13/06	LY-1	0.012*	0.011*	10:45	SSW
	LY-2B	0.025*		10:45	
	LY-4	0.005*		10:45	
09/14/06	LY-1	0.010*	0.011*	10:45	Calm
	LY-2B	0.004*		10:45	
	LY-4	0.004*		10:45	
09/15/06	LY-1	0.011*	0.012*	11:15	Calm
	LY-2B	0.010*		11:15	
	LY-4	0.013*		11:00	
09/18/06	LY-1	0.011*	0.020*	11:00	SSW
	LY-2B	0.009*		11:00	
	LY-4	0.009*		11:00	
09/19/06	LY-1	0.035*	0.081*	11:15	SSW
	LY-2B	0.044*		11:15	
	LY-4	0.041*		11:15	
09/20/06	LY-1	0.012*	0.010*	10:45	WNW
	LY-2B	0.007*		10:45	
	LY-4	0.003*		10:30	
Notification Level		0.120			

### Notes:

Background monitoring station is located east of Building 9B, between 9B and New York Avenue.

Predominant wind direction determined using hourly wind direction data from the Pittsfield Municipal Airport Weather Station.

Site activity completed on September 20, 2006.

<sup>\*</sup> Measured with DR-2000 or DR-4000.

<sup>&</sup>lt;sup>1</sup> Monitoring was performed only on days when site activities occurred.

 $<sup>^{2}</sup>$  The particulate monitors obtain real-time data. The sampling data were obtained by BEC on the sampling date.

### ITEM 10 NEWELL STREET AREA I (GECD440) SEPTEMBER 2006

\* All activities described below for this item were conducted pursuant to the Consent Decree.

### a. <u>Activities Undertaken/Completed</u>

Sent letters to owners of properties with Conditional Solutions, as well as to holders of encumbrances on those properties, regarding the Conditional Solutions.

### b. Sampling/Test Results Received

None

### c. Work Plans/Reports/Documents Submitted

Submitted revised drafts of EREs and associated survey plans for GE-owned properties to EPA and MDEP (September 4 and 13, 2006).

### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Conduct semi-annual inspection of engineered barriers and restored and re-vegetated areas.
- Continue preparation of Final Completion Report.

### e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

### f. Proposed/Approved Work Plan Modifications

### ITEM 11 NEWELL STREET AREA II (GECD450) SEPTEMBER 2006

\* All activities described below for this item were conducted pursuant to or in connection with the Consent Decree.

### a. <u>Activities Undertaken/Completed</u>

- Continued shipment of soil excavated from Parcel J9-23-8 to the selected disposal facility located in Port Arthur, Texas.
- Conducted wipe sampling of additional gondola railcars to support the shipment of soil excavated from Parcel J9-23-8 to the selected disposal facility located in Port Arthur, Texas, as identified in Table 11-1.
- Conducted drum sampling of DNAPL oil from the Newell Street Area II trailer, as identified in Table 11-1.
- Conducted air monitoring for PCBs, as identified in Table 11-1.

### b. Sampling/Test Results Received

See attached tables.

### c. Work Plans/Reports/Documents Submitted

None

### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

Continue shipments of soil excavated from Parcel J9-23-8 to the selected disposal facility located in Port Arthur, Texas.

### e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

### f. Proposed/Approved Work Plan Modifications

## TABLE 11-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

## NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

		Sample				Date Received by
Project Name	Field Sample ID	Date	Matrix	Laboratory	Analyses	GE or BBL
Building 78 Drum Sampling	B0523-WATER-1	8/24/06	Water	SGS	PCB, VOC, SVOC, Total Metals	9/18/06
Building 78 Drum Sampling	B0546-WATER-1	8/24/06	Water	SGS	PCB, VOC, SVOC, Total Metals	9/18/06
Building 78 Drum Sampling	B1459-WATER-1	8/24/06	Water	SGS	PCB, VOC, SVOC, Total Metals	9/18/06
Building 78 Drum Sampling	B1460-WATER-1	8/24/06	Water	SGS	PCB, VOC, SVOC, Total Metals	9/18/06
DNAPL Sampling from Newell Street Trailer	NS-Tank1-Oil-1	9/14/06	Oil	SGS	PCB, VOC, SVOC, Total RCRA	
					Metals, Flashpoint	
Gondola Wipe Sampling	CEFX-33412-W1	9/13/06	Wipe	SGS	PCB	9/18/06
Gondola Wipe Sampling	CEFX-33412-W2	9/13/06	Wipe	SGS	PCB	9/18/06
Gondola Wipe Sampling	CEFX-33412-W3	9/13/06	Wipe	SGS	PCB	9/18/06
Gondola Wipe Sampling	CEFX-33412-W4	9/13/06	Wipe	SGS	PCB	9/18/06
Gondola Wipe Sampling	CEFX-33412-W5	9/13/06	Wipe	SGS	PCB	9/18/06
Gondola Wipe Sampling	NRLX-5282-96-W1	9/13/06	Wipe	SGS	PCB	9/18/06
Gondola Wipe Sampling	NRLX-5282-96-W2	9/13/06	Wipe	SGS	PCB	9/18/06
Gondola Wipe Sampling	NRLX-5282-96-W3	9/13/06	Wipe	SGS	PCB	9/18/06
Gondola Wipe Sampling	NRLX-5282-96-W4	9/13/06	Wipe	SGS	PCB	9/18/06
Gondola Wipe Sampling	NRLX-5282-96-W5	9/13/06	Wipe	SGS	PCB	9/18/06
PCB Ambient Air Sampling	Field Blank	9/05 - 9/06/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	Northwest of NS Area II	9/05 - 9/06/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	Southeast of NS Area II	9/05 - 9/06/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	Northeast of NS Area II	9/05 - 9/06/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	Northeast of NS Area II (colocated)	9/05 - 9/06/06	Air	Berkshire Environmental	PCB	9/15/06
PCB Ambient Air Sampling	Background - East of Building 9B	9/05 - 9/06/06	Air	Berkshire Environmental	PCB	9/15/06

## TABLE 11-2 PCB DATA RECEIVED DURING SEPTEMBER 2006

## GONDOLA WIPE SAMPLING NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in $\mu g/100 cm^2$ )

Sample ID	Date Collected	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Total PCBs
CEFX-33412-W1	9/13/2006	ND(1.0)	ND(1.0)						
CEFX-33412-W1	9/13/2006	ND(1.0)	ND(1.0)						
		\ /	\ /	\ /	\ /	\ /	\ /	\ /	\ /
CEFX-33412-W3	9/13/2006	ND(1.0)	ND(1.0)						
CEFX-33412-W4	9/13/2006	ND(1.0)	ND(1.0)						
CEFX-33412-W5	9/13/2006	ND(1.0)	ND(1.0)						
NRLX-5282-96-W1	9/13/2006	ND(1.0)	ND(1.0)						
NRLX-5282-96-W2	9/13/2006	ND(1.0)	ND(1.0)						
NRLX-5282-96-W3	9/13/2006	ND(1.0)	ND(1.0)						
NRLX-5282-96-W4	9/13/2006	ND(1.0)	ND(1.0)						
NRLX-5282-96-W5	9/13/2006	ND(1.0)	ND(1.0)						

#### Notes

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.

## TABLE 11-3 DATA RECEIVED DURING SEPTEMBER 2006

### BUILDING 78 DRUM SAMPLING NEWELL STREET AREA II

### **GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**

(Results are presented in parts per million, ppm)

		3-WATER-1	B0546-WATER		B1460-WATER-1	
Parameter Date Co	ollected: 0	8/24/06	08/24/06	08/24/06	08/24/06	
Volatile Organics						
Acetone	NE	(0.0050)	ND(0.20)	ND(0.0050)	0.0062	
Benzene	NE	(0.0010)	0.018 J	ND(0.0010)	ND(0.0010)	
Chlorobenzene	NE	(0.0010)	0.023 J	ND(0.0010)	ND(0.0010)	
Chloroform	0.	00031 J	0.013 J	ND(0.0010)	ND(0.0010)	
Ethylbenzene	NE	(0.0010)	0.026 J	ND(0.0010)	ND(0.0010)	
Tetrachloroethene	NE	(0.0010)	0.041	ND(0.0010)	ND(0.0010)	
Toluene	NE	(0.0010)	0.014 J	ND(0.0010)	ND(0.0010)	
Trichloroethene	NE	(0.0010)	1.9	0.00025 J	ND(0.0010)	
Vinyl Chloride	NE	(0.0010)	0.020 J	ND(0.0010)	ND(0.0010)	
Xylenes (total)	NE	(0.0010)	0.15	ND(0.0010)	ND(0.0010)	
PCBs-Unfiltered						
Aroclor-1254		0.11	130	0.40	0.036	
Total PCBs		0.11	130	0.40	0.036	
Semivolatile Organics						
1,2,4-Trichlorobenzene	NI	O(0.010)	4.5	0.0049 J	ND(0.010)	
bis(2-Ethylhexyl)phthalate	NI	D(0.010)	ND(1.0)	0.015	0.021	
Inorganics-Unfiltered						
Arsenic	(	0.0292	0.0487	0.290	0.202	
Barium		0.645	0.272	1.27	1.35	
Cadmium	0.	00110 B	0.000560 B	0.00930 B	0.00914 B	
Chromium	(	0.0505	0.109	0.469	0.335	
Lead		0.154	0.275	0.931	1.65	
Mercury	0.0	000853 B	0.000553 B	0.00260	0.00122	

### **Notes**

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs, volatiles, semivolatiles, and metals.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.
- 3. Only those constituents detected in one or more samples are summarized.

### Data Qualifiers:

### Organics (volatiles, PCBs, semivolatiles)

J - Indicates an estimated value less than the practical quantitation limit (PQL).

### Inorganics

B - Indicates an estimated value between the instrument detection limit (IDL) and PQL.

## TABLE 11-4 AMBIENT AIR PCB DATA RECEIVED DURING SEPTEMBER 2006

## PCB AMBIENT AIR CONCENTRATIONS NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Sampling Event Period	Date Analytical Results Received by BEC, Inc.	Field Blank (μg/PUF)	Northwest of NS Area II (μg/m³)	Southeast of NS Area II (µg/m³)	Northeast of NS Area II (μg/m³)	Northeast of NS Area II (colocated) (µg/m³)	Background - East of Building 9B (μg/m³)
09/05 - 09/06/06 09/11/06		ND (<0.10)	0.0036 <sup>1,2</sup>	0.0024 <sup>1,2</sup>	0.0032 <sup>1,2</sup>	0.0030 <sup>1,2</sup>	0.0028 <sup>1,2</sup>
Notification Level		0.05	0.05	0.05	0.05	0.05	0.05

### Notes:

ND - Non-Detect

**NOTE**: Preliminary data review was conducted based on the following data quality indicators associated with the tabulated dataset above: sampling collection time, sampling calibration check, temperature receipt, associated blanks, laboratory control sample recoveries, and surrogate recoveries.

The total PCB reported for these samples includes the sum of PCB quantified as Aroclor 1248, 1254, and/or 1260, as footnoted.

<sup>&</sup>lt;sup>1</sup> Laboratory qualification (PE): Aroclor 1248 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1248 is not present in the sample, but is reported to more accurately quantify PCB present in sample that has undergone environmental alteration.

<sup>&</sup>lt;sup>2</sup> Laboratory qualification (AF): Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

### ITEM 12 FORMER OXBOW AREAS J & K (GECD420) SEPTEMBER 2006

\* All activities described below for this item were conducted pursuant to the Consent Decree.

a. Activities Undertaken/Completed
------------------------------------

None

### b. Sampling/Test Results Received

None

### c. Work Plans/Reports/Documents Submitted

None

### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Submit Addendum to Supplemental Information Package showing modified vegetation restoration plans as agreed with property owners.
- Plant trees and shrubs in remediated areas in accordance with modified restoration plans.

### e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

### f. Proposed/Approved Work Plan Modifications

# ITEM 13 HOUSATONIC RIVER AREA UPPER ½ MILE REACH (GECD800) SEPTEMBER 2006

\* All activities described below for this item were conducted pursuant to the Consent Decree.

### a. Activities Undertaken/Completed

Completed monitoring the three seepage meters in the river in support of upcoming evaluation and report on total organic carbon (TOC) content in the isolation layer.

### b. Sampling/Test Results Received

None

### c. Work Plans/Reports/Documents Submitted

None

### d. <u>Upcoming Scheduled and Anticipated Activities (next six weeks)</u>

- Prepare report presenting results of seepage meter study and evaluation of TOC content in isolation layer (to be submitted in fall 2006).
- Prepare and submit report on inspection of restored bank vegetation.
- Prepare and submit report on inspection of aquatic habitat enhancement structures and armor stone.
- Revise and resubmit report on July 2006 bank erosion inspection.
- Perform repairs related to erosion inspection.

### e. General Progress/Unresolved Issues/Potential Schedule Impacts

As noted above, GE plans to submit a report evaluating TOC content in the isolation layer in fall 2006. The Final Completion Report for Upper ½ Mile Reach Removal Action will be submitted following EPA review and approval of that report.

### f. Proposed/Approved Work Plan Modifications

Received EPA verbal approval to stop seepage monitoring, proposed in a telephone conversation between GE and EPA (September 8, 2006).

# ITEM 14 HOUSATONIC RIVER AREA 1½ MILE REACH (GECD820) SEPTEMBER 2006

(Note: This item is limited to activities conducted by GE and does not include EPA's work on the 1½ Mile Reach Removal Action)

### a. Activities Undertaken/Completed

On September 26, 2006, BBL (on GE's behalf) performed a round of water column monitoring at nine locations along the Housatonic River between Coltsville, MA and Great Barrington, MA. Two of these locations are situated in the 1½ Mile Reach: Lyman Street Bridge (Location 4) and Pomeroy Avenue Bridge (Location 6A). A composite grab sample was collected at each location and submitted to Northeast Analytical for analysis of PCBs (total), TSS, POC, and chlorophyll-a, as identified in Table 14-1. (The other seven locations are discussed under Item 15 below.)

### b. Sampling/Test Results Received

See attached tables.

### c. Work Plans/Reports/Documents Submitted

None

### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

Continue Housatonic River monthly water column monitoring.

### e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

### f. Proposed/Approved Work Plan Modifications

## TABLE 14-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

## HOUSATONIC RIVER - 1-1/2 MILE REACH GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

						Date Received
Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	by GE or BBL
Monthly Water Column Sampling	Location-4	8/23/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	9/8/06
Monthly Water Column Sampling	Location-4	9/26/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	
Monthly Water Column Sampling	Location-6A	8/23/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	9/8/06
Monthly Water Column Sampling	Location-6A	9/26/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	

## TABLE 14-2 SAMPLE DATA RECEIVED DURING SEPTEMBER 2006

## MONTHLY WATER COLUMN SAMPLING HOUSATONIC RIVER - 1 1/2 MILE REACH GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in parts per million, ppm)

Sample ID	Location	Date Collected	Aroclor-1016, -1221, -1232, -1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs	POC	TSS	Chlorophyll (a)
LOCATION-4	Lyman Street Bridge	08/23/06	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	0.562	2.70	0.0012
LOCATION-6A	Pomeroy Ave. Bridge	08/23/06	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	0.612	4.20	0.0018

### Notes:

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to Northeast Analytical, Inc. for analysis of unfiltered PCBs, total suspended solids (TSS), particulate organic carbon (POC), and chlorophyll (a).
- 2. Sampling methods involved the collection of composite grab samples at each location, representative of three stations (25, 50, and 75 percent of the total river width at each location) at 50 percent of the total river depth at each station.
- 3. ND Analyte was not detected. The number in parenthesis is the associated detection limit.

# ITEM 15 HOUSATONIC RIVER AREA REST OF THE RIVER (GECD850) SEPTEMBER 2006

### a. Activities Undertaken/Completed

On September 26, 2006, BBL (on GE's behalf) performed a round of water column monitoring at nine locations along the Housatonic River between Coltsville and Great Barrington, MA. Two locations are situated in the 1½ Mile Reach of the Housatonic River and were discussed in Item 14. Of the remaining seven locations, two are located upstream of the 1½ Mile Reach: Hubbard Avenue Bridge (Location 1) and Newell Street Bridge (Location 2). The five remaining locations are situated in the Rest of the River: Holmes Road Bridge (Location 7); New Lenox Road Bridge (Location 9); Woods Pond Headwaters (Location 10); Schweitzer Bridge (Location 12); and Division Street Bridge (Location 13). Sampling activities were performed at these locations on September 26, 2006 from downstream to upstream. Composite grab samples were collected at each location sampled and submitted to Northeast Analytical for analysis of PCBs (total), TSS, POC, and chlorophyll-a, as identified in Table 15-1.

### b. <u>Sampling/Test Results</u>

See attached tables.

### c. Work Plans/Reports/Documents Submitted

None

### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Continue Housatonic River monthly water column monitoring.
- Prepare design drawings for installation of replacement gate at Rising Pond Dam.\*
- Submit plan to EPA and Lead Administrative Trustee (LAT) for placement of riprap in an area adjacent to Woods Pond Dam.\*
- Perform Housatonic River young-of-year fish sampling.

### e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

### f. Proposed/Approved Work Plan Modifications

## TABLE 15-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

## HOUSATONIC RIVER - REST OF RIVER GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	Date Received by GE or BBL
-	•					by OL OI BBL
Monthly Water Column Sampling	HR-D1 (Location-12)	9/26/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	
Monthly Water Column Sampling	HR-D1 (Location-12)	8/23/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	9/8/06
Monthly Water Column Sampling	Location-1	9/26/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	
Monthly Water Column Sampling	Location-1	8/23/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	9/8/06
Monthly Water Column Sampling	Location-10	9/26/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	
Monthly Water Column Sampling	Location-10	8/23/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	9/8/06
Monthly Water Column Sampling	Location-12	9/26/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	
Monthly Water Column Sampling	Location-12	8/23/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	9/8/06
Monthly Water Column Sampling	Location-13	9/26/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	
Monthly Water Column Sampling	Location-13	8/23/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	9/8/06
Monthly Water Column Sampling	Location-2	9/26/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	
Monthly Water Column Sampling	Location-2	8/23/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	9/8/06
Monthly Water Column Sampling	Location-7	8/23/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	9/8/06
Monthly Water Column Sampling	Location-7	9/26/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	
Monthly Water Column Sampling	Location-9	8/23/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	9/8/06
Monthly Water Column Sampling	Location-9	9/26/06	Water	NEA	PCB, TSS, POC, Chlorophyll-A	

### Note:

1. Field duplicate sample locations are presented in parenthesis.

### TABLE 15-2 SAMPLE DATA RECEIVED DURING SEPTEMBER 2006

### MONTHLY WATER COLUMN SAMPLING HOUSATONIC RIVER - REST OF RIVER GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

(Results are presented in parts per million, ppm)

		Date	Aroclor-1016, -1221,							
Sample ID	Location	Collected	-1232, -1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs	POC	TSS	Chlorophyll (a)
LOCATION-1	Hubbard Avenue Bridge	08/23/06	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	0.826	4.88	0.0014
LOCATION-2	Newell Street Bridge	08/23/06	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	0.563	4.20	0.0010
LOCATION-7	Holmes Road Bridge	08/23/06	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	0.434	3.10	0.0019
LOCATION-9	New Lenox Road Bridge	08/23/06	ND(0.0000220)	0.0000290 PE	0.0000370 AF	0.0000610 AG	0.000127	0.614	4.90	0.0026
LOCATION-10	Headwaters of Woods Pond	08/23/06	ND(0.0000220)	0.0000220 PE	0.0000270 AF	0.0000340 AG	0.0000830	0.622	2.50	0.0027
LOCATION-12	Schweitzer Bridge	08/23/06	ND(0.0000220)	0.0000230 PE	0.0000400 AF	0.0000730 AG	0.000136	0.689	4.80	0.0044
		08/23/06	[ND(0.0000220)]	[0.0000310 PE]	[0.0000420 AF]	[0.0000690 AG]	[0.000142]	[0.772]	[5.47]	[0.0042]
LOCATION-13	Division Street Bridge	08/23/06	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	0.433	3.20	0.0042

### Notes:

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to Northeast Analytical, Inc. for analysis of unfiltered PCBs, total suspended solids (TSS), particulate organic carbon (POC), and chlorophyll (a).
- 2. Sampling methods involved the collection of composite grab samples at each location, representative of three stations (25, 50, and 75 percent of the total river width at each location) at 50 percent of the total river depth at each station.
- 3. ND Analyte was not detected. The number in parenthesis is the associated detection limit.
- 4. Field duplicate sample results are presented in brackets.

### Data Qualifiers:

- AF Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
- AG Aroclor 1260 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
- PE Aroclor 1248 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1248 is not present in the sample, but is reported to more accurately quantify PCBs present in a sample that has undergone environmental alteration.

# ITEMS 16 & 17 HOUSATONIC RIVER FLOODPLAIN RESIDENTIAL AND NON-RESIDENTIAL PROPERTIES ADJACENT TO 1½-MILE REACH (GECD710 AND GECD720) SEPTEMBER 2006

\* All activities described below for this item were conducted pursuant to the Consent Decree.

### a. Activities Undertaken/Completed

- Completed final restoration activities at certain Phase 3 floodplain properties.
- Continued restoration activities at Phase 4 floodplain properties.
- Sought access permission from Massachusetts Division of Fisheries and Wildlife (MDFW) to cross MDFW property to plant trees at Phase 4 floodplain properties.
- Conducted the initial post-removal inspection of backfilled restored areas within the Phase 4 floodplain properties.
- Conducted sampling of Phase 4 floodplain properties road material for characterization, as identified in Table 16&17-1.

### b. Sampling/Test Results Received

None

### c. Work Plans/Reports/Documents Submitted

None

### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Continue efforts to obtain access permission from MDFW to cross MDFW property to plant trees at Phase 4 floodplain properties.
- Complete restoration activities at Phase 4 floodplain properties, assuming access permission to cross MDFW property is received.
- Conduct inspections of backfilled/restored areas at Phase 3 floodplain properties.
- Develop Supplemental RD/RA Work Plan for certain Phase 2 floodplain properties.
- Submit inspection report for the Phase 4 floodplain properties.

# ITEMS 16 & 17 (cont'd) HOUSATONIC RIVER FLOODPLAIN RESIDENTIAL AND NON-RESIDENTIAL PROPERTIES ADJACENT TO 1½-MILE REACH (GECD710 AND GECD720) SEPTEMBER 2006

### e. General Progress/Unresolved Issues/Potential Schedule Impacts

EPA has advised GE that instead of submitting separate Final Completion Reports for the Phase 1 and 2 floodplain properties, the Phase 3 floodplain properties, and the Phase 4 floodplain properties, GE should submit Final Completion Reports for the 1½ Mile Floodplain Residential Properties and the 1½ Mile Floodplain Non-Residential Properties, including all phases together.

### f. Proposed/Approved Work Plan Modifications

## TABLE 16&17-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

## FLOODPLAIN RESIDENTIAL AND NON-RESIDENTIAL PROPERTIES ADJACENT TO 1-1/2 MILE REACH GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

		Sample				Date Received by
Project Name	Field Sample ID	Date	Matrix	Laboratory	Analyses	GE or BBL
Floodplain Phase 4 Road Material Characterization	PHASE4-ROADMATERIAL-1	9/12/06	Soil	SGS	PCB, VOC, SVOC, Metals	

# ITEM 18 HOUSATONIC RIVER FLOODPLAIN CURRENT RESIDENTIAL PROPERTIES DOWNSTREAM OF CONFLUENCE (ACTUAL/POTENTIAL LAWNS) (GECD730) SEPTEMBER 2006

### a. Activities Undertaken/Completed

None

### b. Sampling/Test Results Received

None

### c. Work Plans/Reports/Documents Submitted

None

### d. <u>Upcoming Scheduled and Anticipated Activities (next six weeks)</u>

None

### e. General Progress/Unresolved Issues/Potential Schedule Impacts

Awaiting EPA approval of GE's Pre-Design Investigation Work Plan (submitted on February 26, 2002). (Based on discussions with EPA, this pre-design sampling will be deferred for some period of time.)\*

### f. Proposed/Approved Work Plan Modifications

## ITEM 19 ALLENDALE SCHOOL PROPERTY (GECD500) SEPTEMBER 2006

### a. Activities Undertaken/Completed

None

### b. Sampling/Test Results Received

None

### c. Work Plans/Reports/Documents Submitted

None

### d. <u>Upcoming Scheduled and Anticipated Activities (next six weeks)</u>

Receive results from outdoor air monitoring conducted by EPA, as well as results from indoor sampling conducted by the Massachusetts Department of Public Health at Allendale School.

### e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

### f. Proposed/Approved Work Plan Modifications

### ITEM 20 OTHER AREAS SILVER LAKE AREA (GECD600) SEPTEMBER 2006

\* All activities described below for this item were conducted pursuant to the Consent Decree.

### a. Activities Undertaken/Completed

- Awarded contract for implementation of Pilot Study for sediments.
- Collected weekly water column samples from three locations within Silver Lake (September 8, 13, 20, and 27, 2006).
- Collected three additional soil samples from within Recreational Area 4 two samples for further PCB delineation in area of bank soil removal related to Pilot Study implementation (September 15, 2006), and one sample for TCLP disposal characterization (September 29, 2006).

### b. Sampling/Test Results Received

See attached tables, as well as attached particle size test result sheets from Severn Trent Laboratories.

### c. Work Plans/Reports/Documents Submitted

Submitted Fourth Pre-Design Investigation Report for Soils at properties adjacent to Silver Lake (September 8, 2006).

### d. Upcoming Scheduled Activities (next six weeks)

- Initiate implementation of Pilot Study for sediments.
- Perform bank soil removal in conjunction with Pilot Study and prepare report thereon.

### e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

### f. Proposed/Approved Work Plan Modifications

## TABLE 20-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

## SILVER LAKE AREA GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

		Sample	Depth				Date Received
Project Name	Field Sample ID	Date	(feet)	Matrix	Laboratory	Analyses	by GE or BBL
Additional PDI Soil Sampling	I9-9-19-DUP-1 (I9-9-19-SB-2-SS)	8/29/06	0-1	Soil	SGS	Lead	9/1/06
Additional PDI Soil Sampling	19-9-19-SB-2-SS	8/29/06	0-1	Soil	SGS	Lead	9/1/06
Monthly Water Column Sampling	Location-4A	8/23/06	NA	Water	NEA	PCB, TSS	9/8/06
Silver Lake Pilot Study Bank Soil Sampling	RA4-PILOT	8/25/06	0-3	Soil	SGS	TCLP	9/12/06
Silver Lake Pilot Study Bank Soil Sampling	RA4-PILOT-2	9/29/06	0-3	Soil	SGS	TCLP	
Silver Lake Pilot Study Bank Soil Sampling	SL-BS-0.50-1	9/15/06	0-1	Soil	SGS	PCB	9/20/06
Silver Lake Pilot Study Bank Soil Sampling	SL-BS-0.50-1	9/15/06	1-3	Soil	SGS	PCB	9/20/06
Silver Lake Pilot Study Bank Soil Sampling	SL-BS-0.83-1	9/15/06	0-1	Soil	SGS	PCB	9/20/06
Silver Lake Pilot Study Bank Soil Sampling	SL-BS-0.83-1	9/15/06	1-3	Soil	SGS	PCB	9/20/06
Silver Lake Pilot Study Isolation Layer Material Sampling	BGRAV-1	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	BGRAV-2	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	BGRAV-3	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Clark-Pond-Sand-1	8/25/06	NA	Sand	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Clark-Pond-Sand-2	8/25/06	NA	Sand	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Clark-Pond-Sand-3	8/25/06	NA	Sand	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Clark-Top-Soil-1	8/25/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Clark-Top-Soil-2	8/25/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Clark-Top-Soil-3	8/25/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Clark-Wash-Sand-1	8/25/06	NA	Sand	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Clark-Wash-Sand-2	8/25/06	NA	Sand	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Clark-Wash-Sand-3	8/25/06	NA	Sand	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	FSAND-1	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	FSAND-2	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	FSAND-3	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	LANEPOND-1	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	LANEPOND-2	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	LANEPOND-3	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	LANETS-1	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	LANETS-2	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	LANETS-3	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	POND-1	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	POND-2	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	POND-3	8/22/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	SL-BANKSAND-1	8/7/06	NA	Soil	NEA	Grain size	9/6/06

 $\label{local-control} $$V\GE_Pittsfield\_General\Reports and Presentations\Monthly Reports\2006\9-06 CD Monthly\Tracking Logs\Tracking.xlsTABLE 20-1$ 

## TABLE 20-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

## SILVER LAKE AREA GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Depth (feet)	Matrix	Laboratory	Analyses	Date Received by GE or BBL
Silver Lake Pilot Study Isolation Layer Material Sampling	SL-BANKSAND-2	8/7/06	NA	Soil	NEA	Grain size	9/6/06
Silver Lake Pilot Study Isolation Layer Material Sampling	SL-BANKSAND-3	8/7/06	NA	Soil	NEA	Grain size	9/6/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Troy-Loam-Sand-1	8/25/06	NA	Sand	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Troy-Loam-Sand-2	8/25/06	NA	Sand	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Troy-Loam-Sand-3	8/25/06	NA	Sand	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Troy-Nassau-Sand-1	8/25/06	NA	Sand	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Troy-Nassau-Sand-2	8/25/06	NA	Sand	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Troy-Nassau-Sand-3	8/25/06	NA	Sand	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Troy-Top-Soil-1	8/25/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Troy-Top-Soil-2	8/25/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Pilot Study Isolation Layer Material Sampling	Troy-Top-Soil-3	8/25/06	NA	Soil	NEA	Grain size	9/26/06
Silver Lake Weekly Water Quality Monitoring	SL-Water-Mon-1	9/20/06	NA	Water	NEA	PCB, TSS	9/28/06
Silver Lake Weekly Water Quality Monitoring	SL-Water-Mon-1	9/27/06	NA	Water	NEA	PCB, TSS	
Silver Lake Weekly Water Quality Monitoring	SL-Water-Mon-1	9/13/06	NA	Water	NEA	PCB, TSS	9/20/06
Silver Lake Weekly Water Quality Monitoring	SL-Water-Mon-1	9/8/06	NA	Water	NEA	PCB, TSS	9/19/06
Silver Lake Weekly Water Quality Monitoring	SL-Water-Mon-2	9/8/06	NA	Water	NEA	PCB, TSS	9/19/06
Silver Lake Weekly Water Quality Monitoring	SL-Water-Mon-2	9/13/06	NA	Water	NEA	PCB, TSS	9/20/06
Silver Lake Weekly Water Quality Monitoring	SL-Water-Mon-2	9/27/06	NA	Water	NEA	PCB, TSS	
Silver Lake Weekly Water Quality Monitoring	SL-Water-Mon-2	9/20/06	NA	Water	NEA	PCB, TSS	9/28/06
Silver Lake Weekly Water Quality Monitoring	SL-Water-Mon-3	9/20/06	NA	Water	NEA	PCB, TSS	9/28/06
Silver Lake Weekly Water Quality Monitoring	SL-Water-Mon-3	9/13/06	NA	Water	NEA	PCB, TSS	9/20/06
Silver Lake Weekly Water Quality Monitoring	SL-Water-Mon-3	9/27/06	NA	Water	NEA	PCB, TSS	
Silver Lake Weekly Water Quality Monitoring	SL-Water-Mon-3	9/8/06	NA	Water	NEA	PCB, TSS	9/19/06
Soil Drum Sampling	BLDG78-F1751-0823	8/23/06	NA	Soil	SGS	PCB, TCLP	9/18/06

### Note:

1. Field duplicate sample locations are presented in parenthesis.

## TABLE 20-2 DATA RECEIVED DURING SEPTEMBER 2006

## ADDITIONAL PRE-DESIGN INVESTIGATION SOIL SAMPLING SILVER LAKE AREA

## GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in dry weight parts per million, ppm)

Parameter	Sample ID: Sample Depth (Feet): Date Collected:	0-1
Inorganics		
Lead		137 [168]

### Notes:

- Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs.
- 2. Field duplicate sample results are presented in brackets.

## TABLE 20-3 PCB DATA RECEIVED DURING SEPTEMBER 2006

## PILOT STUDY BANK SOIL SAMPLING SILVER LAKE AREA

### **GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**

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

Sample ID	Depth (Feet)	Date Collected	Aroclor-1016, -1221, -1232, -1242, -1248	Aroclor-1254	Aroclor-1260	Total PCBs
SL-BS-0.50-1	0-1	9/15/06	ND(0.36)	3.6	ND(0.36)	3.6
	1-3	9/15/06	ND(0.033)	0.069	ND(0.033)	0.069
SL-BS-0.83-1	0-1	9/15/06	ND(0.035)	ND(0.035)	ND(0.035)	ND(0.035)
	1-3	9/15/06	ND(0.032)	0.076	ND(0.032)	0.076

### Notes:

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.

## TABLE 20-4 TCLP DATA RECEIVED DURING SEPTEMBER 2006

## PILOT STUDY BANK SOIL SAMPLING SILVER LAKE AREA

## GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in parts per million, ppm)

Sample ID:	TCLP	RA4-Pilot
Sample Depth (Feet):	Regulatory	0-3
Parameter Date Collected:	Limits	8/25/2006
Volatile Organics		
1,1-Dichloroethene	0.7	ND(0.010)
1,2-Dichloroethane	0.5	ND(0.010)
2-Butanone	200	ND(0.25)
Benzene	0.5	ND(0.010)
Carbon Tetrachloride	0.5	ND(0.010)
Chlorobenzene	100	ND(0.010)
Chloroform	6	ND(0.010)
Tetrachloroethene	0.7	ND(0.010)
Trichloroethene	0.5	ND(0.010)
Vinyl Chloride	0.2	ND(0.010)
Semivolatile Organics		
1,4-Dichlorobenzene	7.5	ND(0.010)
2,4,5-Trichlorophenol	400	ND(0.010)
2,4,6-Trichlorophenol	2	ND(0.010)
2,4-Dinitrotoluene	0.13	ND(0.010)
Cresol	200	ND(0.010)
Hexachlorobenzene	0.13	ND(0.010)
Hexachlorobutadiene	0.5	ND(0.010)
Hexachloroethane	3	ND(0.010)
Nitrobenzene	2	ND(0.010)
Pentachlorophenol	100	ND(0.050)
Pyridine	5	ND(0.010)
Organochlorine Pesticides		
Endrin	0.02	ND(0.0020)
Gamma-BHC (Lindane)	0.4	ND(0.040)
Heptachlor	0.008	ND(0.0040)
Heptachlor Epoxide	0.008	ND(0.0040)
Methoxychlor	10	ND(0.10)
Technical Chlordane	0.03	ND(0.0030)
Toxaphene	0.5	ND(0.050)
Herbicides		
2,4,5-TP	1	ND(0.10)
2,4-D	10	ND(0.40)
Inorganics		
Arsenic	5	ND(0.200)
Barium	100	0.248 B
Cadmium	1	0.00520 B
Chromium	5	0.00770 B
Lead	5	0.0625 B
Mercury	0.2	ND(0.000570)
Selenium	1	ND(0.200)
Silver	5	ND(0.100)

### Notes:

- Sample was collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of TCLP constituents.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.

### Data Qualifiers:

### **Inorganics**

B - Indicates an estimated value between the instrument detection limit (IDL) and practical quantitation limit (PQL).

## TABLE 20-5 PCB DATA RECEIVED DURING SEPTEMBER 2006

## SOIL DRUM SAMPLING SILVER LAKE AREA

### GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

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

Sample ID	Date Collected	Aroclor-1016, -1221, -1232, -1242, -1248	Aroclor-1254	Aroclor-1260	Total PCBs
BLDG78-F1751-0823	8/23/06	ND(0.48)	2.7	ND(0.48)	2.7

### Notes:

- 1. Sample was collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs and TCLP constituents.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.
- 3. Please refer to Table 20-6 for a summary of TCLP constituents.

## TABLE 20-6 TCLP DATA RECEIVED DURING SEPTEMBER 2006

## SOIL DRUM SAMPLING SILVER LAKE AREA

### ${\bf GENERAL\ ELECTRIC\ COMPANY\ -\ PITTSFIELD,\ MASSACHUSETTS}$

(Results are presented in parts per million, ppm)

Parameter	Sample ID: Date Collected:	TCLP Regulatory Limits	BLDG78-F1751-0823 8/23/2006
Volatile Organic		Lillito	GIZGIZGG
1,1-Dichloroether		0.7	ND(0.010)
1,2-Dichloroethar	ne	0.5	ND(0.010)
2-Butanone		200	ND(0.25)
Benzene		0.5	ND(0.010)
Carbon Tetrachlo	ride	0.5	ND(0.010)
Chlorobenzene		100	ND(0.010)
Chloroform		6	ND(0.010)
Tetrachloroethen	е	0.7	ND(0.010)
Trichloroethene		0.5	ND(0.010)
Vinyl Chloride		0.2	ND(0.010)
Semivolatile Org	janics		
1,4-Dichlorobenze	ene	7.5	ND(0.010)
2,4,5-Trichlorophe	enol	400	ND(0.010)
2,4,6-Trichlorophe	enol	2	ND(0.010)
2,4-Dinitrotoluene	)	0.13	ND(0.010)
Cresol		200	ND(0.010)
Hexachlorobenze	ene	0.13	ND(0.010)
Hexachlorobutadi	iene	0.5	ND(0.010)
Hexachloroethan	е	3	ND(0.010)
Nitrobenzene		2	ND(0.010)
Pentachloropheno	ol	100	ND(0.050)
Pyridine		5	ND(0.010)
Inorganics			
Arsenic		5	ND(0.100)
Barium		100	0.391 B
Cadmium		1	0.0503 B
Chromium		5	0.00710 B
Lead		5	2.82
Mercury		0.2	ND(0.000570)
Selenium		1	ND(0.200)
Silver		5	ND(0.100)

### Notes:

- Sample was collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs and TCLP constituents.
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.
- 3. Please refer to Table 20-5 for a summary of PCBs.

### Data Qualifiers:

### **Inorganics**

B - Indicates an estimated value between the instrument detection limit (IDL) and practical quantitation limit (PQL).

## TABLE 20-7 SAMPLE DATA RECEIVED DURING SEPTEMBER 2006

## WEEKLY WATER QUALITY MONITORING SILVER LAKE AREA

### **GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**

(Results are presented in parts per million, ppm)

	Date									
Sample ID	Collected	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Total PCBs	TSS
SL-WATER-MON-1	9/8/06	ND(0.000022)	0.00023 PB	ND(0.000022)	ND(0.000022)	0.00011 PE	0.000047 AF	0.000030 AG	0.000417	12.9
SL-WATER-MON-1	9/13/06	ND(0.000022)	0.00018 PB	ND(0.000022)	ND(0.000022)	0.000093 PE	0.000042 AF	0.000030 AG	0.000345	11.0
SL-WATER-MON-1	9/20/06	ND(0.000022)	0.00023 PB	ND(0.000022)	ND(0.000022)	0.00012 PE	0.000049 AF	0.000028 AG	0.000427	7.40
SL-WATER-MON-2	9/8/06	ND(0.000022)	0.00026 PB	ND(0.000022)	ND(0.000022)	0.00012 PE	0.000055 AF	0.000031 AG	0.000466	4.64
SL-WATER-MON-2	9/13/06	ND(0.000022)	0.00020 PB	ND(0.000022)	ND(0.000022)	0.00010 PE	0.000051 AF	0.000029 AG	0.00038	4.15
SL-WATER-MON-2	9/20/06	ND(0.000022)	0.00024 PB	ND(0.000022)	ND(0.000022)	0.00011 PE	0.000051 AF	0.000030 AG	0.000431	5.81
SL-WATER-MON-3	9/8/06	ND(0.000022)	0.00035 PB	ND(0.000022)	ND(0.000022)	0.00014 PE	0.000056 AF	0.000042 AG	0.000588	3.39
SL-WATER-MON-3	9/13/06	ND(0.000022)	0.00025 PB	ND(0.000022)	ND(0.000022)	0.000096 PE	0.000041 AF	0.000033 AG	0.00042	ND(2.00)
SL-WATER-MON-3	9/20/06	ND(0.000022)	0.00026 PB	ND(0.000022)	ND(0.000022)	0.00011 PE	0.000052 AF	0.000034 AG	0.000456	2.79

### Notes:

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to Northeast Analytical, Inc. for analysis of PCBs and total suspended solids (TSS).
- 2. ND Analyte was not detected. The number in parenthesis is the associated detection limit.

### Data Qualifiers:

- AF Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
- AG Aroclor 1260 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
- PB Aroclor 1221 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1221 is not present in the sample, but is reported to more accurately quantify PCBs present in a sample that has undergone environmental alteration.
- PE Aroclor 1248 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1248 is not present in the sample, but is reported to more accurately quantify PCBs present in a sample that has undergone environmental alteration.

## TABLE 20-8 SAMPLE DATA RECEIVED DURING SEPTEMBER 2006

### MONTHLY WATER COLUMN SAMPLING SILVER LAKE AREA

### **GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**

(Results are presented in parts per million, ppm)

Sample ID	Location	Date Collected	Aroclor-1016, -1232, -1242	Aroclor 1221	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs	TSS
LOCATION-4A	Silver Lake Outlet	8/23/06	ND(0.0000220)	0.000310 PB	0.000100 PE	0.0000620 AF	0.0000480 AG	0.000520	5.40

### Notes:

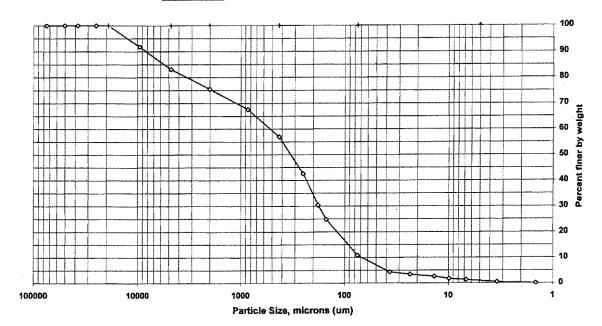
- 1. Sample was collected by BBL, an ARCADIS company (BBL), and submitted to Northeast Analytical, Inc. for analysis of unfiltered PCBs and total suspended solids (TSS).
- 2. Sampling methods involved the collection of single grab 50 percent of the total river width, and 50 percent of the total river depth.
- 3. ND Analyte was not detected. The number in parenthesis is the associated detection limit.

### Data Qualifiers:

- AG Aroclor 1260 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
- AF Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
- PB Aroclor 1221 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1221 is not present in the sample, but is reported to more accurately quantify PCBs present in a sample that has undergone environmental alteration.
- PE Aroclor 1248 is being used to report an altered PCB pattern exhibited by the sample. Actual Aroclor 1248 is not present in the sample, but is reported to more accurately quantify PCBs present in a sample that has undergone environmental alteration.

8/25/2006 Date Received: Client Code: NORANA SDG: N/A 116015 Start Date: 9/18/2006 BGRAV-1 Sample ID: ETR(s): 9/22/2006 Lab ID: 680968 End Date:

Percent Solids:	94.4%	•	Non-soil material:	plant
Specific Gravity:	2.650	(assumed)	Shape (> #10):	angular
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve	Particle	Percent	incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	91.8	8.2
#4	4750	83.1	8.7
#10	2000	75.5	7.7
#20	850	67.6	7.8
#40	425	57.0	10.7
#60	250	42.6	14.4
#80	180	30.5	12.1
#100	150	24.8	5.7
#200	75	10.9	13.9
Hydrometer	36.9	4.3	6.6
	23.4	3.5	0.9
ı	13.6	2.6	0.9
ı	9.8	1.7	0.9
	6.7	1.3	0.4
	3.4	0.4	0.9
٧	1.4	0.0	0.4

Soil	Percent of
Classification	Total Sample
Gravel	16.9
Sand	72.2
Coarse Sand	7.7
Medium Sand	18.5
Fine Sand	46.0
Silt	9.6
Clay	1.3

Preparation Method: D2217
Dispersion Device: Mechanical mixer with

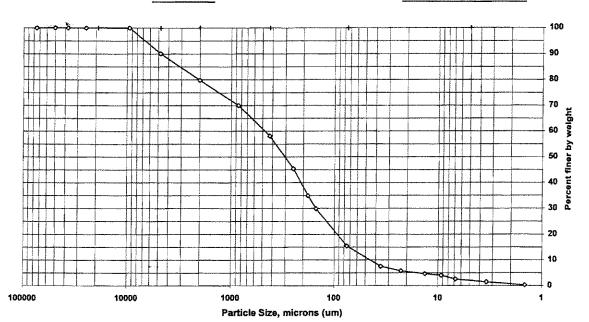
a metal paddle.

 Client Code:
 NORANA
 SDG:
 N/A
 Date Received:
 8/25/2006

 Sample ID:
 BGRAV-2
 ETR(s):
 116015
 Start Date:
 9/18/2006

 Lab ID:
 680969
 End Date:
 9/22/2006

Percent Solids:	92.4%		Non-soil material:	na
Specific Gravity:	2.650	(assumed)	Shape (> #10):	angular
Maximum Particle Size:	9.5 mm	-	Hardness (> #10):	hard



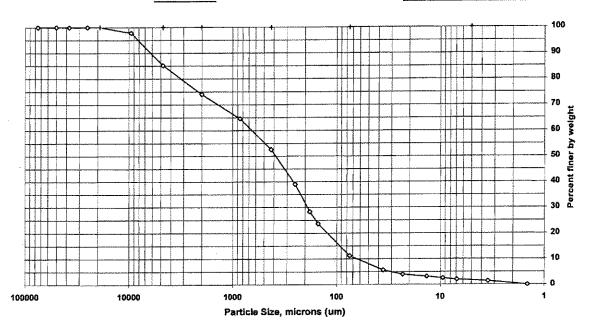
Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	90.1	9.9
#10	2000	79.8	10.3
#20	850	70.0	9.9
#40	425	58.2	11.8
#60	250	45.4	12.8
#80	180	34.9	10.4
#100	150	29.9	5.0
#200	75	15.4	14.5
Hydrometer	35.6	7.5	7.9
	22.8	5.8	1.7
	13.3	4.6	1.2
	9.3	4.1	0.6
I	6.8	2.6	1.4
	3.4	1.4	1.2
<b>V</b> .	1.4	0.3	1.2

Soil	Percent of
Classification	Total Sample
Gravel	9.9
Sand	74.7
Coarse Sand	10.3
Medium Sand	21.7
Fine Sand	42.7
Silt	12.8
Clay	2.6

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.

Client Code:	NORANA	SDG:	N/A	Date Received:	8/25/2006
Sample ID:	BGRAV-3	ETR(s):	116015	Start Date:	9/18/2006
Lab ID:	680970	-		End Date:	9/22/2006

Percent Solids:	96.8%		Non-soil material:	na
Specific Gravity:	2.650	(assumed)	Shape (> #10):	angular
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	97.8	2.2
#4	4750	85.2	12.7
#10	2000	74.0	11.1
#20	850	64.6	9.4
#40	425	52.6	12.0
#60	250	39.0	13.6
#80	180	28.3	10.7
#100	150	23.6	4,7
#200	75	11.2	12.4
Hydrometer	36.1	5.7	5.6
	23.1	4.0	1.7
	13.5	3.1	0.8
l .	9.4	2.5	0.6
I	6.9	2.0	0.6
	3.5	1.4	0.6
V	1.4	0.0	1.4

Soil	Percent of
Classification	Total Sample
Gravel	14.8
Sand	73.9
Coarse Sand	11.1
Medium Sand	21.4
Fine Sand	41.4
Siit	9.3
Clay	2.0

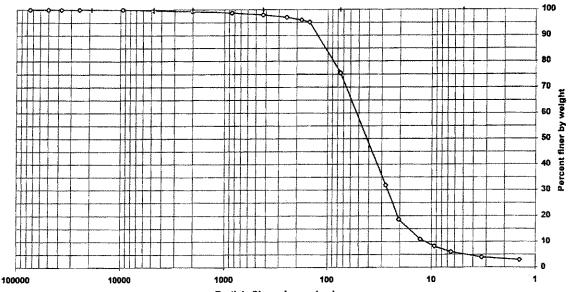
Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.

Client Code:	NORANA
Sample ID:	CLARK-POND-SAND-1
Lab ID:	681189

SDG: N/A ETR(s): 116046 Date Received: 8/29/2006
Start Date: 8/31/2006
End Date: 9/22/2006

Percent Solids: 81.8%
Specific Gravity: 2.650 (assumed)
Maximum Particle Size: 9.5 mm

Non-soil material: plant
Shape (> #10): angular
Hardness (> #10): hard



Particle Size, microns (um)

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.6	0.4
#10	2000	99.3	0.3
#20	850	98.7	0.6
#40	425	98.0	0.7
#60	250	97.0	1.0
#80	180	95.9	1.1
#100	150	95.2	0.8
#200	75	75.5	19.7
Hydrometer	27.4	31.9	43.6
1	20.5	18.7	13.2
	12.8	10.9	7.7
	9.4	8.3	2.7
l l	6.5	6.1	2.2
	3.3	4.0	2.1
V	1.4	2.9	1.0

Soil	Percent of
Classification	Total Sample
Gravel	0.4
Sand	24.1
Coarse Sand	0.3
Medium Sand	1.3
Fine Sand	22.5
Silt	69.4
Clay	6.1

Preparation Method:

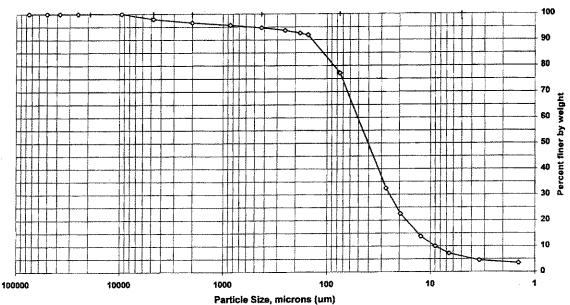
D2217

Dispersion Device: Mechanical mixer with

a metal paddle.

Client Code:	NORANA	SDG:	N/A	Date Received:	8/29/2006
Sample ID:	CLARK-POND-SAND-2	ETR(s):	116046	Start Date:	8/31/2006
Lab ID:	681190	•		End Date:	9/22/2006

Percent Solids:	80.6%		Non-soil material:	plant	
Specific Gravity:	2.650	(assumed)	Shape (> #10):	angular	
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard	
•					



Sieve Particle Percent Incremental finer percent size, um size 3 inch 75000 100.0 0.0 2 inch 50000 100.0 0.0 37500 100.0 0.0 1.5 inch 100.0 0.0 1 inch 25000 3/4 inch 19000 100.0 0.0 100.0 0.0 3/8 inch 9500 4750 98.0 2.0 #4 #10 2000 96.6 1.4 #20 850 95.7 0.9 425 1.0 #40 94.7 #60 250 93.6 1.1 #80 180 92.6 1.1 #100 150 91.9 0.7 75 77.1 14.8 #200 44.7 27.0 32.5 Hydrometer 19.5 22.6 9.9 13.8 8.8 12.4 3.9 8.9 9.9 6.6 2.8 7.2 3.3 4.5 2.7 3.5 1.0 1.4

Soil	Percent of
Classification	Total Sample
Gravel	2.0
Sand	20.9
Coarse Sand	1.4
Medium Sand	1.9
Fine Sand	17.6
Sift	70.0
Clay	7.2

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.

Client Code:	NORANA
Sample ID:	CLARK-POND-SAND-3
Lab ID:	681191

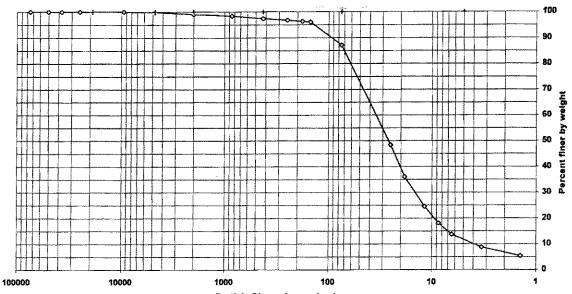
SDG: N/A ETR(s): 116046 Date Received: 8/29/2006
Start Date: 8/31/2006
End Date: 9/22/2006

Percent Solids: 79.1%
Specific Gravity: 2.650
Maximum Particle Size: 9.5 mm (assumed)

 Non-soil material:
 na

 Shape (> #10):
 angular

 Hardness (> #10):
 hard



Particle Size, microns (um)

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.8	0.2
#10	2000	99.0	0.8
#20	850	98.4	0.7
#40	425	97.4	1.0
#60	250	96.8	0.6
#80	180	96.3	0.4
#100	150	96.1	0.2
#200	75	87.2	8.9
Hydrometer	25.1	48.4	38.9
	18.3	36.1	12.3
I	11.8	24.5	11.5
I	8.6	18.0	6.5
Ĭ	6.4	13.7	4.3
	3.3	8.8	4.9
V	1.4	5.4	3.4

Soil	Percent of
Classification	Total Sample
Gravel	0.2
Sand	12.6
Coarse Sand	0.8
Medium Sand	1.6
Fine Sand	10.2
Silt	73.5
Clay	13.7

Preparation Method:

D2217

Dispersion Device: Mechanical mixer with

a metal paddle.

Client Code:	NORANA	SDG:	N/A	Date Received:	8/29/2006
Sample ID:	CLARK-TOP-SOIL-1	ETR(s):	116046	Start Date:	8/31/2006
Lab ID:	681192	•		End Date:	9/22/2006

Percent Solids: Specific Gravity:	80.7% 2.650	(assumed)	Non-soll material: Shape (> #10):	plant angular	
Maximum Particle Size:	19 mm		Hardness (> #10):	hard	
· <del>•••••</del> •	<del></del>				100
					90
					80
					70
					60 8

Particle Size, microns (um)

100

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	88.6	11,4
#4	4750	81.6	7.0
#10	2000	71.1	10.5
#20	850	65.7	5.4
#40	425	58.8	6.9
#60	250	52,6	6.3
#80	180	48.2	4.3
#100	150	46.0	2.2
#200	75	36.6	9.5
Hydrometer	32.0	18.5	18.1
	21.1	14.8	3.7
	12.7	10.6	4.2
	9.0	9.0	1.6
	6.6	7.4	1.6
	3.2	4.3	3.1
V	1.4	2.8	1.5

10000

Soil	Percent of
Classification	Total Sample
Gravel	18.4
Sand	45.1
Coarse Sand	10.5
Medium Sand	12.3
Fine Sand	22.3
Silt	29.2
Clay	7.4

10

Preparation Method:

D2217

Dispersion Device: Mechanical mixer with

a metal paddle.

Dispersion Period: 1 minute

100000

40 HE 20 A

20 10

Client Code:	NORANA	SDG:	N/A	Date Received:
Sample ID:	CLARK-TOP-SOIL-2	ETR(s):	116046	Start Date:
Lab ID:	681193	_		End Date:

		plant angular	umed) Shape (> #10): angular		79.4% 2.650	Percent Solids:
		hard	Hardness (> #10):	<del></del>	19 mm	Maximum Particle Size:
	100					
	90					
				<del>-                                      </del>	$\downarrow \downarrow \downarrow \downarrow$	
		<del></del>			$\rightarrow$	<del></del>
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	70			<del> </del>		
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1	20					
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	10					
	,—				++	<del>                                      </del>

Particle Size, microns (um	1	Ì
----------------------------	---	---

100

1000

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	92.0	8.0
#4	4750	85.0	7.0
#10	2000	73.8	11.2
#20	850	67.3	6.4
#40	425	60.3	7.0
#60	250	54.0	6.3
#80	180	49.7	4.3
#100	150	47.5	2.2
#200	75	38.4	9.1
Hydrometer	32.6	21.3	17.1
I	21.4	16.6	4.7
1	12.8	12.7	4.0
1	8.9	10.0	2.7
I	6.6	8.7	1.3
	3.2	6.1	2.6
V	1.4	4.2	1.9

10000

Soil	Percent of	
Classification	Total Sample	
Gravel	15.0	
Sand	46.6	
Coarse Sand	11.2	
Medium Sand	13.5	
Fine Sand	21.9	
Silt	29.7	
Clay	8.7	

Preparation Method:

8/29/2006

8/31/2006

9/22/2006

Dispersion Device: Mechanical mixer with

a metal paddle.

Dispersion Period: 1 minute

100000

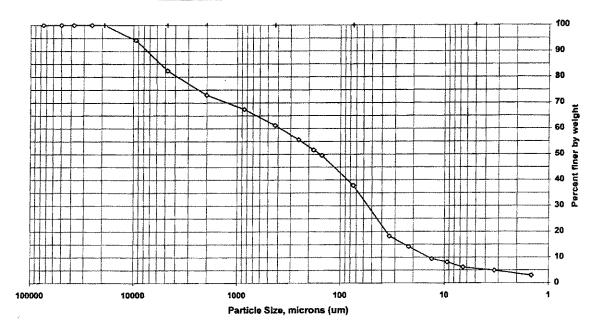
 Client Code:
 NORANA
 SDG:
 N/A
 Date Received:
 8/29/2006

 Sample ID:
 CLARK-TOP-SOIL-3
 ETR(s):
 116046
 Start Date:
 8/31/2006

 Lab ID:
 681194
 End Date:
 9/22/2006

Percent Solids: 78.9% Non-soil material: plant
Specific Gravity: 2.650 (assumed) Shape (> #10): angular

Maximum Particle Size: 19 mm Hardness (> #10): hard



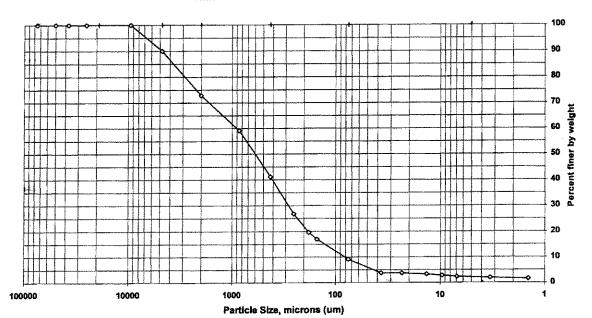
Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	94.2	5.8
#4	4750	82.4	11.8
#10	2000	73.0	9.4
#20	850	67.5	5.6
#40	425	61.2	6.2
#60	250	55.7	5.5
#80	180	51.7	4.0
#100	150	49.6	2.1
#200	75	37.9	. 11.7
Hydrometer	33.7	18.2	19.6
1	22.0	14.2	4.1
	13.2	9.4	4.8
	9.3	8.2	1.2
I	6.5	6.1	2.0
Į į	3.3	4.9	1.2
V	1.4	2.9	1.9

Soil	Percent of	
Classification	Total Sample	
Gravel	17.6	
Sand	44.5	
Coarse Sand	9.4	
Medium Sand	11.8	
Fine Sand	23.3	
Silt	31.8	
Clay	6.1	

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.

Client Code:	NORANA	SDG:	N/A	Date Received:	8/29/2006
Sample ID:	CLARK-WASH-SAND-1	ETR(s):	116046	Start Date:	8/31/2006
Lab ID:	681186	•		End Date:	9/22/2006

Percent Solids:	94.4%		Non-soil material:	na
Specific Gravity:	2.650	(assumed)	Shape (> #10):	angular
Maximum Particle Size:	9.5 mm		Hardness (> #10):	herd



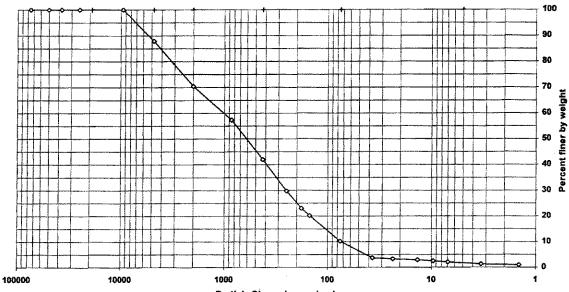
Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	90.0	10.0
#10	2000	72.8	17.2
#20	850	59.1	13.7
#40	425	41.2	17.9
#60	250	26.8	14.4
#80	180	19.7	7.1
#100	150	16.9	2.7
#200	75	9.1	7.8
Hydrometer	36.9	3.8	5.4
l	23.3	3.8	0.0
I	13.5	3.3	0.5
	9.6	2.8	0.5
l	6.9	2.4	0.5
	3.3	2.0	0.4
V	1,4	1.6	0.4

Soil	Percent of		
Classification	Total Sample		
Gravel	10.0		
Sand	80.9		
Coarse Sand	17.2		
Medium Sand	31.6		
Fine Sand	32.1		
Silt	6.8		
Clay	2.4		

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.

Client Code:	NORANA	SDG: N/A	Date Received:	8/29/200
Sample ID:	CLARK-WASH-SAND-2	ETR(s): 116046	Start Date:	8/31/200
Lab ID:	681187	<del></del>	End Date:	9/22/200

Percent Solids:	90.0%		Non-soil material:	na
Specific Gravity:	2.650	(assumed)	Shape (> #10):	angular
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard
-			_	



Particle Size, microns (um)

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	88.0	12.0
#10	2000	70.4	17.5
#20	850	57.4	13.1
#40	425	42.0	15.4
#60	250	29.8	12.2
#80	180	23.1	6.7
#100	150	20.2	2.9
#200	75	10.2	10.0
Hydrometer	36.9	3.7	6.5
Ī	23.5	3.3	0.4
	13.5	2.9	0.3
	9.6	2.5	0.4
	6.9	2.1	0.4
	3.3	1.3	0.8
V	1.4	1,0	0.3

Soil	Percent of
Classification	Total Sample
Gravel	12.0
Sand	77.8
Coarse Sand	17.5
Medium Sand	28.5
Fine Sand	31.8
Silt	8.1
Clay	2.1

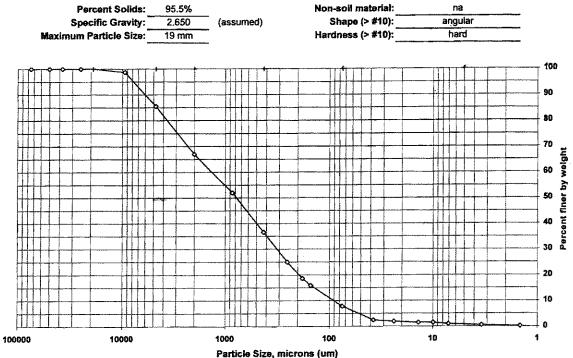
Preparation Method:

D2217

Dispersion Device: Mechanical mixer with

a metal paddle.

Client Code:	NORANA	SDG:	N/A	Date Received:	8/29/2006
Sample ID:	CLARK-WASH-SAND-3	ETR(s):	116046	Start Date:	8/31/2006
Lab ID:	681188	•		End Date:	9/22/2006



Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.7	1.3
#4	4750	85.5	13.2
#10	2000	67.0	18.6
#20	850	52.0	14.9
#40	425	36.6	15.4
#60	250	25.0	11.6
#80	180	18.6	6.3
#100	150	15.9	2.8
#200	75	7.8	8.1
Hydrometer	37.4	2.5	5.3
	23.7	2.0	0.5
<u>I</u>	13.8	1.5	0.5
ı	9.9	1.5	0.0
	7.0	1.0	0.5
	3.4	0.6	0.4
V	1.5	0.2	0.4

Soil	Percent of
Classification	Total Sample
Gravel	14.5
Sand	77.7
Coarse Sand	18.6
Medium Sand	30.3
Fine Sand	28.8
Silt	6.8
Clay	1.0

Preparation Method:

D2217

Dispersion Device: Mechanical mixer with

a metal paddle.

Non-soil material:

na

Client Code:	NORANA	SDG:	N/A	Date Received:	8/25/2006
Sample ID:	FSAND-1	ETR(s):	116015	Start Date:	9/18/2006
Lab ID:	680977	-		End Date:	9/23/2006

98.3%

Percent Solids:

	na .	Shape (> #10):	2.650	Specific Gravity:
	na	Hardness (> #10):	Med sand	Maximum Particle Size:
10		* <u> </u>	<del>                                      </del>	<u> </u>
90				
   80				
70				
60				
<u> </u> 5(			1	
4			AND THE PROPERTY OF THE PROPER	
30			A VANCOUNT OF THE PROPERTY OF	
20	1.1			
10				
$\Box_{0}$				

Particle Size, microns (um)

100

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	100.0	0.0
#40	425	99.8	0.2
#60	250	94.1	5.7
#80	180	77.8	16.3
#100	150	65.0	12.8
#200	75	22.7	42.3
Hydrometer	37.4	6.4	16.3
.	23.8	4.4	2.0
I	13.8	3.4	1.0
1	9.8	3.4	0.0
ı	7.0	2.5	1.0
i	3.4	2.0	0.5
V	1.4	1.5	0.5

10000

Soil	Percent of
Classification	Total Sample
Gravel	0.0
Sand	77.3
Coarse Sand	0.0
Medium Sand	0.2
Fine Sand	77.1
Silt	20.2
Clay	2.5

10

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.

Dispersion Period: 1 minute

FSL024:07.29.05:0 STL Burlington

100000

116015BPS 9/25/2006

Client Code:	NORANA
Sample ID:	FSAND-2
l ah ID:	680978

SDG: N/A ETR(s): 116015 
 Date Received:
 8/25/2006

 Start Date:
 9/18/2006

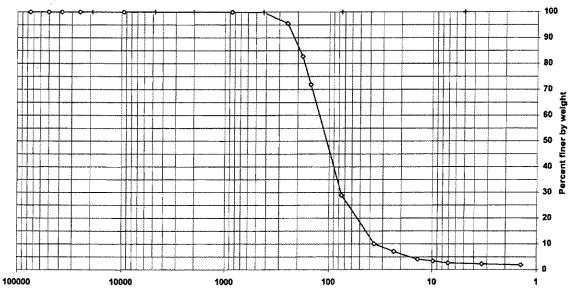
 End Date:
 9/23/2006

Percent Solids: 95.4%
Specific Gravity: 2.650
Maximum Particle Size: Crs sand

 Non-soll material:
 na

 Shape (> #10):
 angular

 Hardness (> #10):
 hard



Particle Size, microns (um)

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	100.0	0.0
#40	425	99.8	0.2
#60	250	95.6	4.2
#80	180	82.8	12.8
#100	150	71.9	10.9
#200	75	28.9	43.0
Hydrometer	36.1	10.1	18.9
	23.3	7.1	3.0
ı	13.7	4.1	3.0
	9.7	3,4	0.7
	7.0	2.6	0.7
	3.3	2.2	0.4
V	1.4	1.9	0.4

Soil	Percent of
Classification	Total Sample
Gravel	0.0
Sand	71.1
Coarse Sand	0.0
Medium Sand	0.2
Fine Sand	70.9
Silt	26.3
Clay	2.6

Preparation Method:

D2217

Dispersion Device: Mechanical mixer with

a metal paddle.

Dispersion Period: 1 minute

FSL024:07.29.05:0 STL Burlington

116015BPS 9/25/2006

 Client Code:
 NORANA

 Sample ID:
 FSAND-3

 Lab ID:
 680979

SDG: N/A ETR(s): 116015 Date Received: 8/25/2006
Start Date: 9/18/2006
End Date: 9/23/2006

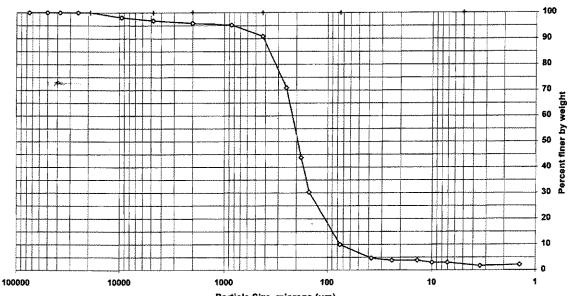
Percent Solids: 95.2%
Specific Gravity: 2.650

Maximum Particle Size: 19 mm

 Non-soil material:
 na

 Shape (> #10):
 angular

 Hardness (> #10):
 hard



Particle Size, microns (um)

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.1	1.9
#4	4750	96.9	1.1
#10	2000	95.9	1.1
#20	850	95.2	0.7
#40	425	90.9	4.3
#60	250	70.9	20.0
#80	180	43.8	27.1
#100	150	30.3	13.5
#200	75	10.0	20.3
Hydrometer	37.5	4.7	5.3
	23.8	3.8	0.9
1	13.8	3.8	0.0
1	9.9	3.0	0.9
l	7.0	3.0	0.0
	3.4	1.7	1.3
V	1.4	2.1	-0.4

Soil	Percent of
Classification	Total Sample
Gravel	3.1
Sand	86.9
Coarse Sand	1.1
Medium Sand	5.0
Fine Sand	80.9
Silt	7.0
Clay	3.0

Preparation Method: D2217
Dispersion Device: Mechanical mixer with

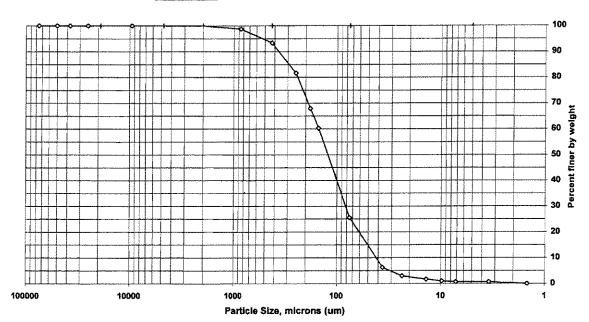
a metal paddle.

 Client Code:
 NORANA
 SDG:
 N/A
 Date Received:
 8/25/2006

 Sample ID:
 LANE POND-1
 ETR(s):
 116015
 Start Date:
 9/18/2006

 Lab ID:
 680974
 End Date:
 9/22/2006

Percent Solids:	88.7%		Non-soil material:	plant
Specific Gravity:	2.650	(assumed)	Shape (> #10):	angular
Maximum Particle Size:	Crs sand		Hardness (> #10):	hard



Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.9	0.1
#20	850	98.7	1.2
#40	425	93.4	5.3
#60	250	81.7	11.7
#80	180	67.9	13.6
#100	150	60.3	7.6
#200	75	25.6	34.7
Hydrometer	36.3	6.3	19.3
I	23.5	3.0	3.3
l l	13.7	1.7	1.3
	9.7	1.0	0.7
I	7.1	0.7	0.3
	3.4	0.7	0.0
V	1.5	0.0	0.7

Soil	Percent of
Classification	Total Sample
Gravel	0.0
Sand	74.4
Coarse Sand	0.1
Medium Sand	6.5
Fine Sand	67.8
Silt	24.9
Clay	0.7

Preparation Method: D2217
Dispersion Device: Mechanical mixer with

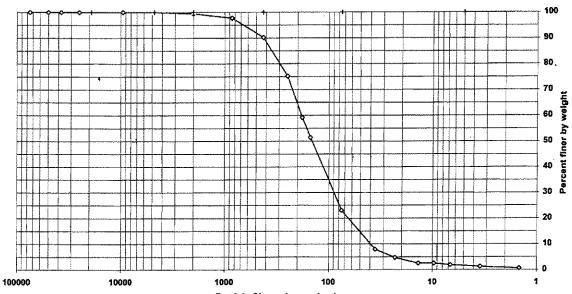
a metal paddle.

Client Code:	NORANA
Sample ID:	LANE POND-2
Lab ID:	680975

SDG: ETR(s): 116015 Date Received: 8/25/2006 Start Date: 9/18/2006 End Date: 9/22/2006

Percent Solids: 90.5% Specific Gravity: 2.650 (assumed) Maximum Particle Size: Crs sand

Non-soil material: Shape (> #10): angular Hardness (> #10): hard



Particle Size, microns (um)

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.4	0.6
#20	850	97.7	1.8
#40	425	90.2	7.5
#60	250	75.2	15.0
#80	180	59.1	16.1
#100	150	51.4	7.7
#200	75	23.0	28.4
Hydrometer	35.8	8.0	15.1
	23.2	4.8	3.2
	13.6	2.6	2.2
	9.6	2.6	0.0
	6.7	1.9	0.6
	3.4	1.3	0.6
V	1.5	0.6	0.6

Soil	Percent of
Classification	Total Sample
Gravel	0.0
Sand	77.0
Coarse Sand	0.6
Medium Sand	9,2
Fine Sand	67.2
Sift	21.1
Clay	1.9

Preparation Method:

D2217

Dispersion Device: Mechanical mixer with

a metal paddle.

Dispersion Period: 1 minute

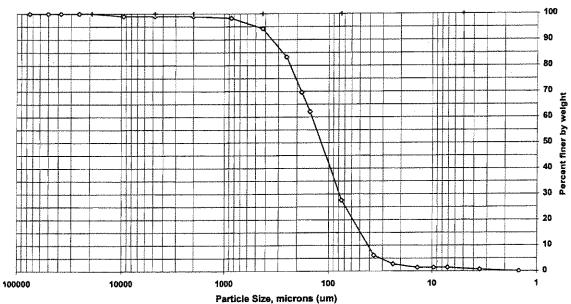
FSL024:07.29.05:0 STL Burlington

116015PS 9/25/2006

Client Code:	NORANA	SDG:	N/A
Sample ID:	LANE POND-3	ETR(s):	116015
Lab ID:	680976	_	

Date Received:	8/25/2006
Start Date:	9/18/2006
End Date:	9/22/2006

Percent Solids:	87.5%		Non-soil material:	na
Specific Gravity:	2.650	(assumed)	Shape (> #10):	angular
Maximum Particle Size:	19 mm	•	Hardness (> #10):	brittle



article	Size.	microns	um	١

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.0	1.0
#4	4750	99.0	0.0
#10	2000	98.9	0.0
#20	850	98.3	0.7
#40	425	94.2	4.1
#60	250	83.3	10.9
#80	180	69.6	13.7
#100	150	62.1	7.5
#200	75	27.6	34.5
Hydrometer	36.5	6.2	21.4
	23.6	2.8	3.4
	13.8	1.4	1.4
	9.6	1.4	0.0
1 .	7.1	1.4	0.0
ı	3.5	0.7	0.7
V	1.5	0.0	0.7

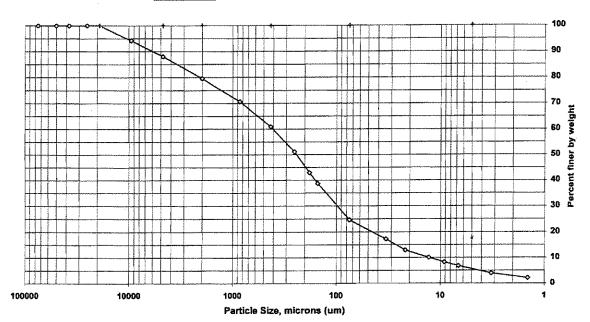
Soil	Percent of	
Classification	Total Sample	
Gravel	1.0	
Sand	71.4	
Coarse Sand	0.0	
Medium Sand	4.7	
Fine Sand	66.6	
Silt	26.2	
Clay	1.4	

Preparation Method: Dispersion Device: Mechanical mixer with

a metal paddle.

Client Code:	NORANA	SDG:	N/A	Date Received:	8/25/2006
Sample ID:	LANETS-1	ETR(s): 11	6015	Start Date:	9/18/2006
Lab ID:	680971	COLUMN STATE OF THE STATE OF TH		End Date:	9/22/2006





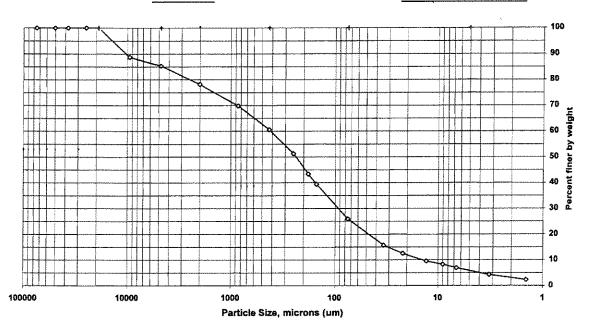
Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	94.2	5.8
#4	4750	88.0	6.2
#10	2000	79.6	8.5
#20	850	70.7	8.9
#40	425	60.9	9.8
#60	250	51.1	9.8
#80	180	42.9	8.2
#100	150	38.7	4.2
#200	75	24.6	14.1
Hydrometer	33.7	17,2	7.4
	22.0	12.9	4.3
1	12.9	10.0	2.9
1	9.1	8.3	1.8
	6.7	6.8	1.4
I	3.2	3.9	2.9
V	1,4	2.2	1.8

Soil	Percent of
Classification	Total Sample
Gravel	12.0
Sand	63.4
Coarse Sand	8.5
Medium Sand	18.7
Fine Sand	36.3
Silt	17.8
Clay	6.8

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.

Client Code:	NORANA	SDG:	N/A	Date Received:	8/25/2006
Sample ID:	LANETS-2	ETR(s):	116015	Start Date:	9/18/2006
Lab ID:	680972	•		End Date:	9/22/2006

Percent Solids:	86.7%		Non-soil material:	plant ·	
Specific Gravity:	2.650	(assumed)	Shape (> #10):	angular	
Maximum Particle Size:	19 mm		Hardness (> #10):	hard	



Sieve Particle Percent Incremental size size, um finer percent 3 inch 75000 100.0 0.0 50000 100.0 2 inch 0.0 1.5 inch 37500 100.0 0.0 25000 100.0 1 inch 0.0 3/4 inch 19000 100.0 0.0 3/8 inch 9500 88.7 11.3 #4 4750 85.3 3.4 #10 7.2 2000 78.2 #20 850 69.8 8.3 #40 425 60.6 9.3 #60 250 9.3 51.3 #80 180 43.4 7.9 #100 150 39.4 4.0 #200 75 25.9 13.5 Hydrometer 33.7 15.7 10.2 21.8 12.4 3.3 12.9 9.5 8.9 8.2 1.3 6.6 6.9 1.3 3.2 4.3 2.6 1.4 2.3

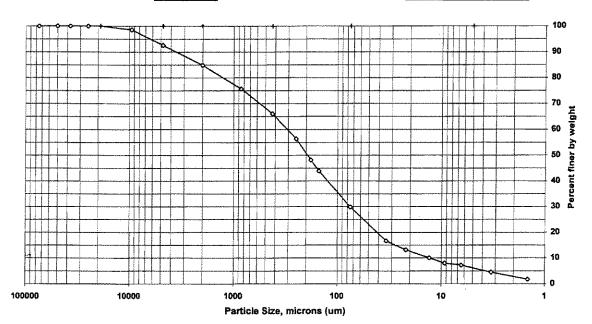
Soil	Percent of	
Classification	Total Sample	
Gravel	14.7	
Sand	59.4	
Coarse Sand	7.2	
Medium Sand	17.6	
Fine Sand	34.7	
Silt	19.0	
Clay	6.9	

Preparation Method: D2217
Dispersion Device: Mechanical mixer with

a metal paddie.

Client Code:	NORANA	SDG:	N/A	Date Received:	8/25/2006
Sample ID:	LANETS-3	ETR(s):	116015	Start Date:	9/18/2006
Lab ID:	680973	•		End Date:	9/22/2006

Percent Solids:	88.1%		Non-soil material:	plant
Specific Gravity:	2.650	(assumed)	Shape (> #10):	rounded
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.6	1.4
#4	4750	92.6	6.0
#10	2000	84.9	7.7
#20	850	75.7	₹ 9.2
#40	425	66.0	9.7
#60	250	56.3	9.7
#80	180	48.2	8.2
#100	150	43.9	4.3
#200	75	29.8	14.0
Hydrometer	33.7	16.6	13.2
l	21.8	13.1	3.5
	12.9	10.0	3.1
	9.3	8.0	2.1
ı	6.4	7.3	0.7
	3.3	4.5	2.8
V	1.4	1.7	2.8

Soil	Percent of
Classification	Total Sample
Gravel	7.4
Sand	62.8
Coarse Sand	7.7
Medium Sand	18.9
Fine Sand	36.2
Silt	22.6
Clay	7.3

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.

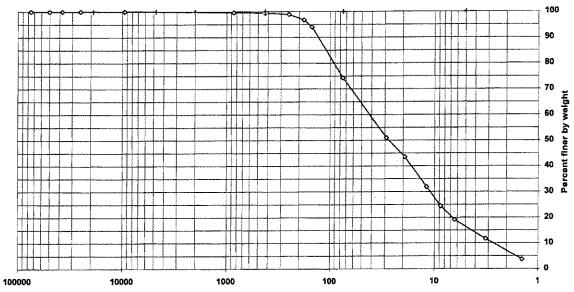
Dispersion Period: 1 minute

FSL024:07,29.05:0 STL Burlington

116015PS 9/25/2006

Client Code:	NORANA	SDG:	N/A	Date Received:	8/25/2006
Sample ID:	POND-1	ETR(s):	116015	Start Date:	9/18/2006
Lab ID:	680965			End Date:	9/22/2006

Percent Solids:	77.4%		Non-soil material:	plant
Specific Gravity:	2.650	(assumed)	Shape (> #10):	angular
Maximum Particle Size:	9.5 mm		Hardness (> #10):	hard



Particle Size, microns (um)

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.8	0.2
#20	850	99.6	0.1
#40	425	99.4	0.2
#60	250	98.9	0.5
#80	180	96.8	2.1
#100	150	94.1	2.7
#200	75	74.3	19.8
Hydrometer	29.1	51.0	23.2
ı	19.3	43.6	7.4
j	11.9	31.9	11,7
I	8.7	24.4	7.4
I	6.4	19.1	5.3
ı	3.2	11.7	7.4
V	1,4	3.7	8.0

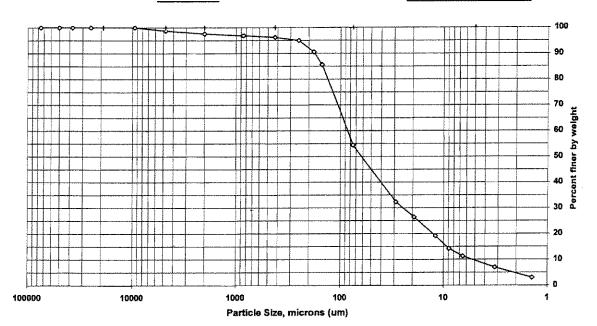
Soil	Percent of
Classification	Total Sample
Gravel	0.0
Sand	25.7
Coarse Sand	0.2
Medium Sand	0.4
Fine Sand	25.2
Silt	55.1
Clay	19.1

Preparation Method: D2217
Dispersion Device: Mechanical mixer with

a metal paddle.

Client Code:	NORANA	SDG:	N/A	Date Received:	8/25/2006
Sample ID:	POND-2	ETR(s):	116015	Start Date:	9/18/2006
Lab ID:	680966			End Date:	9/22/2006

Percent Solids:	84.2%	Non-soil n	naterial:	na
Specific Gravity:	2.650 (assur	ned) Shape	(> #10):	rounded
Maximum Particle Size:	9.5 mm	Hardness	(> #10):	hard



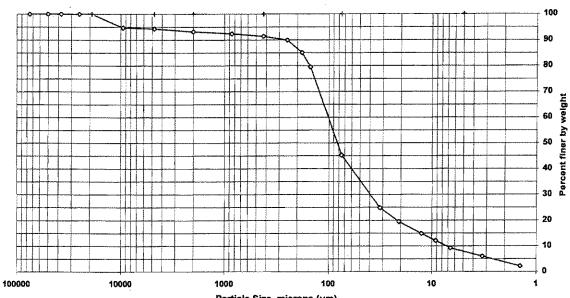
Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	98.7	1.3
#10	2000	97.6	1.2
#20	850	96.8	0.7
#40	425	96.2	0.6
#60	250	94.9	1.3
#80	180	90.6	4.4
#100	150	85.6	5.0
#200	75	54.4	31.2
Hydrometer	28.8	32.3	22.1
	19.4	26.4	5.9
1	12.0	19.1	7.3
	8.8	14.2	5.0
	6.5	11.2	3.0
	3.2	6.9	4.3
V	1.4	3.0	4.0

Soil	Percent of
Classification	Total Sample
Gravel	1.3
Sand	44,3
Coarse Sand	1.2
Medium Sand	1.3
Fine Sand	41.8
Silt	43.2
Clay	11.2

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.

Client Code:	NORANA	SDG:	N/A	Date Received:	8/25/2006
Sample ID:	POND-3	ETR(s):	116015	Start Date:	9/18/2006
Lab ID:	680967			End Date:	9/22/2006

Percent Solids:	82.3%		Non-soil material:	na
Specific Gravity:	2.650	(assumed)	Shape (> #10):	angular
Maximum Particle Size:	19 mm		Hardness (> #10):	brittle



Particle Size, microns (um)

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	94.7	5.3
#4	4750	94.3	0.4
#10	2000	93.2	1.1
#20	850	92.4	0.8
#40	425	91.5	0.9
#60	250	90.0	1.5
#80	180	85.0	4.9
#100	150	79.5	5.6
#200	75	45.2	34.3
Hydrometer	31.6	24.8	20.4
l l	20.8	19.5	5.3
	12.5	14.9	4.6
	9.2	12.0	2.8
l	6.6	9.2	2.8
ļ ļ	3.3	6.0	3.2
٧	1.4	2.1	3.9

Soil	Percent of
Classification	Total Sample
Gravel	5.7
Sand	49.1
Coarse Sand	1.1
Medium Sand	1.7
Fine Sand	46.3
Silt	36.0
Clay	9.2

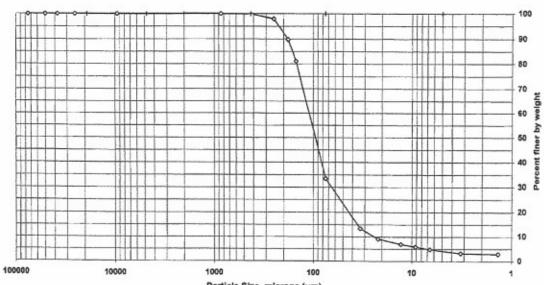
Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.

Client Code: NORANA SL-BANKSAND-1 Sample ID: Lab ID: 678111

SDG: 115663 ETR(s): 115663

Date Received: 8/9/2006 Start Date: 8/10/2006 8/29/2006 End Date:

Percent Solids: 94.6% Specific Gravity: 2.650
Maximum Particle Size: Med sand Non-soil material: Shape (> #10): n/a Hardness (> #10): n/a



Particle	Size,	microns	(um

Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	100.0	0.0
#40	425	99.9	0.1
#60	250	97.9	2.0
#80	180	89.8	8.1
#100	150	81.1	8.7
#200	75	33.4	47.7
Hydrometer	33.2	13.4	20.1
	21.9	9.1	4.3
I	12.9	6.9	2.1
1	9.2	5.9	1.1
1	6.6	4.8	1.1
1	3.2	3.2	1.6
V	1.4	2.9	0.3

Soil Classification	Percent of Total Sample
Gravel	0.0
Sand	66.6
Coarse Sand	0.0
Medium Sand	0.1
Fine Sand	66.5
Silt	28.6
Clay	4.8

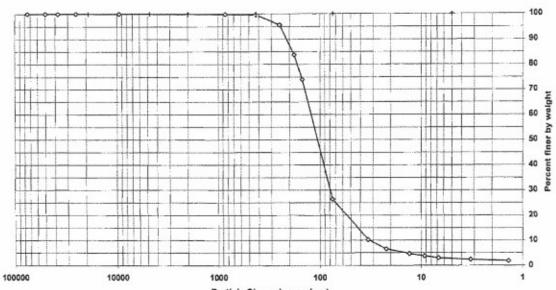
Preparation Method: Dispersion Device: Mechanical mixer with

a metal paddle.

SDG: 115663 ETR(s): 115663 Date Received: 8/9/2006
Start Date: 8/10/2006
End Date: 8/29/2006

Percent Solids: 94.8%
Specific Gravity: 2.650
Maximum Particle Size: Crs sand

Non-soil material: n/a
Shape (> #10): subrounded
Hardness (> #10): hard



Particle Size, microns (um)

Sieve	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.8	0.2
#20	850	99.8	0.0
#40	425	99.6	0.2
#60	250	95.6	3.9
#80	180	83.8	11.8
#100	150	74.0	9.8
#200	75	26.4	47.5
Hydrometer	33.8	10.3	16.2
	22.2	6.6	3.7
1	13.1	4.7	1.9
1	9.3	3.7	0.9
	6.8	3.0	0.7
	3.3	2.3	0.7
V	1.4	1.9	0.5

Soil Classification	Percent of Total Sample	
Gravel	0.0	
Sand	73.6	
Coarse Sand	0.2	
Medium Sand	0.3	
Fine Sand	73.1	
Silt	23.4	
Clay	3.0	

Preparation Method:

D2217

Dispersion Device: Mechanical mixer with

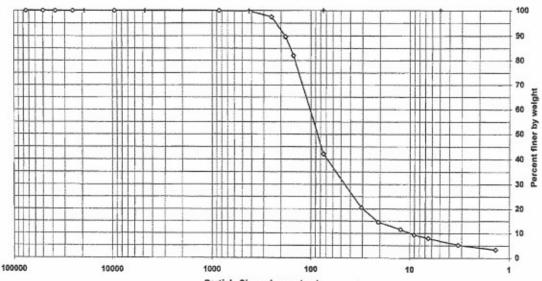
a metal paddle.

Client Code: NORANA
Sample ID: SL-BANKSAND-3
Lab ID: 678113

SDG: 115663 ETR(s): 115663 Date Received: 8/9/2006 Start Date: 8/10/2006 End Date: 8/29/2006

Percent Solids: 91.3%
Specific Gravity: 2.650
Maximum Particle Size: Crs sand

Non-soil material: n/a
Shape (> #10): subangular
Hardness (> #10): hard



Particle Size, microns (um)

Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 Inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.9	0.1
#20	850	99.9	0.0
#40	425	99.8	0.1
#60	250	97.5	2.3
#80	180	89.7	7.8
#100	150	82.0	7.6
#200	75	42.2	39.9
Hydrometer	30.8	20.6	21.6
1	20.8	14.5	6.0
1	12.4	11.5	3.0
1	9.1	9.3	2.2
1	6.5	8.0	1.4
1	3.2	5.2	2.7
V	1.4	3.3	1.9

Soil Classification	Percent of Total Sample
Gravel	0.0
Sand	57.8
Coarse Sand	0.1
Medium Sand	0.1
Fine Sand	57.6
Silt	34.2
Clay	8.0

Preparation Method:

D2217

Dispersion Device: Mechanical mixer with

a metal paddle.

Dispersion Period: 1 minute

FSL024:07.29.05:0 STL Burlington

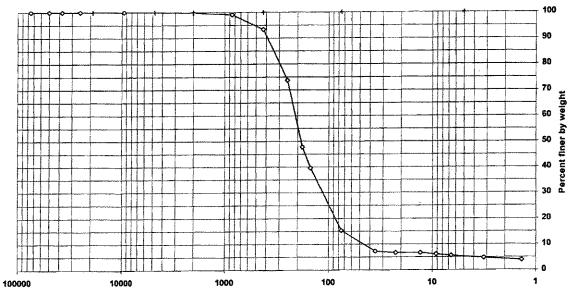
115663PS 8/30/2006

Client Code:	NORANA
Sample ID:	TROY-LOAM-SAND-1
Lab ID:	681198

SDG: N/A ETR(s): 116046 Date Received: 8/29/2006
Start Date: 8/31/2006
End Date: 9/20/2006

Percent Solids: 94.5%
Specific Gravity: 2.650
Maximum Particle Size: Crs sand

Non-soil material: plant
Shape (> #10): subrounded
Hardness (> #10): hard



Particle Size, microns (um)

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent ·
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.8	0,2
#20	850	99.1	0.7
#40	425	93.4	5.7
#60	250	73.7	19.6
#80	180	47.8	25.9
#100	150	39.6	8.2
#200	75	15.3	24.3
Hydrometer	35.3	7.2	8.1
	22.4	6.7	0.6
1	12.9	6.7	0.0
	9.2	6.1	0,6
ı	6.6	5.6	0.6
	3.2	4.7	0.8
ν	1.4	3.9	0.8

Soil	Percent of
Classification	Total Sample
Gravel	0.0
Sand	84.7
Coarse Sand	0.2
Medium Sand	6.4
Fine Sand	78.1
Silt	9.7
Clay	5.6

Preparation Method:

D2217

Dispersion Device: Mechanical mixer with

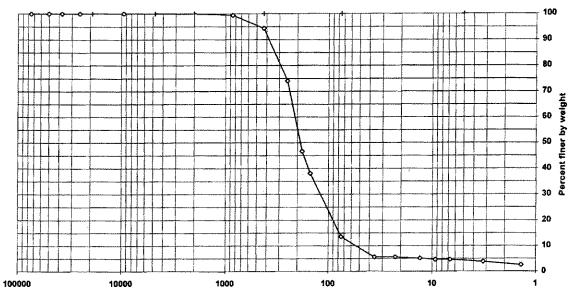
a metal paddie.

Client Code:	NORANA
Sample ID:	TROY-LOAM-SAN-2
Lab ID:	681199

SDG: N/A ETR(s): 116046 Date Received: 8/29/2006
Start Date: 8/31/2006
End Date: 9/20/2006

Percent Solids:	95.5%
Specific Gravity:	2.650
Maximum Particle Size:	Crs sand

Non-soil material: plant
Shape (> #10): subrounded
Hardness (> #10): hard



Particle Size, microns (um)

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.9	0.1
#20	850	99.4	0.5
#40	425	94.4	5.0
#60	250	74.1	20.4
#80	180	46.7	27.4
#100	150	38.1	8.6
#200	75	13.6	24.5
Hydrometer	35.6	5.6	8.0
	22.5	5.6	0.0
1	13.1	5.1	0.5
1	9.3	4.6	0.5
	6.7	4.6	0.0
I	3.2	3.8	0.8
V	1.4	2.5	1.3

Soil	Percent of
Classification	Total Sample
Gravel	0.0
Sand	86.4
Coarse Sand	0.1
Medium Sand	5.5
Fine Sand	80.9
Silt	9.0
Clay	4.6

Preparation Method:

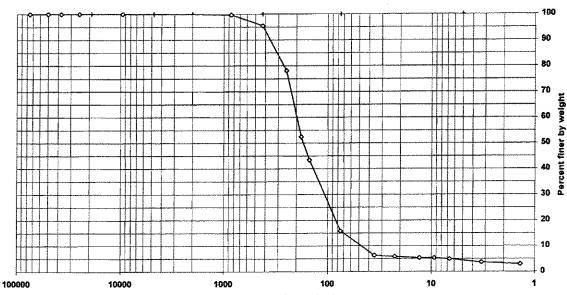
D2217

Dispersion Device: Mechanical mixer with

a metal paddle.

Date Received: 8/29/2006 Client Code: NORANA SDG: N/A 8/31/2006 Sample ID: TROY-LOAM-SAND-3 ETR(s): 116046 Start Date: 9/20/2006 End Date: Lab ID: 681200





Particle Size, microns (um)

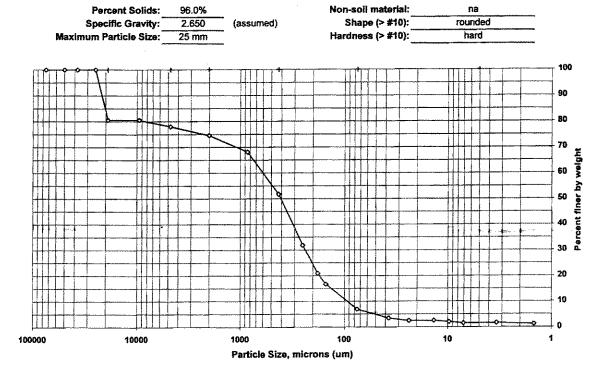
Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.9	0.1
#20	850	99.7	0.2
#40	425	95.5	4.2
#60	250	78.1	17.4
#80	180	52.4	25.7
#100	150	43.4	9.0
#200	75	15.8	27.6
Hydrometer	35.3	6.3	9.5
1	22.4	5.8	0.5
	13.0	5.3	0.5
	9.4	5.3	0.0
I	6.6	4.9	0.5
I	3.3	3.6	1.2
V	1.4	2.9	0.7

Soil Classification	Percent of Total Sample
Gravel	0.0
Sand	84.2
Coarse Sand	0.1
Medium Sand	4.4
Fine Sand	79.7
Silt	11.0
Clay	4.9

Preparation Method: D2217
Dispersion Device: Mechanical mixer with

a metal paddle.

Client Code:	NORANA		SDG:	N/A	Date Received:	8/29/2006
Sample ID:	TROY-NASSAU-SAND-1	•	ETR(s):	116046	Start Date:	8/31/2006
Lab ID:	681195		_		End Date:	9/22/2006



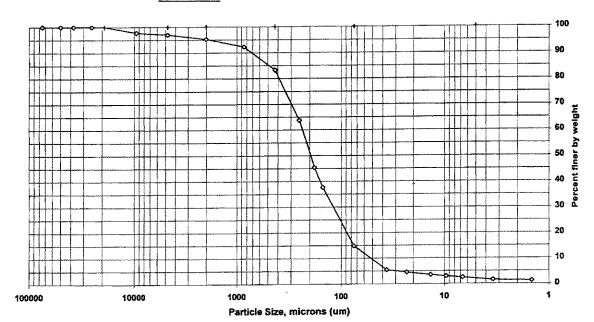
Sieve	Particle	Percent	incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	80.5	19.5
3/8 inch	9500	80.5	0.0
#4	4750	78.0	2.5
#10	2000	74.5	3.5
#20	850	68.1	6.4
#40	425	51.8	16.3
#60	250	31.9	19.9
#80	180	20.9	11.0
#100	150	16.7	4.2
#200	75	6.9	9.8
Hydrometer	37.3	3.5	3.4
1	23.8	2.5	1.0
J	13.6	2.5	-0.1
	9.7	2.0	0.5
l	7.1	1.5	0.5
	3.4	1.6	-0.1
V	1.5	1.2	0.4

Soil	Percent of
Classification	Total Sample
Gravel	22.0
Sand	71.1
Coarse Sand	3.5
Medium Sand	22.7
Fine Sand	44.9
Silt	5.4
Clay	1.5

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.

Client Code:	NORANA	SDG:	N/A	Date Received:	8/29/2006
	TROY-NASSU-AU-SAND-2	ETR(s):	116046	Start Date:	8/31/2006
Lab ID:	681196	•		End Date:	9/22/2006

Percent Solids:	94.1%		Non-soil material:	na
Specific Gravity:	2.650	(assumed)	Shape (> #10):	angular
Maximum Particle Size:	19 mm		Hardness (> #10):	hard



Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	97.8	2.2
#4	4750	97.0	0.7
#10	2000	95.3	1.8
#20	850	92.3	3.0
#40	425	83.3	9.0
#60	250	63.8	19.6
#80	180	45.4	18.3
#100	150	37.6	7.8
#200	75	14.8	22.8
Hydrometer	36.4	5.5	9.3
I	23.2	4.5	1.0
	13.5	3.5	1.0
I	9.6	3.0	0.5
I	6.7	2.5	0.5
i i	3.4	1.6	0.9
V	1.5	1.2	0.3

Soil	Percent of
Classification	Total Sample
Gravel	3.0
Sand	82.2
Coarse Sand	1.8
Medium Sand	12.0
Fine Sand	68.5
Silt	12.3
Clay	2.5

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.

 Client Code:
 NORANA

 Sample ID:
 TROY-NASSAU-SAND-3

 Lab ID:
 681197

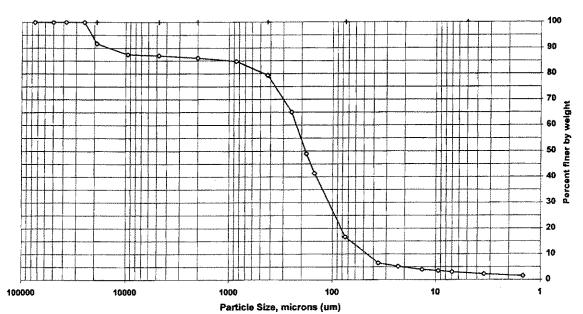
SDG: N/A ETR(s): 116046 
 Date Received:
 8/29/2006

 Start Date:
 8/31/2006

 End Date:
 9/22/2006

Percent Solids: 94.5%
Specific Gravity: 2.650 (assumed)
Maximum Particle Size: 25 mm

Non-soil material: na
Shape (> #10): rounded
Hardness (> #10): hard



Particle | Percent | Incremental

Particle	Percent	incremental
size, um	finer	percent
75000	100.0	0.0
50000	100.0	0.0
37500	100.0	0.0
25000	100.0	0.0
19000	91.8	8.2
9500	87.5	4.3
4750	87.1	0.4
2000	86.1	0.9
850	84.8	1.3
425	79.4	5.4
250	65.1	14.4
180	49.0	16.1
150	41.4	7.6
75	16.7	24.7
35.7	6.5	10.1
22.9	5.2	1.3
13.4	3.9	1.3
9.4	3.5	0.4
6.9	3.0	0.4
3.4	2.3	0.8
1.5	1.5	0.7
	size, um 75000 50000 37500 25000 19000 9500 4750 2000 850 425 250 180 150 75 35.7 22.9 13.4 9.4 6.9	size, um         finer           75000         100.0           50000         100.0           37500         100.0           25000         100.0           19000         91.8           9500         87.5           4750         87.1           2000         86.1           850         84.8           425         79.4           250         65.1           180         49.0           150         41.4           75         16.7           35.7         6.5           22.9         5.2           13.4         3.9           9.4         3.5           6.9         3.0           3.4         2.3

Soil	Percent of
Classification	Total Sample
Gravel	12.9
Sand	70.4
Coarse Sand	0.9
Medium Sand	6.7
Fine Sand	62.7
Silt	13.6
Clay	3.0

Preparation Method:

D2217

Dispersion Device: Mechanical mixer with

a metal paddle.

Dispersion Period: 1 minute

FSL024:07.29.05:0 STL Burlington

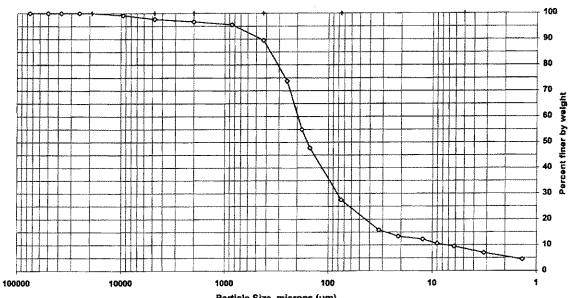
116046PS 9/22/2006

Client Code:	NORANA
Sample ID:	TROY-TOP-SOIL-1
Lab ID:	681201

SDG: N/A ETR(s): 116046 Date Received: 8/29/2006
Start Date: 8/31/2006
End Date: 9/20/2006

Percent Solids:	87.8%
Specific Gravity:	2.650
Maximum Particle Size:	19 mm

Non-soil material: plant
Shape (> #10): subrounded
Hardness (> #10): hard



Particle Size, microns (um)

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.2	0.8
#4	4750	97.7	1.5
#10	2000	96.8	0.9
#20	850	95.6	1.2
#40	425	89.6	6.0
#60	250	73.7	15.9
#80	180	54.9	18.8
#100	150	47.8	7.1
#200	75	27.5	20.3
Hydrometer	32.5	15.8	11.6
	21.1	13.3	2.5
ı	12.3	12.2	1.1
1	9.0	10.6	1.7
1	6.2	9.4	1.1
	3.2	6.9	2.5
v	1.4	4.4	2.5

Soil	Percent of
Classification	Total Sample
Gravei	2.3
Sand	70.2
Coarse Sand	0.9
Medium Sand	7.2
Fine Sand	62.1
Sift	18.0
Clay	9.4

Preparation Method:

Dispersion Device: Mechanical mixer with a metal paddle.

D2217

Client Code:	NORANA	SDG:	N/A	Date Received:	8/29/2006
Sample ID:	TROY-TOP-SOIL-2	ETR(s):	116046	Start Date:	8/31/2006
Lab ID:	681202	•		End Date:	9/20/2006

	plant	oil material:	Non-soil	87.9%	Percent Solids:	
	subrounded	ape (> #10):		2.650	Specific Gravity:	
	hard	ess (> #10):	Hardness	9.5 mm	rimum Particle Size:	Maxin
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Particle Size, microns (um)

Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.5	0.5
#10	2000	98.7	8.0
#20	850	97.8	0.9
#40	425	92.3	5.5
#60	250	76.3	16.0
#80	180	56.5	19.8
#100	150	50.4	6.2
#200	75	29.5	20.8
Hydrometer	32.1	19.0	10.6
	20.7	17.4	1.6
	12.1	15.6	1.9
	8.6	13.7	1.9
	6.2	12.4	1.2
	3.2	9.6	2.8
٧	1.3	6.8	2.8

Soil	Percent of
Classification	Total Sample
Gravel	0.5
Sand	70.0
Coarse Sand	0.8
Medium Sand	6.4
Fine Sand	62.8
Sit	17.1
Clay	12.4

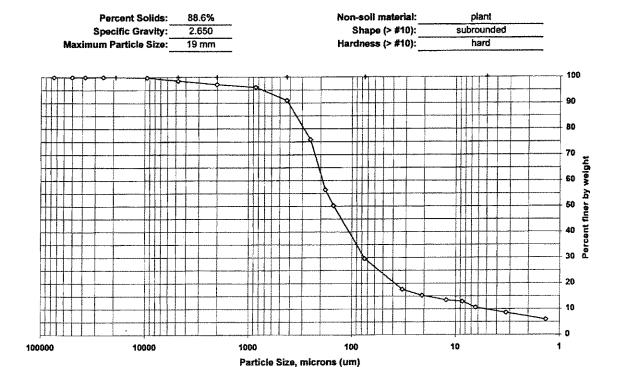
Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.

Dispersion Period: 1 minute

FSL024:07.29.05:0 STL Burlington

116046BPS 9/22/2006

Client Code:	NORANA	SDG:	N/A	Date Received:	8/29/2006
Sample ID:	TROY-TOP-SOIL-3	ETR(s):	116046	Start Date:	8/31/2006
Lab ID:	681203	_		End Date:	9/20/2006



Sieve	Particle	Percent	Incremental
size	size, um	finer	percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.8	0.2
#4	4750	98.6	1.2
#10	2000	97.1	1.5
#20	850	96.1	1.1
#40	425	91.0	5.1
#60	250	75.8	15.2
#80	180	56.4	19.4
#100	150	50.3	6.1
#200	75	29.6	20.6
Hydrometer	32.3	17.6	12.0
ı	20.9	15.2	2.3
ı	12.3	13.5	1.8
	8.6	12.9	0.6
1	6.3	10.6	2.3
I	3.3	8.5	2.1
V	1,4	5.9	2.6

Soil	Percent of Total Sample	
Classification		
Gravel	1.4	
Sand	68.9	
Coarse Sand	1.5	
Medium Sand	6.2	
Fine Sand	61.3	
Silt	19.1	
Clay	10.6	

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.

## ITEM 21 GROUNDWATER MANAGEMENT AREAS PLANT SITE 1 (GMA 1) (GECD310) SEPTEMBER 2006

\* All activities described below for this item were conducted pursuant to the Consent Decree.

#### a. <u>Activities Undertaken/Completed</u>

#### **General:**

- Conducted routine groundwater elevation and NAPL monitoring activities.
- Conducted NAPL bailing round in preparation for semi-annual monitoring event.

#### **East Street Area 1-North and South:**

- Continued automated groundwater and NAPL pumping at North Side and South Side Caissons. No LNAPL was recovered from the North Side Caisson in September. Approximately 25 gallons of LNAPL were recovered from the South Side Caisson in September.
- Continued routine well monitoring and manual NAPL removal activities. Approximately 1.529 liters (0.403 gallon) of LNAPL were removed from this area during September.

#### **East Street Area 2-South:**

- Continued automated groundwater and LNAPL removal activities. A total of approximately 3,071,279 gallons of groundwater was recovered from pumping systems 64R, 64S, 64V, 64X, RW-1(S), RW-1(X), and RW-2(X). In addition, approximately 633 gallons of LNAPL were removed from pumping systems 64R, 64V, RW-1(S), RW-1(X), 64X, and 64S Caisson.
- Continued automated DNAPL removal activities. Approximately 26 gallons of DNAPL were removed from pumping system RW-3(X) during September.
- Continued routine well monitoring and manual NAPL removal activities. Approximately 18.067 liters (4.767 gallons) of LNAPL were removed from wells in this area during September. Approximately 2.776 liters (0.733 gallon) of DNAPL were removed from wells in this area during September.
- Treated/discharged 3,265,622 gallons of water through 64G Groundwater Treatment Facility.
- Conducted LNAPL recovery testing at well 25R.

# ITEM 21 (cont'd) GROUNDWATER MANAGEMENT AREAS PLANT SITE 1 (GMA 1) (GECD310) SEPTEMBER 2006

#### a. Activities Undertaken/Completed (cont'd)

#### **East Street Area 2-North:**

- Continued well monitoring and NAPL removal activities. Approximately 0.148 liter (0.039 gallon) of LNAPL was recovered from this area during September.

#### 20s, 30s, and 40s Complexes:

- Continued well monitoring and NAPL removal activities. Approximately 0.037 liter (0.010 gallon) of LNAPL was recovered from this area during September.

#### **Lyman Street Area:**

- Continued automated groundwater and NAPL removal activities. A total of approximately 172,604 gallons of groundwater was recovered from pumping systems RW-1R, RW-2, and RW-3. No LNAPL was removed from the automated recovery systems during September.
- Continued routine well monitoring and NAPL removal activities. Approximately 1.098 liters (0.290 gallon) of LNAPL was removed from wells in this area during September. Approximately 2.776 liters (0.733 gallon) of DNAPL were removed from wells in this area during September.

#### **Newell Street Area II:**

- Continued automated DNAPL removal activities. A total of approximately 97.2 gallons of DNAPL was removed by System 2 in September.
- Continued routine well monitoring and NAPL removal activities. Approximately 6.719 liters (1.773 gallons) of DNAPL were recovered from this area during September. Approximately 1.508 liters (0.398 gallon) of LNAPL were recovered from this area during September.
- Conducted inventory of existing wells.

#### Silver Lake Area:

- Continued routine monitoring of staff gauge in lake.

# ITEM 21 (cont'd) GROUNDWATER MANAGEMENT AREAS PLANT SITE 1 (GMA 1) (GECD310) SEPTEMBER 2006

#### b. <u>Sampling/Test Results Received</u>

See attached tables.

#### c. Work Plans/Reports/Documents Submitted

None

#### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Continue routine groundwater and NAPL monitoring/recovery activities, including semi-annual NAPL monitoring event.
- Repair/replace wells that were damaged during Newell Street Area II Removal Action.
- Evaluate potential additional groundwater/LNAPL recovery measures at the former scrapyard area at East Street Area 2-South and present the results in a letter to EPA by October 30, 2006.
- Remove/replace/modify selected wells on the 20s and 30s Complexes per GE's approved May 22, 2006 proposal.
- Remove oil skimmer from well 40R and place a new skimmer in well GMA1-17W, following EPA approval of GE's proposal.
- Perform supplemental groundwater sampling activities at 2 wells, as approved by EPA in its September 27, 2006 conditional approval letter for GE's Groundwater Quality Monitoring Interim Report for Spring 2006 (see Items 21.e and 21.f below).

#### e. General Progress/Unresolved Issues/Potential Schedule Impacts

The fall 2006 supplemental sampling event at 2 wells may be delayed pending evaluation of the data obtained during the expedited sampling activities at GMA 4 (see Item 24.d).

#### f. Proposed/Approved Work Plan Modifications

Received EPA conditional approval of GE's July 28, 2006 Groundwater Quality Monitoring Interim Report for Spring 2006 (September 27, 2006).

### TABLE 21-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

### GROUNDWATER MANAGEMENT AREA 1 GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

		Sample				Date Received
Project Name	Field Sample ID	Date	Matrix	Laboratory	Analyses	by GE or BBL
Building 78 GMA1 Well Water Drum Sampling	BLDG78-GMA-1-COMP	8/16/06	Water	SGS	PCB, VOC, SVOC, Total Metals	9/12/06
Building 78 GMA1 Well Water Drum Sampling	GMA1-27-WATER-1	8/24/06	Water	SGS	PCB, VOC, SVOC, Total Metals	9/18/06

#### TABLE 21-2 DATA RECEIVED DURING SEPTEMBER 2006

#### BUILDING 78 WATER DRUM SAMPLING GROUNDWATER MANAGEMENT AREA 1 GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

(Results are presented in parts per million, ppm)

Parameter	Sample ID: Date Collected:	BLDG78-GMA-1-COMP 08/16/06	GMA1-27-WATER-1 08/24/06		
Volatile Organic	s				
Chloroethane		0.0087 J	ND(0.0010)		
Chloroform		ND(0.010)	0.00053 J		
PCBs-Unfiltered	d				
Aroclor-1254		0.016	0.064		
Total PCBs		0.016	0.064		
Semivolatile Org	ganics				
bis(2-Ethylhexyl)	phthalate	0.019 0.015			
Di-n-Butylphthala	ate	0.0030 J ND(0.010)			
Inorganics-Unfil	Itered				
Arsenic		ND(0.0100)	0.0107		
Barium		0.110	0.907		
Cadmium		0.000470 B	0.00398 B		
Chromium		0.0336	0.356		
Lead		0.0278	0.457		
Mercury		0.000108 B	0.00157		

#### Notes:

- 1. Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs, volatiles, semivolatiles, and metals.
- 2. Only those constituents detected in one or more samples are summarized.
- 3. ND Analyte was not detected. The number in parenthesis is the associated detection limit.

#### Data Qualifiers:

#### Organics (volatiles, PCBs, semivolatiles)

J - Indicates an estimated value less than the practical quantitation limit (PQL).

#### Inorganics

B - Indicates an estimated value between the instrument detection limit (IDL) and PQL.

# TABLE 21-3 AUTOMATED LNAPL & GROUNDWATER RECOVERY SYSTEMS MONTHLY SUMMARY EAST STREET AREA 1 - NORTH & SOUTH GROUNDWATER MANAGEMENT AREA 1

Caisson	Month	Vol. LNAPL Collected (gallon)	Vol. Water Recovered (gallon)	Percent Downtime
Northside	September 2005	4.0	10,400	4.91
	October 2005	24.0	8,900	26.34
	November 2005	4.0	52,000	
	December 2005	12.0	33,900	
	January 2006	1.0	44,300	
	February 2006	1.0	27,700	
	March 2006	5.0	26,800	0.71
	April 2006	0.0	17,500	
	January 1900	0.0	20,500	
	June 2006	0.0	51,700	
	July 2006	0.0	18,500	
	August 2006	0.0	21,700	
	September 2006	0.0	13,000	0.89
Southside	September 2005	9.0	56,300	4.91
	October 2005	4.0	71,000	4.91
	November 2005	2.0	96,600	
	December 2005	0.0	112,800	
	January 2006	15.0	98,400	
	February 2006	0.0	98,500	
	March 2006	3.0	121,500	0.71
	April 2006	12.0	76,200	
	May 2006	12.0	73,500	
	June 2006	0.0	160,900	
	July 2006	0.0	58,900	
	August 2006	0.0	84,900	
	September 2006	25.0	59,400	0.89

# TABLE 21-4 MEASUREMENT AND REMOVAL OF RECOVERABLE LNAPL EAST STREET AREA 1 - NORTH & SOUTH GROUNDWATER MANAGEMENT AREA 1

## CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Well Name	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	LNAPL Removed (liters)	September 2006 Removal (liters)				
GMA 1 - East Street Area 1 - North										
49	9/27/06	5.72	5.71	0.01	0.006	0.006				
105	9/27/06	8.39	7.59	0.80	0.616	0.616				
106	9/27/06	9.59	9.10	0.49	0.302	0.302				
GMA 1 - East St	reet Area 1 -	South								
34	9/27/06	6.12	6.11	0.01	0.006	0.006				
35	9/27/06	6.00	5.96	0.04	0.025	0.025				
45	9/27/06	6.03	5.94	0.09	0.056	0.056				
72	72 9/27/06		6.87	0.16	0.099	0.099				
76	9/27/06	7.44	6.76	0.68	0.420	0.420				

Total Manual LNAPL Removal for September 2006: 1.529 liters 0.403 gallons

#### Note:

1. ft BMP - feet Below Measuring Point.

# TABLE 21-5 ROUTINE WELL MONITORING EAST STREET AREA 1 - NORTH & SOUTH GROUNDWATER MANAGEMENT AREA 1

# CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)			
GMA 1 - East S	GMA 1 - East Street Area 1 - North											
49	999.90	9/27/06	5.72	5.71	0.01		11.51	0.00	994.19			
105	1002.85	9/27/06	8.39	7.59	0.80		17.37	0.00	995.20			
106	1004.06	9/27/06	9.59	9.10	0.49		12.48	0.00	994.93			
107	1003.86	9/27/06	7.73		0.00		17.69	0.00	996.13			
131	1001.18	9/27/06	4.82		0.00		6.80	0.00	996.36			
North Caisson	997.84	9/6/06	17.60	Р	< 0.01		19.80	0.00	980.24			
North Caisson	997.84	9/12/06	18.40	18.39	0.01		19.80	0.00	979.45			
North Caisson	997.84	9/20/06	18.10	Р	< 0.01		19.80	0.00	979.74			
North Caisson	997.84	9/27/06	18.09	18.08	0.01		19.80	0.00	979.76			
GMA 1 - East S	treet Area 1 -	South										
31R	1,000.23	9/12/06	9.70		0.00		15.03	0.00	990.53			
34	999.90	9/27/06	6.12	6.11	0.01		20.99	0.00	993.79			
35	1000.15	9/27/06	6.00	5.96	0.04		9.54	0.00	994.19			
45	1000.10	9/27/06	6.03	5.94	0.09		11.72	0.00	994.15			
72	1000.62	9/27/06	7.03	6.87	0.16		21.88	0.00	993.74			
72R	1000.92	9/12/06	7.00		0.00		13.30	0.00	993.92			
76	1000.45	9/27/06	7.44	6.76	0.68		18.61	0.00	993.64			
South Caisson	1001.11	9/6/06	14.26	Р	< 0.01		15.00	0.00	986.85			
South Caisson	1001.11	9/12/06	14.33	14.30	0.03		15.00	0.00	986.81			
South Caisson	1001.11	9/20/06	14.00	13.97	0.03		15.00	0.00	987.14			
South Caisson	1001.11	9/27/06	8.82	8.81	0.01		15.00	0.00	992.30			

- 1. ft BMP feet Below Measuring Point.
- 2. --- indicates LNAPL or DNAPL was not present in a measurable quantity.
- 3. P indicates that NAPL is present at a thickness < 0.01 feet, the corresponding thickness is recorded as such.

# TABLE 21-6 AUTOMATED LNAPL/DNAPL & GROUNDWATER RECOVERY SYSTEMS EAST STREET AREA 2 - SOUTH GROUNDWATER MANAGEMENT AREA 1

Recovery		Oil	Water	
System		Collected	Recovered	Percent
Location	Month	(gallon)	(gallon)	Downtime
40R	September 2005 October 2005 November 2005 December 2005 January 2006 February 2006 March 2006	0 0 0 0 0 0		
	April 2006 May 2006 June 2006 July 2006 August 2006 September 2006	0 0 0 0 0		
64R	September 2005 October 2005 November 2005 December 2005 January 2006 February 2006	50 75 125 400 400 375	10,200 492,200 988,100 1,062,900 896,700 899,800	4.91 10.71
	March 2006 April 2006 May 2006 June 2006 July 2006 August 2006	150 75 75 550 250 25	170,611 375,609 435,398 720,359 345,697 38,948	0.71
	September 2006	75	4,627	0.89
64S System	September 2005 October 2005 November 2005 December 2005 January 2006 February 2006	321 82 324 170 245 673	172,650 541,419 1,014,521 927,871 1,080,795 1,304,005	4.91 10.71
	March 2006 April 2006 May 2006 June 2006 July 2006	1,285 558 51 327 472	1,078,733 696,282 668,110 1,061,071 732,853	2.14 5.36 1.79 0.93 0.93
	August 2006 September 2006	238 188	646,128 393,032	0.89
64V <sup>1</sup>	September 2005 October 2005	349 564	714,700 933,400	4.91 4.91
	November 2005 December 2005 January 2006 February 2006	515 564 697 598	1,304,100 1,117,000 1,208,800 1,177,900	0.74
	March 2006 April 2006 May 2006 June 2006 July 2006	315 249 431 697 548	1,251,800 901,800 911,700 1,228,300 885,300	0.71
	August 2006 September 2006	548 548 332	1,016,400 794,600	0.89

# TABLE 21-6 AUTOMATED LNAPL/DNAPL & GROUNDWATER RECOVERY SYSTEMS EAST STREET AREA 2 - SOUTH GROUNDWATER MANAGEMENT AREA 1

Recovery		Oil	Water	
System		Collected	Recovered	Percent
Location	Month	(gallon)	(gallon)	Downtime
64X	September 2005	25	403,200	
	October 2005	25	403,200	21.43
	November 2005	0	489,600	
	December 2005	6	417,600	
	January 2006	1	417,600	
	February 2006	1	388,800	
	March 2006	1	504,000	0.71
	April 2006	1	403,200	
	May 2006	83	403,200	
	June 2006	14	518,400	
	July 2006	28	388,800	
	August 2006	127	504,000	
	September 2006	24.2	403,200	0.89
RW-2(X)	September 2005	0	721,200	4.91
	October 2005	0	529,600	
	November 2005	0	573,600	
	December 2005	0	491,800	
	January 2006	0	710,700	
	February 2006	0	1,288,600	
	March 2006	0	1,081,726	0.71
	April 2006	10	408,494	
	May 2006	0	652,543	
	June 2006	0	1,463,805	
	July 2006	0	1,076,551	
	August 2006	0	1,146,830	0.00
	September 2006	1	546,233	0.89
RW-1(S) 2	September 2005	4	527,699	4.91
	October 2005	43	783,765	
	November 2005	42	1,103,548	
	December 2005	40	900,898	
	January 2006	30	270,228	
	February 2006	27	1,042,895	
	March 2006	40	1,049,702	0.71
	April 2006	57	736,984	
	May 2006	77	744,621	
	June 2006	59	935,039	4.63
	July 2006	28	722,887	
	August 2006	17	741,315	0.00
	September 2006	12	554,826	0.89
RW-1(X)	September 2005	0	80,000	4.91
	October 2005	0	299,300	
	November 2005	0	390,700	
	December 2005	0	324,500	
	January 2006	0	417,500	
	February 2006	0	381,500	0.74
	March 2006	0	119,720	0.71
	April 2006	0	403,940	
	May 2006	0	385,828	
	July 2006 June 2006	0 0	561,633 369,041	
	August 2006	0	471,215	
	September 2006	1.1	374,761	0.89
	September 2000	1.1	314,701	0.03

#### **TABLE 21-6** AUTOMATED LNAPL/DNAPL & GROUNDWATER RECOVERY SYSTEMS **EAST STREET AREA 2 - SOUTH GROUNDWATER MANAGEMENT AREA 1**

#### **CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS** September 2006

Recovery System Location	Month	Oil Collected (gallon)	Water Recovered (gallon)	Percent Downtime
RW-3(X)	September 2005	40		
( )	October 2005	19		35.71
	November 2005	51		5.88
	December 2005	31		
	January 2006	27		
	February 2006	20		
	March 2006	36		
	April 2006	29		
	May 2006	29		
	June 2006	42		
	July 2006	28		
	August 2006	37		
	September 2006	26		

Summary of Total Automated Removal								
Water: 3,071,279 Gallons								
LNAPL:	633	Gallons						
DNAPL:	26	Gallons						

- The flow meter at recovery well 64V was reset in December 2004.
   The flow meter at recovery well RW-1(S) was reset in January 2006.
- 3. The flow meters at recovery wells RW-1(X), RW-2(X), 64X(W), and 64R were reset in March 2006.

#### **TABLE 21-7** WELL MONITORING AND RECOVERY OF LNAPL EAST STREET AREA 2 - NORTH & SOUTH / 20s, 30s, & 40s COMPLEXES **GROUNDWATER MANAGEMENT AREA 1**

#### **CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS** September 2006

Well Name	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	LNAPL Removed (liters)	September 2006 Removal (liters)	
20's Complex		<u> </u>			•	•	
CC	9/26/06	20.25	20.22	0.03	0.019	0.019	
II	9/26/06	28.49	28.46	0.03	0.019	0.019	
East Street Area 2	2 - North						
14-N	9/26/06	23.63	23.50	0.13	0.080	0.080	
17-N	9/26/06	31.10	31.05	0.05	0.031	0.031	
23-N	9/26/06	31.26	31.20	0.06	0.037	0.037	
East Street Area 2	2 - South						
02	9/25/06	18.60	18.59	0.01	0.006	0.006	
14	9/25/06	18.28	18.26	0.02	0.047	0.047	
	9/19/06	26.22	21.20	5.02	4.127		
OFD	9/20/06	22.25	21.68	0.57	0.537	4.040	
25R	9/21/06	21.86	21.75	0.11	0.111	4.818	
	9/25/06	21.95	21.80	0.15	0.043		
26RR	9/25/06	23.54	23.10	0.44	0.271	0.271	
29	9/25/06	19.70	18.72	0.98	0.605	0.605	
30	9/25/06	17.10	12.80	4.30	2.653	2.653	
47	9/25/06	19.58	18.20	1.38	0.851	0.851	
48	9/25/06	18.40	16.10	2.30	1.419	1.419	
50	9/25/06	11.52	11.21	0.31	0.191	0.191	
55	9/25/06	18.20	16.90	1.30	0.802	0.802	
95-04R	9/25/06	16.05	14.52	1.53	3.782	3.782	
95-05	9/25/06	17.03	16.36	0.67	0.413	0.413	
95-07R	9/25/06	19.72	19.70	0.02	0.049	0.049	
GMA1-14	9/25/06	20.19	20.16	0.03	0.019	0.019	
	9/13/06	16.40	15.95	0.45	0.278		
GMA1-15	9/20/06	16.45	15.90	0.55	0.339	1.049	
	9/25/06	16.50	15.80	0.70	0.432		
	9/13/06	14.28	14.00	0.28	0.173		
GMA1-16	9/20/06	14.30	13.93	0.37	0.228	0.611	
	9/25/06	14.26	13.92	0.34	0.210		
GMA1-17E	9/25/06	16.07	16.05	0.02	0.012	0.012	
	9/6/06	12.00	11.64	0.36	0.222		
GMA1-19	9/13/06	12.14	11.82	0.32	0.197	0.463	
GIVIA 1-19	9/20/06	11.73	11.69	0.04	0.025		
	9/25/06	11.63	11.60	0.03	0.019		
M-R	9/25/06	20.61	20.60	0.01	0.006	0.006	

Total LNAPL Removal East Street Area 2 - South for September 2006: 18.067 liters 4.767 gallons

Total LNAPL Removal East Street Area 2 - North for September 2006: 0.148 liters 0.039 gallons

Total LNAPL Removal 20's, 30's & 40's Complexs for September 2006: 0.037 liters 0.010 gallons

Total LNAPL Removal for September 2006: 18.252 liters

4.816 gallons

#### Note:

1. ft BMP - feet Below Measuring Point.

# TABLE 21-8 WELL MONITORING AND RECOVERY OF DNAPL EAST STREET AREA 2 - NORTH & SOUTH / 20s, 30s, & 40s COMPLEXES GROUNDWATER MANAGEMENT AREA 1

### CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Well	Date	Depth to Water	Depth to DNAPL	DNAPL Thickness	DNAPL Removed	September 2006 Removal
Name		(ft BMP)	(ft BMP)	(feet)	(liters)	(liters)
E2SC-03I	9/25/06	9.90	37.90	4.50	2.776	2.776

Total DNAPL Removal East Street Area 2 - South for September 2006: 2.776 liters

0.733 gallons

Total DNAPL Removal East Street Area 2 - North for September 2006: 0.000 liters

0.000 gallons

Total DNAPL Removal 20's, 30's & 40's Complexs for September 2006: 0.000 liters

0.000 gallons

Total DNAPL Removal for September 2006: 2.776 liters

0.733 gallons

#### Note:

1. ft BMP - feet Below Measuring Point

#### TABLE 21-9 64G TREATMENT PLANT DISCHARGE DATA GROUNDWATER MANAGEMENT AREA 1

### CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Date	Housatonic River Date Discharge (gallons)		Total Discharge (gallons)
September 2005	2,537,520	335,710	2,873,230
October 2005	5,156,510	177,795	5,334,305
November 2005	5,221,180	163,951	5,385,131
December 2005	5,678,290	104,185	5,782,475
January 2006	6,317,250	89,159	6,406,409
February 2006	8,371,400	114,659	8,486,059
March 2006	5,301,850	200,184	5,502,034
April 2006	4,830,590	255,870	5,086,460
May 2006	5,110,840	263,791	5,374,631
June 2006	5,067,810	293,825	5,361,635
July 2006	4,631,550	348,554	4,980,104
August 2006	3,542,620	322,375	3,864,995
September 2006	2,938,190	327,432	3,265,622

After treatment, the majority of the water processed at GE's Building 64G groundwater treatment facility is discharged to the Housatonic River through NPDES permitted Outfall 005. However, as part of GE's overall efforts to contain NAPL within the site and to optimize NAPL recovery operations, a portion of the treated water discharged from the 64G facility is routed to GE's on-site recharge pond located in East Street Area 2-South.

			5 4			5 41 4			
\A/-!!	Measuring	Data	Depth	Depth to	LNAPL	Depth to	Total	DNAPL	Corrected
Well	Point Elev.	Date	to Water	LNAPL	Thickness	DNAPL	Depth	Thickness	Water Elev.
Name	(feet)		(ft BMP)	(ft BMP)	(feet)	(ft BMP)	(ft BMP)	(feet)	(feet)
20's Complex		1	1				1		T
CC	998.84	9/26/06	20.25	20.22	0.03		27.15	0.00	978.62
EE	1,004.27	9/26/06	25.42		0.00		33.84	0.00	978.85
II	1,007.26	9/26/06	28.49	28.46	0.03		31.66	0.00	978.80
East Street Area									
05-N	1,009.23	9/26/06	24.61		0.00		27.67	0.00	984.62
14-N	1,010.53	9/26/06	23.63	23.50	0.13		30.40	0.00	987.02
16-N	1,010.65	9/26/06	31.50		0.00		37.20	0.00	979.15
17-N	1,010.49	9/26/06	31.10	31.05	0.05		38.75	0.00	979.44
23-N	1,011.13	9/26/06	31.26	31.20	0.06		38.20	0.00	979.93
East Street Area									
02	995.64	9/25/06	18.60	18.59	0.01		23.30	0.00	977.05
05	996.10	9/25/06	15.58		0.00		23.48	0.00	980.52
13	990.88	9/25/06	18.24		0.00		22.60	0.00	972.64
14	991.61	9/25/06	18.28	18.26	0.02		25.65	0.00	973.35
19	983.59	9/6/06	11.60		0.00		18.11	0.00	971.99
19	983.59	9/13/06	11.74		0.00		18.10	0.00	971.85
19	983.59	9/18/06	11.50		0.00		18.10	0.00	972.09
19	983.59	9/29/06	11.40		0.00		18.09	0.00	972.19
25R	998.31	9/19/06	26.22	21.20	5.02		30.78	0.00	976.76
25R	998.31	9/20/06	22.25	21.68	0.57		30.78	0.00	976.59
25R	998.31	9/21/06	21.86	21.75	0.11		30.78	0.00	976.55
25R	998.31	9/25/06	21.95	21.80	0.15		30.80	0.00	976.50
26RR	1,000.58	9/25/06	23.54	23.10	0.44		28.50	0.00	977.45
29	991.59	9/25/06	19.70	18.72	0.98		21.90	0.00	972.80
30	989.34	9/25/06	17.10	12.80	4.30		22.36	0.00	976.24
40R	991.60	9/6/06	18.70		0.00		NM	0.00	972.90
40R	991.60	9/12/06	17.10		0.00		NM	0.00	974.50
40R	991.60	9/20/06	18.72		0.00		NM	0.00	972.88
40R	991.60	9/27/06	18.75		0.00		NM	0.00	972.85
42	988.33	9/25/06	13.89		0.00		18.71	0.00	974.44
43	989.67	9/25/06	14.69		0.00		22.49	0.00	974.98
47	991.09	9/25/06	19.58	18.20	1.38		23.05	0.00	972.79
48	992.39	9/25/06	18.40	16.10	2.30		22.65	0.00	976.13
49R	988.71	9/18/06	15.95		0.00		24.88	0.00	972.76
49R	988.71	9/26/06	15.98		0.00		24.81	0.00	972.73
49RR	989.80	9/18/06	17.06		0.00		23.05	0.00	972.74
50	985.79	9/25/06	11.52	11.21	0.31		23.40	0.00	974.56
55	989.45	9/25/06	18.20	16.90	1.30		30.05	0.00	972.46
57	989.80	9/25/06	13.28		0.00		27.10	0.00	976.52
58	985.79	9/25/06	13.51	13.49	0.02		24.05	0.00	972.30
64R	993.37	9/6/06	16.17	16.16	0.01		20.50	0.00	977.21
64R	993.37	9/12/06	16.38	Р	< 0.01		20.50	0.00	976.99
64R	993.37	9/20/06	16.28	Р	< 0.01		20.50	0.00	977.09
64R	993.37	9/27/06	16.37	16.36	0.01		20.50	0.00	977.01

	Magazzina		Donth	Donth to	LNADI	Donth to	Total	DNADI	Carracted
Well	Measuring Point Elev.	Date	Depth to Water	Depth to LNAPL	LNAPL Thickness	Depth to DNAPL	Total	DNAPL Thickness	Corrected Water Elev.
		Date	(ft BMP)	(ft BMP)	(feet)	(ft BMP)	Depth (ft BMP)		(feet)
Name	(feet)	0/0/00						(feet)	$\overline{}$
64S	984.48	9/6/06	19.15	P	< 0.01		28.70	0.00	965.33
64S	984.48	9/12/06	19.25	19.24	0.01		28.70	0.00	965.24
64S	984.48	9/20/06	19.25	Р	< 0.01		28.70	0.00	965.23
64S	984.48	9/27/06	19.21	19.20	0.01		28.70	0.00	965.28
64S-Caisson	NA	9/6/06	10.85	P	< 0.01		14.55	0.00	NA
64S-Caisson	NA	9/12/06	11.18	11.17	0.01		14.55	0.00	NA
64S-Caisson	NA	9/20/06	10.85	Р	< 0.01		14.55	0.00	NA
64S-Caisson	NA	9/27/06	10.91	10.88	0.03		14.55	0.00	NA
64V	987.29	9/6/06	21.80	21.60	0.20		29.60	0.00	965.68
64V	987.29	9/12/06	22.30	21.80	0.50	Р	29.60	< 0.01	965.46
64V	987.29	9/20/06	21.85	21.55	0.30	Р	29.60	< 0.01	965.72
64V	987.29	9/27/06	22.00	21.70	0.30		29.60	0.00	965.57
64X(N)	984.83	9/6/06	12.76	Р	< 0.01		15.85	0.00	972.07
64X(N)	984.83	9/12/06	13.85	13.84	0.01		15.85	0.00	970.99
64X(N)	984.83	9/20/06	12.74	12.72	0.02		15.85	0.00	972.11
64X(N)	984.83	9/27/06	12.75	12.74	0.01		15.85	0.00	972.09
64X(S)	981.56	9/6/06	15.60	15.55	0.05		23.82	0.00	966.01
64X(S)	981.56	9/12/06	15.80	15.73	0.07		23.82	0.00	965.83
64X(S)	981.56	9/20/06	15.65	15.55	0.10		23.82	0.00	966.00
64X(S)	981.56	9/27/06	15.72	15.58	0.14		23.82	0.00	965.97
64X(W)	984.87	9/6/06	18.75	Р	< 0.01		24.35	0.00	966.12
64X(W)	984.87	9/12/06	19.95	19.93	0.02		24.35	0.00	964.94
64X(W)	984.87	9/20/06	18.80	18.75	0.05		24.35	0.00	966.12
64X(W)	984.87	9/27/06	18.81	18.79	0.02		24.35	0.00	966.08
95-01	983.77	9/18/06	11.03		0.00		17.25	0.00	972.74
95-04R	988.70	9/25/06	16.05	14.52	1.53		22.06	0.00	974.07
95-05	989.45	9/25/06	17.03	16.36	0.67		20.09	0.00	973.04
95-07R	994.91	9/25/06	19.72	19.70	0.02		26.05	0.00	975.21
3-6C-EB-22	986.94	9/18/06	14.41		0.00		20.01	0.00	972.53
E2SC-03I	982.12	9/25/06	9.90		0.00	37.90	42.40	4.50	972.22
E2SC-17	985.38	9/26/06	12.25		0.00		45.75	0.00	973.13
E2SC-23	992.07	9/18/06	18.10		0.00		21.15	0.00	973.97
E2SC-24	987.90	9/18/06	15.90		0.00		21.60	0.00	972.00
ES2-06	986.00	9/18/06	13.64		0.00		34.54	0.00	972.36
GMA1-14	997.43	9/25/06	20.19	20.16	0.03		23.25	0.00	977.27
GMA1-15	988.59	9/13/06	16.40	15.95	0.45		17.84	0.00	972.61
GMA1-15	988.59	9/20/06	16.45	15.90	0.55		17.84	0.00	972.65
GMA1-15	988.59	9/25/06	16.50	15.80	0.70		17.84	0.00	972.74
GMA1-16	986.82	9/13/06	14.28	14.00	0.28		20.01	0.00	972.80
GMA1-16	986.82	9/20/06	14.30	13.93	0.37		20.00	0.00	972.86
GMA1-16	986.82	9/25/06	14.26	13.92	0.34		20.00	0.00	972.88
GMA1-17E	993.03	9/25/06	16.07	16.05	0.02		17.30	0.00	976.98
GMA1-17W	992.63	9/25/06		up to recove				0.00	NA
GMA1-19	984.28	9/6/06	12.00	11.64	0.36		17.13	0.00	972.61
GMA1-19	984.28	9/13/06	12.14	11.82	0.32		17.13	0.00	972.44

	Measuring		Depth	Depth to	LNAPL	Depth to	Total	DNAPL	Corrected
Well	Point Elev.	Date	to Water	LNAPL	Thickness	DNAPL	Depth	Thickness	Water Elev.
Name	(feet)	Date	(ft BMP)	(ft BMP)	(feet)	(ft BMP)	(ft BMP)	(feet)	(feet)
GMA1-19	984.28	9/20/06	11.73	11.69	0.04		17.14	0.00	972.59
GMA1-19	984.28	9/25/06	11.63	11.60	0.04		17.14	0.00	972.68
GMA1-19 GMA1-20	983.49	9/6/06	11.03	11.60	0.03		17.14	0.00	972.00
GMA1-20	983.49	9/13/06	11.30		0.00		17.30	0.00	972.34
GMA1-20	983.49	9/18/06	11.15		0.00		17.30	0.00	972.19
GMA1-20	983.49	9/29/06	11.15		0.00		17.30	0.00	972.44
GMA1-21	985.68	9/6/06	13.30		0.00		19.45	0.00	972.38
GMA1-21	985.68	9/13/06	13.45		0.00		19.45	0.00	972.23
GMA1-21	985.68	9/18/06	13.40		0.00		19.46	0.00	972.28
GMA1-21	985.68	9/29/06	13.40		0.00		19.44	0.00	972.43
GMA1-21 GMA1-22	988.45	9/29/06	15.80		0.00		19.44	0.00	972.43
GMA1-22	988.45	9/13/06	15.62		0.00		19.25	0.00	972.83
GMA1-22	988.45	9/18/06	15.62		0.00		19.23	0.00	972.85
GMA1-23	986.16	9/29/06	13.55		0.00		17.30	0.00	972.61
GMA1-23	986.16	9/13/06	13.40		0.00		17.30	0.00	972.61
GMA1-23	986.16	9/19/06	13.35		0.00		17.30	0.00	972.76
GMA1-23	983.81	9/6/06	11.47		0.00		16.10	0.00	972.34
GMA1-24	983.81	9/13/06	11.47		0.00		16.10	0.00	972.34
		9/13/06	11.64		0.00		16.10	0.00	972.17
GMA1-24 GMA1-24	983.81 983.81	9/16/06	11.40		0.00		16.08	0.00	972.33
HR-G2-MW-1	982.60	9/28/06	11.40		0.00		18.24	0.00	972.41
HR-G2-MW-2	981.39	9/18/06	9.05		0.00		17.66	0.00	971.45
HR-G2-MW-3	987.14	9/18/06	15.15		0.00		22.00	0.00	972.34
HR-G2-RW-1	976.88	9/18/06	6.71		0.00		18.70	0.00	971.89
HR-G2-RW-1	976.88	9/16/06	6.61		0.00		18.60	0.00	971.94
M-R	998.19	9/25/06	20.61	20.60	0.00		29.21	0.00	977.59
P3	989.25	9/25/06	5.23	20.60			13.06		984.02
PZ-1S	989.25	9/25/06	17.80		0.00		20.25	0.00 0.00	972.13
RW-1(S)	987.23	9/6/06	19.30	19.05	0.00		28.60	0.00	968.16
RW-1(S)	987.23	9/12/06	19.30	19.05	0.25		28.60	0.00	968.14
RW-1(S)	987.23	9/20/06	19.15	19.09	0.05		28.60	0.00	968.23
RW-1(S)	987.23	9/27/06	19.03	19.00	0.05		28.60	0.00	968.16
RW-1(X)	982.68	9/6/06	14.20	19.07	0.00		20.80	0.00	968.48
RW-1(X)	982.68	9/12/06	14.20	P	< 0.01		20.80	0.00	968.48
RW-1(X)	982.68	9/20/06	13.80		0.00		20.80	0.00	968.88
RW-1(X)	982.68	9/27/06	13.90	P	< 0.01		20.80	0.00	968.78
RW-2(X)	985.96	9/6/06	14.40		0.00		15.30	0.00	971.56
RW-2(X)	985.96	9/12/06	14.40				15.30	0.00	971.46
RW-2(X)	985.96	9/12/06	14.50		0.00		15.30	0.00	971.46
	985.96	9/20/06	14.35		0.00		15.30	0.00	971.66
RW-2(X) RW-3(X)	985.96	9/6/06	9.30		0.00	43.00	44.40	1.40	971.61
RW-3(X)	980.28	9/0/06	9.30		0.00	43.00	44.40	1.40	970.98
RW-3(X)	980.28	9/12/06	9.30		0.00	42.75	44.40	1.80	970.38
RW-3(X)		9/20/06	9.30			42.60	44.40	1.70	970.98
KVV-3(A)	980.28	9/21/00	9.30		0.00	42.70	44.40	1.70	970.98

### CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)
Housatonic River									
SG-HR-1	990.73	9/6/06	19.70	See Note 7 r	regarding dep	th to water			971.03
SG-HR-1	990.73	9/13/06	19.80	See Note 7 r	regarding dep	th to water			970.93
SG-HR-1	990.73	9/20/06			regarding dep		•		971.33
SG-HR-1	990.73	9/29/06	19.35	See Note 7 r	regarding dep	th to water			971.38

- 1. ft BMP feet Below Measuring Point.
- 2. --- indicates LNAPL or DNAPL was not present in a measurable quantity.
- 3. NA indicates information not available.
- 4. NM indicates information not measured.
- 5. P indicates that LNAPL is present at a thickness that is < 0.01 feet, the corresponding thickness is recorded as
- 6. Well HR-G2-RW-1 is constructed at an angle of 41.67 degrees from vertical. Depth to water data reflect measurements collected along the angled well casing. Groundwater elevations are corrected to account for the angle of the well casing.
- 7. A survey reference point (SG-HR-1) was established on the Newell Street Bridge. The "Depth to Water" value(s) provided in the above table refer to the vertical distance from the surveyed reference point to the water surface.
- 8. A weighted bailer has been installed at this location to remove accumulations of DNAPL. The DNAPL thickness reported is that measured within the bailer upon the initial retrieval.

# TABLE 21-11 ACTIVE RECOVERY SYSTEMS MONTHLY SUMMARY LYMAN STREET AREA GROUNDWATER MANAGEMENT AREA 1

### CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Month / Year	Volume Water Pumped (gallon)	RW-1 DNAPL Recovered (gallon)	RW-1R LNAPL Recovered (gallon)	RW-3 LNAPL Recovered (gallon)
September 2004	499,209		1	20
October 2004	426,078			
November 2004	421,409			12
December 2004	539,528	-		10
January 2005	443,634			10
February 2005	409,113			5
March 2005	455,192			5
April 2005	425,145			5
May 2005	357,497			
June 2005	422,006			10
July 2005	310,647		5	10
August 2005	302,572			
September 2005	198,753			
October 2005	314,247			
November 2005	412,936			
December 2005	332,721			
January 2006	342,548			
February 2006	336,595			
March 2006	322,169			
April 2006	245,626			
May 2006	253,821			
June 2006	562,906			
July 2006	206,016			
August 2006	216,359			
September 2006	172,604			

- 1. Volume of water pumped is total from Wells RW-1R, RW-2, and RW-3.
- 2. -- indicates LNAPL or DNAPL was not recovered by the system.
- 3. There was 16 hours of downtime for RW-1/1R, 9 hours for RW-2, and 6 hours for RW-3 during September 2006.

# TABLE 21-12 MEASUREMENT AND REMOVAL OF RECOVERABLE LNAPL LYMAN STREET AREA GROUNDWATER MANAGEMENT AREA 1

# CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

	Well lame	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	LNAPL Removed (liters)	September 2006 Removal (liters)
L	.S-21	9/27/06	NM	11.15		0.790	0.790
L	.S-31	9/27/06	14.70	14.20	0.50	0.308	0.308

Total Manual LNAPL Removal for September 2006: 1.098 liters

0.290 gallons

#### Note:

1. ft BMP - feet Below Measuring Point.

# TABLE 21-13 MEASUREMENT AND REMOVAL OF RECOVERABLE DNAPL LYMAN STREET AREA GROUNDWATER MANAGEMENT AREA 1

# CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Well Name	Date	Depth to Water (ft BMP)	Depth to DNAPL (ft BMP)	DNAPL Thickness (feet)	DNAPL Removed (liters)	September 2006 Removal (liters)
LS-12	9/27/06	14.37	26.45	0.05	0.031	0.031
LS-30	9/27/06	14.40	20.30	1.91	1.178	1.178
LS-31	9/27/06	14.70	22.80	0.5	0.308	0.308
LS-34	9/27/06	14.41	27.94	0.6	0.370	0.370
	9/6/06	11.50	24.80	0.28	0.173	
LSSC-07	9/13/06	11.70	24.85	0.23	0.142	0.771
L33C-01	9/20/06	11.40	24.78	0.30	0.185	0.771
	9/27/06	11.44	24.64	0.44	0.271	
LSSC-08I	9/6/06	12.98	23.37	0.01	0.006	0.006
LSSC-34I	9/27/06	13.90	28.30	0.18	0.111	0.111

Total Manual DNAPL Removal for September 2006: 2.776 liters 0.733 gallons

#### Note:

1. ft BMP - feet Below Measuring Point.

# TABLE 21-14 ROUTINE WELL MONITORING LYMAN STREET AREA GROUNDWATER MANAGEMENT AREA 1

	Measuring		Depth	Depth to	LNAPL	Depth to	Total	DNAPL	Corrected
Well	Point Elev.	Date	to Water	LNAPL	Thickness	DNAPL	Depth	Thickness	Water Elev.
Name	(feet)	Daio	(ft BMP)	(ft BMP)	(feet)	(ft BMP)	(ft BMP)	(feet)	(feet)
EPA-01	983.04	9/12/06	13.00		0.00		22.65	0.00	970.04
LS-12	985.49	9/27/06	14.37		0.00	26.45	26.50	0.05	971.12
LS-21	983.42	9/27/06	NM	11.15			12.43	0.00	NA
LS-24	986.58	9/12/06	14.58		0.00		15.10	0.00	972.00
LS-30	986.440	9/27/06	14.40		0.00	20.30	22.21	1.91	972.04
LS-31	987.090	9/27/06	14.70	14.20	0.50	22.80	23.30	0.50	972.86
LS-34	985.79	9/27/06	14.41		0.00	27.94	28.54	0.60	971.38
LS-38	986.95	9/27/06	16.20		0.00		25.04	0.00	970.75
LS-44	980.78	9/12/06	6.60		0.00		24.76	0.00	974.18
LSSC-06	984.91	9/27/06	12.25		0.00		19.35	0.00	972.66
LSSC-07	982.48	9/6/06	11.50		0.00	24.80	25.08	0.28	970.98
LSSC-07	982.48	9/13/06	11.70		0.00	24.85	25.08	0.23	970.78
LSSC-07	982.48	9/20/06	11.40		0.00	24.78	25.08	0.30	971.08
LSSC-07	982.48	9/27/06	11.44		0.00	24.64	25.08	0.44	971.04
LSSC-08I	983.13	9/6/06	12.98		0.00	23.37	23.38	0.01	970.15
LSSC-08I	983.13	9/13/06	13.18		0.00		23.36	0.00	969.95
LSSC-08I	983.13	9/20/06	12.90		0.00		23.38	0.00	970.23
LSSC-08I	983.13	9/27/06	12.92		0.00		23.35	0.00	970.21
LSSC-08S	983.11	9/12/06	13.20		0.00		14.68	0.00	969.91
LSSC-18	987.32	9/12/06	15.20		0.00		18.58	0.00	972.12
LSSC-32	980.68	9/12/06	10.15		0.00		35.20	0.00	970.53
LSSC-33	980.49	9/12/06	9.95		0.00		29.20	0.00	970.54
LSSC-33	980.49	9/27/06	9.72		0.00		29.14	0.00	970.77
LSSC-34I	984.74	9/27/06	13.90		0.00	28.30	28.48	0.18	970.84
RW-1	984.88	9/6/06	12.95		0.00	Р	21.00	< 0.01	971.93
RW-1	984.88	9/12/06	13.80		0.00		21.00	0.00	971.08
RW-1	984.88	9/20/06	12.90		0.00	Р	21.00	< 0.01	971.98
RW-1	984.88	9/27/06	12.90		0.00	Р	21.00	< 0.01	971.98
RW-1 (R)	985.07	9/6/06	15.68		0.00	Р	20.42	< 0.01	969.39
RW-1 (R)	985.07	9/12/06	15.90		0.00	Р	20.42	< 0.01	969.17
RW-1 (R)	985.07	9/20/06	15.65		0.00	Р	20.42	< 0.01	969.42
RW-1 (R)	985.07	9/27/06	15.85		0.00	Р	20.42	< 0.01	969.22
RW-2	987.82	9/6/06	15.10		0.00		21.75	0.00	972.72
RW-2	987.82	9/12/06	15.40		0.00		21.75	0.00	972.42
RW-2	987.82	9/20/06	14.85		0.00		21.75	0.00	972.97
RW-2	987.82	9/27/06	15.15		0.00		21.75	0.00	972.67
RW-3	984.08	9/6/06	15.70	15.53	0.17		21.57	0.00	968.54
RW-3	984.08	9/12/06	16.60	16.49	0.11		21.57	0.00	967.58
RW-3	984.08	9/20/06	16.50	16.48	0.02		21.57	0.00	967.60
RW-3	984.08	9/27/06	16.50	16.47	0.03		21.57	0.00	967.61

# TABLE 21-14 ROUTINE WELL MONITORING LYMAN STREET AREA GROUNDWATER MANAGEMENT AREA 1

### CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)
Housatonic	onic River (Lyman Street Bridge)								
BM-2A	986.32	9/6/06	16.41	See Note 6	regarding der	oth to water			969.91
BM-2A	986.32	9/13/06	16.58	See Note 6	regarding der	oth to water			969.74
BM-2A	986.32	9/20/06	16.32	See Note 6 regarding depth to water					970.00
BM-2A	986.32	9/29/06	16.22	See Note 6	regarding der	oth to water			970.10

- 1. ft BMP feet Below Measuring Point.
- 2. --- indicates LNAPL or DNAPL was not present in a measurable quantity.
- 3. NA indicates information not available.
- 4. NM indicates information not measured.
- 5. P indicates that LNAPL is present at a thickness that is < 0.01 feet, the corresponding thickness is recorded as such.
- 6. A survey reference point (BM-2A) was established on the Lyman Street Bridge. The "Depth to Water" value(s) provided in the above table refer to the vertical distance from the surveyed reference point to the water surface.

# TABLE 21-15 ACTIVE DNAPL RECOVERY SYSTEMS MONTHLY SUMMARY NEWELL STREET AREA II GROUNDWATER MANAGEMENT AREA 1

## CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Recovery System	Date	Total Gallons Recovered
System 1	September 2005	(2)
	October 2005	(2)
	November 2005	(2)
	December 2005	(2)
	January 2006	(2)
	February 2006	(2)
	March 2006	(2)
	April 2006	(2)
	May 2006	(2)
	June 2006	(2)
	July 2006	(2)
	August 2006	(2)
	September 2006	No longer exists (2)
System 2	September 2005	(2)
	October 2005	(2)
	November 2005	(2)
	December 2005	(2)
	January 2006	(2)
	February 2006	(2)
	March 2006	(2)
	April 2006	(2)
	May 2006	(2)
	June 2006	(2)
	July 2006	(2)
	August 2006	(2)
	September 2006	97.2
Total Automated DNAPL Re	emoval for September 2006:	97.2 Gallons

- 1. System 2 wells are N2SC-01I(R), N2SC-03I(R), and N2SC-14.
- 2. The DNAPL recovery systems for the Newell Street Area II were shut down on July 25, 2005. An upgraded system was completed and activated on August 30, 2006.

### TABLE 21-16 GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

# CONSENT DECREE MONTHLY STATUS REPORT GROUNDWATER MANAGEMENT AREA 1 - NEWELL STREET AREA II MEASUREMENT AND REMOVAL OF RECOVERABLE LNAPL September 2006

Well Name	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	LNAPL Removed (liters)	September 2006 Removal (liters)
NS-10	9/27/06	13.73	13.12	0.61	1.508	1.508

Total LNAPL Removal for September 2006: 1.508 liters

0.398 gallons

#### Note:

1. ft BMP - feet Below Measuring Point.

### TABLE 21-17 GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

# CONSENT DECREE MONTHLY STATUS REPORT GROUNDWATER MANAGEMENT AREA 1 - NEWELL STREET AREA II MEASUREMENT AND REMOVAL OF RECOVERABLE DNAPL September 2006

Well Name	Date	Depth to Water (ft BMP)	Depth to DNAPL (ft BMP)	DNAPL Thickness (feet)	DNAPL Removed (liters)	September 2006 Removal (liters)
MW-1D	9/27/06	14.15	38.60	0.13	0.080	0.080
MW-1S	9/27/06	14.20	21.90	0.44	0.271	0.271
N2SC-01I	9/27/06	12.48	36.30	4.1	2.530	2.530
N2SC-03I	9/27/06	10.99	35.95	1.8	1.111	1.111
N2SC-07	9/27/06	10.67	35.29	0.51	0.315	0.315
N2SC-08	9/27/06	12.04	38.45	2.60	1.604	1.604
N2SC-13I	9/27/06	10.70	38.90	0.78	0.037	0.037
NS-30	9/27/06	10.70	34.30	0.80	0.494	0.494
NS-32	9/27/06	11.66	37.65	0.45	0.278	0.278

Total DNAPL Removal for September 2006: 6.719 liters 1.773 gallons

#### Note:

1. ft BMP - feet Below Measuring Point.

# TABLE 21-18 ROUTINE WELL MONITORING NEWELL STREET AREA II GROUNDWATER MANAGEMENT AREA 1

Well	Measuring	Dete	Depth to Weter	Depth to	LNAPL	Depth to	Total	DNAPL	Corrected
Well	Point Elev.	Date	to Water	LNAPL	Thickness		Depth		Water Elev.
Name	(feet)	- / /	(ft BMP)	(ft BMP)	(feet)	(ft BMP)	(ft BMP)	(feet)	(feet)
GMA1-8	981.66	9/21/06	10.11		0.00		16.20	0.00	971.55
GMA1-9	982.36	9/20/06	10.16		0.00		14.33	0.00	972.20
GMA1-25	NA	9/21/06	13.52		0.00		17.31	0.00	NA
GMA1-26	NA	9/21/06	12.72		0.00		16.99	0.00	NA
GMA1-27	NA	9/20/06	8.94		0.00		16.44	0.00	NA
GMA1-28	NA	9/21/06	11.10		0.00		16.15	0.00	NA
MW-1D	987.20	9/27/06	14.15		0.00	38.60	38.73	0.13	973.05
MW-1S	986.60	9/27/06	14.20		0.00	21.90	22.34	0.44	972.40
N2SC-01I	984.99	9/6/06	12.55		0.00	36.31	40.40	4.09	972.44
N2SC-01I	984.99	9/13/06	12.70		0.00	36.40	40.40	4.00	972.29
N2SC-01I	984.99	9/20/06	12.45		0.00	36.45	40.40	3.95	972.54
N2SC-01I	984.99	9/21/06	12.48		0.00	36.25	40.40	4.15	972.51
N2SC-01I	984.99	9/27/06	12.48		0.00	36.30	40.40	4.10	972.51
N2SC-01I(R)	986.01	9/6/06	16.05		0.00	41.10	42.60	1.50	969.96
N2SC-01I(R)	986.01	9/12/06	16.21		0.00	41.28	42.60	1.32	969.80
N2SC-01I(R)	986.01	9/20/06	16.00		0.00	41.15	42.60	1.45	970.01
N2SC-01I(R)	986.01	9/27/06	15.98		0.00	41.15	42.60	1.45	970.03
N2SC-02	985.56	9/21/06	11.55		0.00		38.36	0.00	974.01
N2SC-02	985.56	9/27/06	11.60		0.00		38.37	0.00	973.96
N2SC-03I	986.24	9/6/06	11.10		0.00	35.40	37.75	2.35	975.14
N2SC-03I	986.24	9/13/06	11.15		0.00	35.60	37.73	2.13	975.09
N2SC-03I	986.24	9/20/06	11.03		0.00	35.70	37.75	2.05	975.21
N2SC-03I	986.24	9/27/06	10.99		0.00	35.95	37.75	1.80	975.25
N2SC-03I(R)	985.86	9/6/06	14.4		0.00	39.17	41.10	1.93	971.46
N2SC-03I(R)	985.86	9/12/06	14.35		0.00	38.70	41.10	2.40	971.51
N2SC-03I(R)	985.86	9/20/06	14.1		0.00	38.65	41.10	2.45	971.76
N2SC-03I(R)	985.86	9/27/06	14.1		0.00	40.85	41.10	0.25	971.76
N2SC-04	981.56	9/21/06	11.29		0.00		33.24	0.00	970.27
N2SC-05	982.64	9/21/06	10.64		0.00		36.67	0.00	972.00
N2SC-07	984.61	9/21/06	10.66		0.00		35.83	0.00	973.95
N2SC-07	984.61	9/27/06	10.67		0.00	35.29	35.80	0.51	973.94
N2SC-07S	982.93	9/21/06	11.15		0.00		19.03	0.00	971.78
N2SC-08	986.07	9/20/06	12.03		0.00	38.95	41.03	2.08	974.04
N2SC-08	986.07	9/27/06	12.04		0.00	38.45	41.05	2.60	974.03
N2SC-09I	987.77	9/20/06	10.33		0.00	38.75	38.84	0.09	977.44
N2SC-09I	987.77	9/27/06	13.30		0.00	38.78	38.84	0.06	974.47
N2SC-09S	987.84	9/20/06	9.84		0.00	13.10	13.10	0.00	978.00
N2SC-13I	984.75	9/27/06	10.70		0.00	38.90	39.68	0.78	974.05
N2SC-13S	985.15	9/21/06	10.60		0.00	38.73	39.55	0.82	974.55
N2SC-14	985.06	9/6/06	15.15		0.00	38.88	40.00	1.12	969.91
N2SC-14	985.06	9/12/06	15.02		0.00	38.90	40.00	1.10	970.04
N2SC-14	985.06	9/20/06	14.74		0.00	38.65	40.00	1.35	970.04
N2SC-14	985.06	9/27/06	14.73		0.00	39.50	40.00	0.50	970.32
N2SC-16	985.62	9/21/06	10.77		0.00		36.40	0.00	974.85
NS-10	984.59	9/21/06	13.73	13.20	0.53		21.73	0.00	971.35
NS-10	984.59	9/27/06	13.73	13.12	0.61		21.64	0.00	971.43
NS-15R	964.59 NA	9/6/06	11.20	13.12	0.00		19.00	0.00	971.43 NA
NS-15R NS-15R	NA NA	9/13/06	11.50		0.00		19.00	0.00	NA NA
110-101/	INA	3/13/00	11.50	Page 1		- <b></b>	19.00	0.00	10/6/2006

# TABLE 21-18 ROUTINE WELL MONITORING NEWELL STREET AREA II GROUNDWATER MANAGEMENT AREA 1

### CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Well	Measuring Point Elev.	Date	Depth to Water	Depth to LNAPL	LNAPL Thickness	Depth to DNAPL	Total Depth	DNAPL Thickness	Corrected Water Elev.
Name	(feet)		(ft BMP)	(ft BMP)	(feet)	(ft BMP)	(ft BMP)	(feet)	(feet)
NS-15R	NA	9/20/06	11.10		0.00		19.00	0.00	NA
NS-15R	NA	9/29/06	11.10		0.00		19.00	0.00	NA
NS-15	982.76	9/21/06	11.28		0.00		38.62		971.48
NS-17	984.64	9/21/06	12.74		0.00		18.73	0.00	971.90
NS-20	985.29	9/21/06	6.50		0.00		14.95	0.00	978.79
NS-30	985.99	9/6/06	10.80		0.00	34.25	35.10	0.85	975.19
NS-30	985.99	9/13/06	11.03		0.00	34.35	35.10	0.75	974.96
NS-30	985.99	9/20/06	10.61		0.00	34.30	35.10	0.80	975.38
NS-30	985.99	9/21/06	10.64		0.00	34.17	35.10	0.93	975.35
NS-30	985.99	9/27/06	10.70		0.00	34.30	35.10	0.80	975.29
NS-32	986.20	9/6/06	11.78		0.00	37.70	38.00	0.30	974.42
NS-32	986.20	9/13/06	11.93		0.00	37.65	38.00	0.35	974.27
NS-32	986.20	9/20/06	11.65		0.00	37.61	38.03	0.42	974.55
NS-32	986.20	9/27/06	11.66		0.00	37.65	38.10	0.45	974.54

- 1. ft BMP feet Below Measuring Point.
- 2. --- indicates LNAPL or DNAPL was not present in a measurable quantity.
- 3. NA indicates information not available.

# TABLE 21-19 ROUTINE WELL MONITORING SILVER LAKE AREA GROUNDWATER MANAGEMENT AREA 1

### CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Well Name Staff Gauge w	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	
Silver Lake	980.30	9/6/06	4.55	See Note 2	984.85					
Gauge Silver Lake	980.30	9/13/06	4.65	See Note 2 regarding depth to water						
Gauge Silver Lake Gauge	980.30	9/20/06	4.44	See Note 2	984.74					
Silver Lake Gauge	980.30	9/29/06	4.31	See Note 2	984.61					

- 1. ft BMP feet Below Measuring Point.
- 2. A survey reference point was established on the Silver Lake staff gauge. The "Depth to Water" value(s) provided in the above table refer to the vertical distance from the surveyed reference point to the water surface.
- Additional groundwater elevation data were collected from wells near Silver Lake that are located in the 30s Complex and at the Lyman Street Area. Those results are presented in the monitoring tables for those Removal Action Areas.

# ITEM 22 GROUNDWATER MANAGEMENT AREAS FORMER OXBOWS J & K (GMA 2) (GECD320) SEPTEMBER 2006

\* All activities described below for this item were conducted pursuant to the Consent Decree.

#### a. Activities Undertaken/Completed

Continued routine river elevation monitoring.

#### b. Sampling/Test Results Received

See attached table.

#### c. Work Plans/Reports/Documents Submitted

None

#### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Continue routine river elevation monitoring.
- Conduct supplemental groundwater sampling activities at one well following EPA approval of GE's proposal for such sampling in the GMA 2 Groundwater Quality Monitoring Interim Report for Spring 2006 (see Item 22.e below).

#### e. General Progress/Unresolved Issues/Potential Schedule Impacts

The fall 2006 supplemental sampling event at one well may be delayed pending evaluation of the data obtained during the expedited sampling activities at GMA 4 (see Item 24.d).

#### f. Proposed/Approved Work Plan Modifications

None

#### TABLE 22-1 ROUTINE WELL MONITORING GROUNDWATER MANAGEMENT AREA 2

### CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	
Housatonic River (Foot Bridge)										
GMA2-SG-1	989.82	9/19/06	17.15	See Note 2		972.67				

- 1. ft BMP feet Below Measuring Point.
- 2. A survey reference point was established on the Oxbow J & K foot bridge. The "Depth to Water" value(s) provided in the above table refer to the vertical distance from the surveyed reference point to the water surface.

# ITEM 23 GROUNDWATER MANAGEMENT AREAS PLANT SITE 2 (GMA 3) (GECD330) SEPTEMBER 2006

#### a. Activities Undertaken/Completed

- Conducted routine groundwater elevation and NAPL monitoring activities. Approximately 98.162 liters (25.90 gallons) of LNAPL were removed by the automatic skimmer located in well 51-21 and an additional 6.669 liters (1.76 gallons) of LNAPL were manually removed from the wells in this area (see Table 23-1).\*
- Conducted NAPL bailing round in preparation for semi-annual monitoring event.\*
- Conducted indoor air sampling at Buildings 51 and 59.

#### b. Sampling/Test Results Received

See attached tables.

#### c. Work Plans/Reports/Documents Submitted

Submitted report on soil gas investigation near Building 51 (September 15, 2006).\*

#### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Continue routine groundwater and NAPL monitoring/recovery activities, including semi-annual monitoring event.\*
- Submit supplemental soil gas investigation report (due to EPA by October 23, 2006).\*

#### e. General Progress/Unresolved Issues/Potential Schedule Impacts

On September 29, 2006, EPA agreed that the time for GE's submission of a supplemental soil gas investigation report would be extended until October 23, 2006.\*

#### f. Proposed/Approved Work Plan Modifications

None

### TABLE 23-1 MEASUREMENT AND REMOVAL OF RECOVERABLE LNAPL GROUNDWATER MANAGEMENT AREA 3

# CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Well Name	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	LNAPL Removed (liters)	September 2006 Removal (liters)	
	9/6/06	12.85	11.53	1.32	0.815		
51-08	9/13/06	12.74	11.61	1.13	0.697	3.048	
31-06	9/20/06	12.68	11.52	1.16	0.716	3.040	
	9/26/06	12.81	11.48	1.33	0.821		
51-15	9/26/06	11.37	10.83	0.54	0.333	0.333	
51-16R	9/26/06	11.18	10.85	0.33	0.204	0.204	
51-17	9/26/06	12.09	10.61	1.48	0.913	0.913	
51-19	9/26/06	11.05	11.01	0.04	0.025	0.025	
	9/6/06	15.10	Р	< 0.01	29.18		
51-21	9/12/06	16.18	16.17	0.01	16.68	98.162	
31-21	9/20/06	16.10	16.03	0.07	31.46	90.102	
	9/27/06	15.98	Р	< 0.01	20.85		
59-03R	9/26/06	12.77	12.05	0.72	0.444	0.444	
59-07	9/26/06	12.40	12.30	0.10	0.062	0.062	
	9/6/06	12.23	11.84	0.39	0.241		
GMA3-10	9/20/06	12.20	11.90	0.30	0.185	0.691	
	9/26/06	12.31	11.88	0.43	0.265		
GMA3-12	9/26/06	12.98	12.64	0.34	0.840	0.840	
CMA2 12	9/6/06	12.03	12.02	0.01	0.006	0.019	
GMA3-13	9/26/06	12.08	12.06	0.02	0.012	0.018	
UB-PZ-3	9/26/06	13.08	12.82	0.26	0.091	0.091	

Total Automated LNAPL Removal at well 51-21 for September 2006: 98.162 liters

25.90 Gallons

Total Manual LNAPL Removal at all other wells for September 2006: 6.669 liters

1.76 Gallons

Total LNAPL Removed for September 2006: 104.831 liters

27.66 Gallons

- 1. ft BMP feet Below Measuring Point.
- 2. P indicates that LNAPL or DNAPL is present at a thickness that is < 0.01 feet. The corresponding thickness is recorded as such.

#### TABLE 23-2 ROUTINE WELL MONITORING GROUNDWATER MANAGEMENT AREA 3

	Measuring		Depth	Depth to	LNAPL	Depth to	Total	DNAPL	Corrected
Well	Point Elev.	Date	to Water	LNAPL	Thickness	DNAPL	Depth	Thickness	Water Elev.
Name	(feet)		(ft BMP)	(ft BMP)	(feet)	(ft BMP)	(ft BMP)	(feet)	(feet)
51-05	996.44	9/26/06	9.85		0.00		11.61	0.00	986.59
51-06	997.36	9/19/06	11.25		0.00		14.55	0.00	986.11
51-06	997.36	9/26/06	11.39		0.00		14.34	0.00	985.97
51-07	997.08	9/19/06	Dry at 11.23 feet		0.00		11.23	0.00	NA
51-07 51-08	997.08 997.08	9/26/06 9/6/06	Dry at 11.18 feet 12.85	11.53	0.00 1.32		11.18 14.66	0.00 0.00	NA 985.46
51-08	997.08	9/0/06	12.74	11.61	1.13		14.66	0.00	985.39
51-08	997.08	9/13/06	12.74	11.52	1.16		14.65	0.00	985.48
51-08	997.08	9/26/06	12.81	11.48	1.33		14.60	0.00	985.51
51-09	997.70	9/19/06	Dry at 11.60 feet		0.00		11.60	0.00	NA
51-09	997.70	9/26/06	Dry at 11.58 feet		0.00		11.58	0.00	NA
51-11	994.37	9/19/06	9.20		0.00		13.55	0.00	985.17
51-12	996.55	9/19/06	7.80		0.00		13.34	0.00	988.75
51-13	997.42	9/19/06	Dry at 9.89 feet		0.00		9.73	0.00	NA
51-14	996.77	9/19/06	11.50		0.00		14.80	0.00	985.27
51-15	996.43	9/26/06	11.37	10.83	0.54		14.33	0.00	985.56
51-16R	996.39	9/26/06	11.18	10.85	0.33		14.53	0.00	985.52
51-17	996.43	9/26/06	12.09	10.61	1.48		14.49	0.00	985.72
51-18	997.12	9/19/06	11.60		0.00		12.59	0.00	985.52
51-19	996.43	9/26/06	11.05	11.01	0.04		13.99	0.00	985.42
51-21	1001.49	9/6/06	15.10	P	< 0.01		NM	0.00	986.39
51-21	1001.49	9/12/06	16.18	16.17	0.01		NM	0.00	985.32
51-21	1001.49	9/20/06	16.10	16.03	0.07		NM	0.00	985.46
51-21 59-01	1001.49 997.52	9/27/06 9/19/06	15.98 Dry at 11.40 feet	P	< 0.01		NM 11.43	0.00	985.51 NA
59-01	997.52	9/19/06	Dry at 11.40 feet				11.43	0.00	NA NA
59-01 59-03R	997.52	9/26/06	12.77	12.05	0.72		17.05	0.00	985.54
59-031	997.96	9/26/06	12.40	12.30	0.12		23.52	0.00	985.65
GMA3-10	997.54	9/6/06	12.23	11.84	0.39		17.93	0.00	985.67
GMA3-10	997.54	9/13/06	12.08	11.90	0.18		17.93	0.00	985.63
GMA3-10	997.54	9/20/06	12.20	11.90	0.30		17.93	0.00	985.62
GMA3-10	997.54	9/26/06	12.31	11.88	0.43		17.88	0.00	985.63
GMA3-11	997.25	9/19/06	11.15		0.00		18.30	0.00	986.10
GMA3-12	997.84	9/6/06	12.29	12.15	0.14		21.23	0.00	985.68
GMA3-12	997.84	9/13/06	12.41	12.28	0.13		21.24	0.00	985.55
GMA3-12	997.84	9/20/06	12.37	12.20	0.17		21.20	0.00	985.63
GMA3-12	997.84	9/26/06	12.98	12.64	0.34		21.19	0.00	985.18
GMA3-13	997.73	9/6/06	12.03	12.02	0.01		17.60	0.00	985.71
GMA3-13	997.73	9/13/06	12.10		0.00		17.61	0.00	985.63
GMA3-13 GMA3-13	997.73 997.73	9/20/06 9/26/06	12.10 12.08	12.06	0.00 0.02		17.67 17.56	0.00	985.63 985.67
GMA3-13 GMA3-14	997.73	9/26/06	12.08	12.06	0.02		16.81	0.00	985.67
UB-MW-10	997.42	9/19/06	10.40		0.00		14.90	0.00	985.59
UB-PZ-3	993.99	9/19/06	13.08	12.82	0.00		13.40	0.00	985.31
0D-L7-2	990.IU	3/20/00	13.00	12.02	0.20		10.40	0.00	30J.J I

#### TABLE 23-2 ROUTINE WELL MONITORING GROUNDWATER MANAGEMENT AREA 3

### CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

- 1. ft BMP feet Below Measuring Point.
- 2. --- indicates LNAPL or DNAPL was not present in a measurable quantity.
- 3. NA indicates information not available.
- 4. NM indicates information not measured.
- 5. P indicates that LNAPL is present at a thickness that is < 0.01 feet, the corresponding thickness is recorded as such.

# ITEM 24 GROUNDWATER MANAGEMENT AREAS PLANT SITE 3 (GMA 4) (GECD340) SEPTEMBER 2006

\* All activities described below for this item were conducted pursuant to the Consent Decree.

#### a. Activities Undertaken/Completed

- Conducted routine groundwater elevation monitoring at well GMA4-3.
- Conducted an expedited sampling event at wells 78-1, 78-6, and GMA4-6 to evaluate laboratory performance.

#### b. Sampling/Test Results Received

See attached tables.

#### c. Work Plans/Reports/Documents Submitted

Submitted Groundwater Quality Monitoring Interim Report for Spring 2006 (September 13, 2006).

#### d. Upcoming Scheduled and Anticipated Activities (next six weeks)

- Continue routine monitoring at well GMA4-3 and perform semi-annual monitoring event.
- Evaluate results of expedited sampling event and propose modifications to fall 2006 sampling event, if necessary.
- Conduct fall 2006 groundwater sampling event (see Item 24.e below).

#### e. General Progress/Unresolved Issues/Potential Schedule Impacts

The fall 2006 groundwater sampling event may be delayed pending evaluation of the data obtained during the expedited sampling activities at wells 78-1, 78-6, and GMA4-6.

#### f. Proposed/Approved Work Plan Modifications

Received EPA comments on GE's proposal, in its Groundwater Quality Monitoring Interim Report for Spring 2006, for expedited sampling at certain monitoring wells (78-1, 78-6, and GMA4-6) (September 25, 2006).

### TABLE 24-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

### GROUNDWATER MANAGEMENT AREA 4 GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

		Sample				Date Received by
Project Name	Field Sample ID	Date	Matrix	Laboratory	Analyses	GE or BBL
Building 78 Purge Water Drum Sampling	BLDG78-F2145	8/16/06	Water	SGS	PCB, VOC, SVOC, Total Metals	9/14/06
Building 78 Purge Water Drum Sampling	BLDG78-GMA-4-COMP	8/16/06	Water	SGS	PCB, VOC, SVOC, Total Metals	9/12/06
Semi-Annual Groundwater Sampling	78-1	9/28/06	Water	NEA	PCB (f)	
Semi-Annual Groundwater Sampling	78-1	9/28/06	Water	SGS	PCB (f)	
Semi-Annual Groundwater Sampling	78-6	9/28/06	Water	NEA	PCB (f)	
Semi-Annual Groundwater Sampling	78-6	9/28/06	Water	SGS	PCB (f)	
Semi-Annual Groundwater Sampling	DUP-1 (78-6)	9/28/06	Water	NEA	PCB (f)	
Semi-Annual Groundwater Sampling	DUP-1 (78-6)	9/28/06	Water	SGS	PCB (f)	
Semi-Annual Groundwater Sampling	GMA4-6	9/28/06	Water	NEA	PCB (f)	Cancel
Semi-Annual Groundwater Sampling	GMA4-6	9/28/06	Water	SGS	PCB (f)	Cancel

- 1. Field duplicate sample locations are presented in parenthesis.
- 2. (f) Indicates filtered analysis requested.

#### TABLE 24-2 DATA RECEIVED DURING SEPTEMBER 2006

#### BUILDING 78 PURGE WATER DRUM SAMPLING GROUNDWATER MANAGEMENT AREA 4 GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

(Results are presented in parts per million, ppm)

Parameter	Sample ID: Date Collected:	Bldg78-F2145 08/16/06	BLDG78-GMA-4-Comp 08/16/06
Volatile Organics	Date Collected.	00/10/00	08/10/00
Chloromethane		ND(0.0010)	0.00035 J
Dibromochloromethar	ne	ND(0.0010)	0.00021 J
Methylene Chloride		0.00062 J	ND(0.0010)
Trichloroethene		0.0012	ND(0.0010)
PCBs-Unfiltered			
Aroclor-1254		0.0013	0.0078
Total PCBs		0.0013	0.0078
Semivolatile Organic	cs		
bis(2-Ethylhexyl)phtha	alate	ND(0.010)	0.0016 J
Inorganics-Unfiltere	d		
Barium		0.0555 B	0.0353 B
Chromium		0.00987 B	0.0160
Lead		0.00634 B	0.00531 B
Mercury		0.000116 B	0.000134 B

#### Notes:

- Samples were collected by BBL, an ARCADIS company (BBL), and submitted to SGS Environmental Services, Inc. for analysis of PCBs, volatiles, semivolatiles, and metals.
- 2. Only those constituents detected in one or more samples are summarized.
- 3. ND Analyte was not detected. The number in parenthesis is the associated detection limit.

#### Data Qualifiers:

#### Organics (volatiles, PCBs, semivolatiles)

J - Indicates an estimated value less than the practical quantitation limit (PQL).

#### Inorganics

B - Indicates an estimated value between the instrument detection limit (IDL) and PQL.

#### TABLE 24-3 ROUTINE WELL MONITORING GROUNDWATER MANAGEMENT AREA 4

### CONSENT DECREE MONTHLY STATUS REPORT GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS September 2006

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)
78-1	1,026.32	9/28/06	9.54		0.00		22.40	0.00	1,016.78
78-6	1,012.00	9/28/06	8.14		0.00		17.49	0.00	1,003.86
GMA4-3	1,003.95	9/19/06	18.30		0.00		26.26	0.00	985.65
GMA4-6	1,009.12	9/29/06	9.08		0.00		12.63	0.00	1,000.04

- 1. ft BMP feet Below Measuring Point.
- 2. --- indicates LNAPL or DNAPL was not present in a measurable quantity.

# ITEM 25 GROUNDWATER MANAGEMENT AREAS FORMER OXBOWS A & C (GMA 5) (GECD350) AUGUST 2006

\* All activities described below for this item were conducted pursuant to the Consent Decree.

#### a. Activities Undertaken/Completed

Decommissioned wells A-1, C-1, and C-2 as part of remediation activities at Former Oxbow Areas A & C.

#### b. Sampling/Test Results Received

None

#### c. Work Plans/Reports/Documents Submitted

None

#### d. <u>Upcoming Scheduled and Anticipated Activities (next six weeks)</u>

- Conduct semi-annual groundwater elevation monitoring.
- Conduct supplemental groundwater sampling activities at one well following EPA approval of GE's proposal for such sampling in the GMA 5 Groundwater Quality Monitoring Interim Report for Spring 2006.

#### e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

#### f. Proposed/Approved Work Plan Modifications

None

# Attachment A

# NPDES Sampling Records and Results September 2006



# TABLE A-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

# NPDES PERMIT MONITORING GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	Date Received by GE or BBL
NPDES Sampling	001-A7544	9/4/06	Water	Columbia	Oil & Grease	9/13/06
NPDES Sampling	001-A7546	9/4/06	Water	Accutest	PCB	9/15/06
NPDES Sampling	001-A7540 001-A7551	9/5/06	Water	Columbia	TSS	9/13/06
NPDES Sampling	001-A7551 005-A7528/A7529	8/21/06	Water	Accutest	PCB	9/1/06
	005-A7526/A7529 005-A7539/A7540	8/29/06	Water		PCB	9/11/06
NPDES Sampling				Accutest	PCB PCB	
NPDES Sampling	005-A7552/A7553	9/5/06	Water	Accutest		9/14/06
NPDES Sampling	005-A7552/A7553	9/3/06	Water	Columbia	TSS, BOD	9/13/06
NPDES Sampling	005-A7564/A7567	9/11/06	Water	Accutest	PCB	9/26/06
NPDES Sampling	005-A7584/A7587	9/18/06	Water	Accutest	PCB	9/27/06
NPDES Sampling	005-A7600/A7601	9/26/06	Water	Accutest	PCB	- 1- 1
NPDES Sampling	09B-A7531	8/21/06	Water	Columbia	TSS, BOD	9/1/06
NPDES Sampling	09B-A7541	8/29/06	Water	Columbia	TSS, BOD	9/8/06
NPDES Sampling	09B-A7554	9/3/06	Water	Columbia	TSS, BOD	9/13/06
NPDES Sampling	09B-A7569	9/11/06	Water	Columbia	TSS, BOD	9/20/06
NPDES Sampling	09B-A7591	9/18/06	Water	Columbia	TSS, BOD	9/26/06
NPDES Sampling	09B-A7602	9/26/06	Water	Columbia	TSS, BOD	
NPDES Sampling	09C-A7521	8/20/06	Water	Columbia	Oil & Grease	9/1/06
NPDES Sampling	09C-A7532	8/27/06	Water	Columbia	Oil & Grease	9/8/06
NPDES Sampling	09C-A7542	9/3/06	Water	Columbia	Oil & Grease	9/13/06
NPDES Sampling	09C-A7575	9/14/06	Water	Columbia	Oil & Grease	9/26/06
NPDES Sampling	09C-A7589	9/18/06	Water	Columbia	Oil & Grease	9/26/06
NPDES Sampling	09C-A7592	9/24/06	Water	Columbia	Oil & Grease	
NPDES Sampling	64G-A7525	8/21/06	Water	Columbia	Oil & Grease	9/1/06
NPDES Sampling	64G-A7536	8/28/06	Water	Columbia	Oil & Grease	9/8/06
NPDES Sampling	64G-A7549	9/4/06	Water	Columbia	Oil & Grease	9/13/06
NPDES Sampling	64G-A7565	9/11/06	Water	Columbia	Oil & Grease	9/20/06
NPDES Sampling	64G-A7585	9/18/06	Water	Columbia	Oil & Grease	9/26/06
NPDES Sampling	64G-A7597	9/25/06	Water	Columbia	Oil & Grease	
NPDES Sampling	64T-A7523	8/21/06	Water	Columbia	Oil & Grease	9/1/06
NPDES Sampling	64T-A7534	8/28/06	Water	Columbia	Oil & Grease	9/8/06
NPDES Sampling	64T-A7547	9/4/06	Water	Columbia	Oil & Grease	9/13/06
NPDES Sampling	64T-A7562	9/11/06	Water	Columbia	Oil & Grease	9/20/06

V:\GE\_Pittsfield\_General\Reports and Presentations\Monthly Reports\2006\9-06 CD Monthly\Tracking Logs\
Tracking.xlsTABLE A-1

# TABLE A-1 DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2006

# NPDES PERMIT MONITORING GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

						Date Received
Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	by GE or BBL
NPDES Sampling	64T-A7582	9/18/06	Water	Columbia	Oil & Grease	9/26/06
NPDES Sampling	64T-A7595	9/25/06	Water	Columbia	Oil & Grease	
NPDES Sampling	A7555R	9/11/06	Water	Aquatec	Acute Toxicity Test	
NPDES Sampling	A7555R	9/11/06	Water	Aquatec	Chronic Toxicity Test	
NPDES Sampling	A7555RCN	9/11/06	Water	Columbia	CN	9/20/06
NPDES Sampling	A7555RTM	9/11/06	Water	Columbia	Metals (10)	9/20/06
NPDES Sampling	A7556C	9/11/06	Water	Aquatec	Acute Toxicity Test	
NPDES Sampling	A7556C	9/11/06	Water	Aquatec	Chronic Toxicity Test	
NPDES Sampling	A7556CCN	9/11/06	Water	Columbia	CN	9/20/06
NPDES Sampling	A7556CDM	9/11/06	Water	Columbia	Filtered Metals (8)	9/20/06
NPDES Sampling	A7556CTM	9/11/06	Water	Columbia	Metals (10)	9/20/06
NPDES Sampling	A7557R	9/13/06	Water	Aquatec	Chronic Toxicity Test	
NPDES Sampling	A7557RCN	9/13/06	Water	Columbia	CN	9/22/06
NPDES Sampling	A7557RTM	9/13/06	Water	Columbia	Metals (10)	9/22/06
NPDES Sampling	A7558C	9/13/06	Water	Aquatec	Chronic Toxicity Test	
NPDES Sampling	A7558CCN	9/13/06	Water	Columbia	CN	9/22/06
NPDES Sampling	A7558CDM	9/13/06	Water	Columbia	Filtered Metals (8)	9/22/06
NPDES Sampling	A7558CTM	9/13/06	Water	Columbia	Metals (10)	9/22/06
NPDES Sampling	A7559R	9/15/06	Water	Aquatec	Chronic Toxicity Test	
NPDES Sampling	A7559RCN	9/15/06	Water	Columbia	CN	9/26/06
NPDES Sampling	A7559RTM	9/15/06	Water	Columbia	Metals (10)	9/26/06
NPDES Sampling	A7560C	9/15/06	Water	Aquatec	Chronic Toxicity Test	
NPDES Sampling	A7560CCN	9/15/06	Water	Columbia	CN	9/26/06
NPDES Sampling	A7560CDM	9/15/06	Water	Columbia	Filtered Metals (8)	9/26/06
NPDES Sampling	A7560CTM	9/15/06	Water	Columbia	Metals (10)	9/26/06
NPDES Sampling	AUG06WK4	8/21/06	Water	Columbia	Cu, Pb, Zn	9/1/06
NPDES Sampling	SEP06WK1	8/29/06	Water	Columbia	Cu, Pb, Zn	9/8/06
NPDES Sampling	SEP06WK2	9/3/06	Water	Columbia	Cu, Pb, Zn	9/13/06
NPDES Sampling	SEP06WK4	9/18/06	Water	Columbia	Cu, Pb, Zn	9/26/06
NPDES Sampling	SEP06WK5	9/26/06	Water	Columbia	Cu, Pb, Zn	

## NPDES PERMIT MONITORING SAMPLING GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Parameter Da	Sample ID:	001-A7544 09/04/06	001-A7546 09/04/06	001-A7551 09/05/06	005-A7528/A7529 08/21/06	005-A7539/A7540 08/29/06	005-A7552/A7553 09/03/06	005-A7552/A7553 09/05/06
PCBs-Unfiltered	ate Conected.	09/04/00	09/04/00	09/03/00	00/21/00	00/29/00	09/03/00	09/03/00
None Detected		NA		NA			NA NA	
Inorganics-Unfiltered		14/1		14/1			14/1	
Aluminum	1	NA	NA	NA	NA	NA	NA NA	NA
Cadmium		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Calcium		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chromium		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Copper								NA NA
Cyanide		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	
Lead		NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Magnesium		NA	NA	NA	NA NA	NA	NA	NA
Nickel		NA	NA	NA	NA	NA	NA	NA
Silver		NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered								
Aluminum		NA	NA	NA	NA	NA	NA	NA
Cadmium		NA	NA	NA	NA	NA	NA	NA
Chromium		NA	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA	NA
Lead		NA	NA	NA	NA	NA	NA	NA
Nickel		NA	NA	NA	NA	NA	NA	NA
Silver		NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA
Conventionals	•			•		•	•	
Biological Oxygen Den	nand (5-day)	NA	NA	NA	NA	NA	ND(2.0)	NA
Oil & Grease	• • •	ND(5.0)	NA	NA	NA	NA	NA	NA
Total Suspended Solid	s	ŇA	NA	5.28	NA	NA	ND(1.00)	NA

## NPDES PERMIT MONITORING SAMPLING GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

	Sample ID:	005-A7564/A7567	005-A7584/A7587	09B-A7531	09B-A7541	09B-A7554	09B-A7569	09B-A7591	09C-A7521
Parameter Dat	te Collected:	09/11/06	09/18/06	08/21/06	08/29/06	09/03/06	09/11/06	09/18/06	08/20/06
PCBs-Unfiltered	•				•	•	•		•
None Detected				NA	NA	NA	NA	NA	NA
Inorganics-Unfiltered	•			•	•	•	•		•
Aluminum		NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		NA	NA	NA	NA	NA	NA	NA	NA
Calcium		NA	NA	NA	NA	NA	NA	NA	NA
Chromium		NA	NA	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA	NA	NA
Cyanide		NA	NA	NA	NA	NA	NA	NA	NA
Lead		NA	NA	NA	NA	NA	NA	NA	NA
Magnesium		NA	NA	NA	NA	NA	NA	NA	NA
Nickel		NA	NA	NA	NA	NA	NA	NA	NA
Silver		NA	NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered									
Aluminum		NA	NA	NA	NA	NA	NA	NA	NA
Cadmium		NA	NA	NA	NA	NA	NA	NA	NA
Chromium		NA	NA	NA	NA	NA	NA	NA	NA
Copper		NA	NA	NA	NA	NA	NA	NA	NA
Lead		NA	NA	NA	NA	NA	NA	NA	NA
Nickel		NA	NA	NA	NA	NA	NA	NA	NA
Silver		NA	NA	NA	NA	NA	NA	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	NA	NA
Conventionals			·						•
Biological Oxygen Dema	and (5-day)	NA	NA	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	NA
Oil & Grease		NA	NA	NA	NA	NA	NA	NA	ND(5.2)
Total Suspended Solids		NA	NA	5.50	1.50	3.20	5.33	4.10	NA

## NPDES PERMIT MONITORING SAMPLING GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

	Sample ID:	09C-A7532	09C-A7542	09C-A7575	09C-A7589	64G-A7525	64G-A7536	64G-A7549	64G-A7565	64G-A7585
Parameter	Date Collected:	08/27/06	09/03/06	09/14/06	09/18/06	08/21/06	08/28/06	09/04/06	09/11/06	09/18/06
PCBs-Unfiltered										
None Detected		NA								
Inorganics-Unfilter	ed									
Aluminum		NA								
Cadmium		NA								
Calcium		NA								
Chromium		NA								
Copper		NA								
Cyanide		NA								
Lead		NA								
Magnesium		NA								
Nickel		NA								
Silver		NA								
Zinc		NA								
Inorganics-Filtered										
Aluminum		NA								
Cadmium		NA								
Chromium		NA								
Copper		NA								
Lead		NA								
Nickel		NA								
Silver		NA								
Zinc		NA								
Conventionals										
Biological Oxygen D	emand (5-day)	NA								
Oil & Grease		ND(5.0)	ND(5.0)	ND(5.0)	ND(5.1)	ND(5.2)	ND(5.0)	ND(5.0)	ND(5.2)	ND(5.1)
Total Suspended So	olids	NA								

## NPDES PERMIT MONITORING SAMPLING GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

D	Sample ID:	64T-A7523	64T-A7534	64T-A7547	64T-A7562	64T-A7582	A7555RCN	A7555RTM	A7556CCN	A7556CDM
	te Collected:	08/21/06	08/28/06	09/04/06	09/11/06	09/18/06	09/11/06	09/11/06	09/11/06	09/11/06
PCBs-Unfiltered		<b>.</b>	N1A		T		1 110		N1A	
None Detected		NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Unfiltered										
Aluminum		NA	NA	NA	NA	NA	NA	ND(0.100)	NA	NA
Cadmium		NA	NA	NA	NA	NA	NA	ND(0.00500)	NA	NA
Calcium		NA	NA	NA	NA	NA	NA	24.6	NA	NA
Chromium		NA	NA	NA	NA	NA	NA	ND(0.0100)	NA	NA
Copper		NA	NA	NA	NA	NA	NA	ND(0.0200)	NA	NA
Cyanide		NA	NA	NA	NA	NA	ND(0.0100)	NA	0.0191	NA
Lead		NA	NA	NA	NA	NA	NA	ND(0.00500)	NA	NA
Magnesium		NA	NA	NA	NA	NA	NA	9.47	NA	NA
Nickel		NA	NA	NA	NA	NA	NA	ND(0.0400)	NA	NA
Silver		NA	NA	NA	NA	NA	NA	ND(0.0100)	NA	NA
Zinc		NA	NA	NA	NA	NA	NA	ND(0.0200)	NA	NA
Inorganics-Filtered										
Aluminum		NA	NA	NA	NA	NA	NA	NA	NA	ND(0.100)
Cadmium		NA	NA	NA	NA	NA	NA	NA	NA	ND(0.00500)
Chromium		NA	NA	NA	NA	NA	NA	NA	NA	ND(0.0100)
Copper		NA	NA	NA	NA	NA	NA	NA	NA	ND(0.0200)
Lead		NA	NA	NA	NA	NA	NA	NA	NA	ND(0.00500)
Nickel		NA	NA	NA	NA	NA	NA	NA	NA	ND(0.0400)
Silver		NA	NA	NA	NA	NA	NA	NA	NA	ND(0.0100)
Zinc		NA	NA	NA	NA	NA	NA	NA	NA	0.0294
Conventionals	·									
Biological Oxygen Dem	and (5-day)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oil & Grease		ND(5.2)	ND(5.0)	ND(5.0)	ND(5.2)	ND(5.2)	NA	NA	NA	NA
Total Suspended Solids	3	NA	NA	NA	NA	NA	NA	NA	NA	NA

## NPDES PERMIT MONITORING SAMPLING GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Parameter Da	Sample ID:	A7556CTM 09/11/06	A7557RCN 09/13/06	A7557RTM 09/13/06	A7558CCN 09/13/06	A7558CDM 09/13/06	A7558CTM 09/13/06	A7559RCN 09/15/06	A7559RTM 09/15/06
PCBs-Unfiltered	ite Collected:	09/11/06	09/13/00	09/13/00	09/13/00	09/13/00	09/13/00	09/15/06	09/15/06
None Detected		NA	NA NA	NA	NA	NA	NA	NA NA	NA
Inorganics-Unfiltered		IVA	IVA	IVA	IVA	IVA	INA	IVA	INA
Aluminum		ND(0.400)	I NIA	ND(0.400)	NA	NIA.	ND(0.400)	NA NA	0.209
		ND(0.100)	NA NA	ND(0.100)		NA NA	ND(0.100)		
Cadmium		ND(0.00500)	NA	ND(0.00500)	NA	NA	ND(0.00500)	NA	ND(0.00500)
Calcium		66.9	NA	26.4	NA	NA	73.5	NA	20.8
Chromium		ND(0.0100)	NA	ND(0.0100)	NA	NA	ND(0.0100)	NA	ND(0.0100)
Copper		ND(0.0200)	NA	ND(0.0200)	NA	NA	ND(0.0200)	NA	ND(0.0200)
Cyanide		NA	ND(0.0100)	NA	0.0162	NA	NA	ND(0.0100)	NA
Lead		ND(0.00500)	NA	ND(0.00500)	NA	NA	ND(0.00500)	NA	ND(0.00500)
Magnesium		29.4	NA	10.6	NA	NA	33.4	NA	8.20
Nickel		ND(0.0400)	NA	ND(0.0400)	NA	NA	ND(0.0400)	NA	ND(0.0400)
Silver		ND(0.0100)	NA	ND(0.0100)	NA	NA	ND(0.0100)	NA	ND(0.0100)
Zinc		ND(0.0200)	NA	ND(0.0200)	NA	NA	ND(0.0200)	NA	ND(0.0200)
Inorganics-Filtered									
Aluminum		NA	NA	NA	NA	ND(0.100)	NA	NA	NA
Cadmium		NA	NA	NA	NA	ND(0.00500)	NA	NA	NA
Chromium		NA	NA	NA	NA	ND(0.0100)	NA	NA	NA
Copper		NA	NA	NA	NA	ND(0.0200)	NA	NA	NA
Lead		NA	NA	NA	NA	ND(0.00500)	NA	NA	NA
Nickel		NA	NA	NA	NA	ND(0.0400)	NA	NA	NA
Silver		NA	NA	NA	NA	ND(0.0100)	NA	NA	NA
Zinc		NA	NA	NA	NA	0.0434	NA	NA	NA
Conventionals									
Biological Oxygen Dem	nand (5-day)	NA							
Oil & Grease		NA							
Total Suspended Solids	S	NA							

## NPDES PERMIT MONITORING SAMPLING GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

(Results are presented in parts per million, ppm)

	Sample ID:	A7560CCN	A7560CDM	A7560CTM	AUG06WK4	SEP06WK1	SEP06WK2	SEP06WK4
Parameter Dat	e Collected:	09/15/06	09/15/06	09/15/06	08/21/06	08/29/06	09/03/06	09/18/06
PCBs-Unfiltered								
None Detected		NA	NA	NA	NA	NA	NA	NA
Inorganics-Unfiltered								
Aluminum		NA	NA	0.530	NA	NA	NA	NA
Cadmium		NA	NA	ND(0.00500)	NA	NA	NA	NA
Calcium		NA	NA	22.4	NA	NA	NA	NA
Chromium		NA	NA	ND(0.0100)	NA	NA	NA	NA
Copper		NA	NA	ND(0.0200)	ND(0.0200)	ND(0.0200)	ND(0.0200)	ND(0.0200)
Cyanide		ND(0.0100)	NA	NA	NA	NA	NA	NA
Lead		NA	NA	0.0104	ND(0.00500)	0.00830	0.00540	ND(0.00500)
Magnesium		NA	NA	9.63	NA	NA	NA	NA
Nickel		NA	NA	ND(0.0400)	NA	NA	NA	NA
Silver		NA	NA	ND(0.0100)	NA	NA	NA	NA
Zinc		NA	NA	0.0446	0.0598	0.0448	0.0240	ND(0.0200)
Inorganics-Filtered								
Aluminum		NA	ND(0.100)	NA	NA	NA	NA	NA
Cadmium		NA	ND(0.00500)	NA	NA	NA	NA	NA
Chromium		NA	ND(0.0100)	NA	NA	NA	NA	NA
Copper		NA	ND(0.0200)	NA	NA	NA	NA	NA
Lead		NA	ND(0.00500)	NA	NA	NA	NA	NA
Nickel		NA	ND(0.0400)	NA	NA	NA	NA	NA
Silver		NA	ND(0.0100)	NA	NA	NA	NA	NA
Zinc		NA	0.0392	NA	NA	NA	NA	NA
Conventionals								
Biological Oxygen Dema	and (5-day)	NA	NA	NA	NA	NA	NA	NA
Oil & Grease	İ	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	İ	NA	NA	NA	NA	NA	NA	NA

#### Notes

- 1. Samples were collected by General Electric Company and submitted to Accutest Laboratories and Columbia Analytical Services, Inc. for analysis of PCBs, cyanide, TSS, BOD, oil & grease, and metals (filtered and unfiltered).
- 2. NA Not Analyzed.
- 3. ND Analyte was not detected. The number in parenthesis is the associated detection limit.
- 4. With the exception of inorganics and conventional parameters, only those constituents detected in one or more samples are summarized.
- 5. -- Indicates that all constituents for the parameter group were not detected.

# Attachment B

# NPDES Discharge Monitoring Reports August 2006



GENERAL ELECTRIC CORPORATION ADDRESS ATTN: JEFFREY G. RUEBESAM

100 WOODLAWN AVENUE PITTSFIELD

NAME

MA 01201

FACILITY GENERAL ELECTRIC COMPANY

LOCATION PITTSFIELD MA 01201 ATTY MICHAEL T CARROLL, FHS&F

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)

MA0003891 PERMIT NUMBER

005 1 DISCHARGE NUMBER

MONITORING PERIOD YEAR MO DAY YEAR MO DAY FROM 06 OI TO

Form Approved. OMB No. 2040-0004

MAJOR (SUBR W ) F - FINAL

WATERS TO HOUSATONIC RIVER

\*\*\* NO DISCHARGE I NOTE: Read Instructions before completing this form.

SAMPLE MEASUREMENT PERMIT	AVERAGE 0	MAXIMUM	UNITS	MINIMUM	AVERAGE		-1	EX	OF ANALYSIS	TYPE
MEASUREMENT PERMIT	0				AVERAGE	MAXIMUM	UNITS		ANALYSIS	
		0	( 26)	<b>各种种种种</b>	****	****	Ki .	0	01/30	СР
REQUIREMENT	90 MD AVG	135 DAILY MX	LBS/DY	*****	***	****	****** *****		ONCE/ MONTH	COMPO
SAMPLE MEASUREMENT	1.6	1.6	( 26)	***	***	***	it.	0	01/30	СР
PERMIT REQUIREMENT	MD AVG	270 DAILY MX	LBS/DY	长春春春春春	李爷爷爷爷	华井乔长卡尔	*****		ONCE/ MONTH	COMPO
SAMPLE MEASUREMENT	***	31,6	( 26)	****	*****	5,2	( 19)	0	01/07	GR
PERMIT REQUIREMENT	*****	135 DAILY MX		*********	华华华华华	15 DAILY M			MEEKT,	GRAB
SAMPLE MEASUREMENT	0	0	( 26)	****	· 林林林林林		46	0	01/07	
PERMIT REQUIREMENT	0.01 MD AVG	0.03 DAILY MX	LBS/D	*****	<b>华华朱朱</b> 栋	****	***		MEEKT,	YCOMPE
SAMPLE MEASUREMENT	0.152	0.292		*****	* *****	****	×	0		
PERMIT REQUIREMENT	2.09 MD AVG	DAILY MX	MGD	*******	· 株林林林林	<b>计非标准</b>	****		UDUS	
SAMPLE MEASUREMENT										
PERMIT REQUIREMENT					17.7					
SAMPLE MEASUREMENT										
PERMIT REQUIREMENT	15 13					7				
prepar to assu submit or thos submit	ed under my direction or su re that qualified personnel p ted. Based on my inquiry of te persons directly responsib ted is, to the best of my kno	pervision in accordance with properly gather and evaluate the person or persons who m de for gathering the informati wledge and belief, true, accur	a system designed the information anage the system, ion, the information ate, and complete.	on Mic		EXECUTIVE	13 448-59			9 25
	SAMPLE MEASUREMENT PERMIT REQUIREMENT TREQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT REQUIREMENT OFFICER I Lectil Submits Submi	SAMPLE MEASUREMENT PERMIT PERMIT SAMPLE MEASUREMENT SAMPLE MEASUREMENT O. 0.1 PERMIT REQUIREMENT O. 0.1 PERMIT PERMIT PERMIT REQUIREMENT PERMIT PERMIT REQUIREMENT POFFICER I Leverify under penalty of law that prepare that address on the penalty of the state of the penalty of the penalty of the state of the penalty of the	SAMPLE MEASUREMENT PERMIT PERMIT SAMPLE MEASUREMENT  PERMIT REQUIREMENT PERMIT PERMIT REQUIREMENT PROPERMIT REQUIREMENT PERMIT REQUIREMENT PER	SAMPLE WEASUREMENT SAMPLE MEASUREMENT DO 1 DAILY MX LBS/DY LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX LBS/DY DAILY MX MGD MGD MGD MGD MGD MGD MGD MGD MGD MGD	SAMPLE	SAMPLE MEASUREMENT	SAMPLE MEASUREMENT	SAMPLE MEASUREMENT	SAMPLE MEASUREMENT	SAMPLE MEASUREMENT 31,6 (26) 非常等等

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE PAGE 8 + 9 OF PERMIT FOR SAMPLING REQUIREMENTS. SEE DMR(S) 064G + 064T FOR FURTHER PARAMETERS.

GENERAL ELECTRIC CORPORATION

ADDRESS ATTN. JEFFREY G. RUEBESAM

100 KOODLAWN AVENUE

MA 01201

FACILITY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)

MA0003891 PERMIT NUMBER

064 T DISCHARGE NUMBER

Form Approved. OMB No. 2040-0004

MAJOR (SUBR W )

F - FINAL WASTEWATER TREATMENT (005)

MONITORING PERIOD GENERAL ELECTRIC COMPANY YEAR MO DAY YEAR MO DAY MA 01201 FROM 06 06

LOCATION PITTEFIELD \*\*\* NO DISCHARGE | | \*\*\* NOTE: Read Instructions before completing this form. ATTN: MICHAEL T CARROLL, EHS&F NO. FREQUENCY SAMPLE PARAMETER QUANTITY OR LOADING QUALITY OR CONCENTRATION TYPE EX ANALYSIS **AVERAGE** MAXIMUM UNITS MINIMUM **AVERAGE** MAXIMUM UNITS 长林特特林林 \*\*\*\* ( 12 SAMPLE 各种保持特殊 RCDR 7.2 8.0 99/99 MEASUREMENT SU PERMIT 长长头齿长长 女女女女女 女女女女 6.0 拉格拉拉格格 9.0 WEEKLYRANG-00400 T 0 0 SEE COMMENTS BELOW REQUIREMENT MINIMUM MAXIMUM 50 **상상상상** DIBENZOFURAN SAMPLE \*\*\* \*\*\*\* \*\*\* ( 22 NODI [6] NODI [6] MEASUREMENT 女子亦亦亦女 REPORT REPORT PERMIT \*\*\*\*\* \*\*\*\* 81302 7 -0 0 MD AVO SEE COMMENTS BELOW REQUIREMENT \*\* DAILY MX PPT MONT SAMPLE MEASUREMENT PERMIT REQUIREMENT NAME/TITLE PRINCIPAL EXECUTIVE OFFICER I certify under penalty of law that this document and all attachments were TELEPHONE DATE prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information Michael T. Carroll submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information 25 413 448-5902 2006 9 Mar. Pittsfield Remediation Prog. submitted is, to the best of my knowledge and belief, true, accurate, and complete. SIGNATURE OF PRINCIPAL EXECUTIVE I am aware that there are significant penalties for submitting false information, OFFICER OR AUTHORIZED AGENT TYPED OR PRINTED including the possibility of fine and imprisonment for knowing violations. NUMBER YEAR MO DAY COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SENERAL ELECTRIC CORPORATION

ADDRESS ATTN: DEFFREY G. RUEBESAM 100 GOODLAWN AVENUE

WW 01501

FACILITY GENERAL ELECTRIC COMPANY LOCATION SITE STEELS

### NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)

MONITORING PERIOD

MA0003891 PERMIT NUMBER

064 G DISCHARGE NUMBER

MAJOR

Form Approved. OMB No. 2040-0004

(SUBR W ) F - FINAL GROUNDWATER TREATMENT (005)

			TY OR LOADING		QUALITY OR CONCI				NO. EX	FREQUENCY OF	SAMPLE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS	EX	ANALYSIS	TYPE
Li	SAMPLE MEASUREMENT	女长花谷林	长谷井长谷谷		7.5	非本本本本本	7.6	C 12:	0	99/99	RCDR
CADO T 6 0 BE CEMMENTS BELOW	PERMIT REQUIREMENT	***	查费特异查特	**** ****	6.0 MINIMUM	#***	9 0 MAXIMUM	SU		WEEKL.	YRANG-
ASE NEUTRALS & ACT	SAMPLE MEASUREMENT	***	*****		谷长长长长	NODI [9]	NODI [9]	( 19)			
6030 T · 0 0 FE COMMENTS BELOW	PERMIT REQUIREMENT	外水头分析等	*****	安安 安安 安安 安安	李莽林林春季	REPORT	REPORT DAILY M	MG/L		GTRLY	GRAS
OLATILE COMPOUNDS,	SAMPLE MEASUREMENT	***	****		我将安长妆会	NODI [9]	NODI [9]	1 19	-		
STOR T O O BE COMMENTS BELOW	PERMIT REQUIREMENT	<b>技术技术计</b> 处。	<b>※水水水水</b>	****	作业基本专业	REPORT MO AVG	REPORT DAILY M	MG/L		GTRLY	GRAB
20 00 00 00 00 00	SAMPLE MEASUREMENT	7		٠.		Lan and a second	9				
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT		500.3500002-013-01-01-02-01-02-01-02-01-02-01-02-01-02-01-02-01-02-01-02-01-02-01-02-01-02-01-02-01-02-01-02-0						No. of the last	Paral or as processed	
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT	200 200 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			Common Carlos de la Revolt Carlos Haranda	TOP STORES AND CONCERNS			50090000		
	PERMIT REQUIREMENT					7 7 7					
AME/TITLE PRINCIPAL EXECUTIVE			his document and all attach pervision in accordance with		d	had T.	A second second second second	TELEPHO	NE	D	ATE

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

NAME SEVERAL ELECTRIC CORPORATION

ADDRESS ATTM: JEFFREY G. RUEBESAM 100 WOODLAWN AVENUE

PITTSFIELD

MA 01201

FACILITY GENERAL ELECTRIC COMPANY LOCATION PITTEFIELD

MA 01201

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

MONITORING PERIOD

FROM 06 08 01 TO 06 08 31

MA0003891 PERMIT NUMBER

007 1 DISCHARGE NUMBER

MAJOR (SUBR W )

F - FINAL

DISCHARGE TO HOUSATONIC RIVER

\*\*\* NO DISCHARGE

Form Approved.

OMB No. 2040-0004

PARAMETER		QUANT	TITY OR LOADING	2		QUALITY OR CONC	ENTRATION		NO. EX	FREQUENCY OF	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS	EX	ANALYSIS	TYPE
EMPERATURE: WATER EG. FAHRENHEIT	SAMPLE MEASUREMENT	长安安林安安	於林桥桥桥桥		转替长安安特			( 15)			
0011 W 0 0	PERMIT	在安安安全	****	4. 4. 4. 4.	*****	70	75		Par X	ONCE/	GRAB
- dec by hard in I have by I had also have been bed by	REQUIREMENT			***		MO AVE	DAILY MX	DEG. F		MONTH	
	SAMPLE MEASUREMENT	<b>安长长长</b>	长春长春春春			***		( 12)		4	
0400 W + 0 0 SE COMMENTS BELOW	PERMIT REQUIREMENT	*****	长长长条件件	****	6.0 MINIMUM	****	7. 0 MAXIMUM	SU		MEEKT,	RANG-
GLYCHLORINATED	SAMPLE MEASUREMENT	******	***		****		100000000000000000000000000000000000000	( 21)		Base and Base and	
TELEVILLE TOUGOT TELEVILLE br>TELEVILLE TOUG TELEVILLE TOUG TELEVILLE TOUG TELEVILLE TOUG TELE	PERMIT REQUIREMENT	********	******	****	并非证明证据	REPORT	PEPORT DAILY M	PPB		GTRLY	GRAB
LOW IN CONDUIT OR HRU TREATMENT PLAN	SAMPLE		END STABLE BERT SERVER CALLED	( 03)	本格本法本	****	****		DOVED TO	8.38200 EUROSEA	Heav-Alsa Ingress
COSO W O O DEE COMMENTS BELOW	PERMIT REQUIREMENT	REPORT MO AVO	REPORT DAILY MX	MGD	*****	*****	*****	水林林林 谷林林林		DNCE/ MONT!	CALCT
	SAMPLE MEASUREMENT				-						
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
2	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
NAME/TITLE PRINCIPAL EXECUTIVE			this document and all attach pervision in accordance with		4	- Internal Adversion Systems and Control	1991100-75000000000000000000000000000000000	TELEPHON	VE	D	ATE
Michael T. Carroll Mgr. Pittsfield Remediation	to assur submitt or those	e that qualified personnel p ed. Based on my inquiry of persons directly responsib	pervision in accordance with properly gather and evaluate the person or persons who a de for gathering the informa wledge and belief, true, accu	the information nanage the system tion, the informat	m Mu	hay T.C	enoy 4	13 448-59	902	2006	9 25

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SAMPLE AT MANHOLE PRIOR TO CITY STORM DRAIN.

GENERAL ELECTRIC CORPORATION

ADDRESS ATTN JEFFREY G. RUEBESAM 100 WOODLAWN AVENUE

PITTSFIELD

MA 01201

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

MONITORING PERIOD

MA0003891 PERMIT NUMBER

009 A DISCHARGE NUMBER

F - FINAL

MAJOR (SUBR W )

09A SAMPLE POINT BEFORE 009

Form Approved.

OMB No. 2040-0004

PARAMETER		QUAN	TITY OR LOADING			QUALITY OR CONC	ENTRATION		NO. EX	FREQUENCY OF	SAMPLE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS	EX	ANALYSIS	111-2
(20 DEG. C)	SAMPLE MEASUREMENT			( 26)	<b>各长长长长</b>	<b>经验检验</b>	<b>特特特特特</b>	F			
MOSTO A 0 0	PERMIT REQUIREMENT	104 MO AVG	439 DATLY MX	LBS/D	****	****	****	***		MEEKL	COMPO
OLIDS TOTAL	SAMPLE MEASUREMENT			( 26)	*****	安安林安安	***	×			
CEBO V - 0 C	PERMIT REQUIREMENT	213 MO AVG	876 DAILY MX	LBS/D	****	经存款条件条	李林春春春春	****		WEEKL	COMPO
FLOW, IN CONDUIT OR THRU TREATMENT PLAN	SAMPLE MEASUREMENT			( 03)	***	***	***	#			
SCOSO V O O BEE COMMENTS BELOW	PERMIT REQUIREMENT	REPORT MO AVG	REPORT DAILY MX	MGD	*****	*****	分类类类类	****		CONTI	URCORD
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										19.5
	SAMPLE MEASUREMENT	r									
	PERMIT REQUIREMENT			1							
	SAMPLE MEASUREMENT	r					4. 4				
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT	г									
	PERMIT REQUIREMENT		1.2								
NAME/TITLE PRINCIPAL EXECUTIVE  Michael T. Carroll  Mgr. Pittsfield Remediati	prepa to ass submi	ify under penalty of law that ured under my direction or su ure that qualified personnel   tited. Based on my inquiry of ose persons directly responsily itted is, to the best of my kno	pervision in accordance with properly gather and evaluate the person or persons who note the for gathering the information	a system designe the information nanage the system tion, the informati	ion M	ichay T. C		13 448-5		2006	9 25
TYPED OR PRINTED	I am	aware that there are significa ding the possibility of fine an	int penalties for submitting fa	alse information,	SIGN	FICER OR AUTHORIZ		REA NUMBE	:R	YEAR -	MO D

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE FACE 11 OF PERMIT. SEE DMR 0091. SAMPLE AT 09A.

GENERAL ELECTRIC CORPORATION

ADDRESS ATTN. JEFFREY G. RUEBESAM

100 WODDLAWN AVENUE

PITTSFIELD FACILITY

MA 01201

GENERAL ELECTRIC COMPANY

LOCATION PRINTERIELD MA 01201 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

MONITORING PERIOD

| YEAR | MO | DAY | YEAR | MO | DAY | | FROM | O.6 | O.8 | O.1 | TO | O.6 | O.8 | O.3 | 3.1 |

MA0003891 PERMIT NUMBER

009 B DISCHARGE NUMBER

MAJOR (SUBR W )

F - FINAL 09B SAMPLE POINT PRIOR TO 009

Form Approved.

OMB No. 2040-0004

\*\*\* NO DISCHARGE ! ! \*\*\*

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COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE PAGE 11 OF PERMIT. SEE DMR 0091; SAMPLE AT 09B.

NAME GENERAL ELECTRIC CORPORATION

ADDRESS ATTM. JEFFREY G. RUEBESAM 100 WOODLAWN AVENUE

PITTEFIELD

MA 01201 FACILITY GENERAL ELECTRIC COMPANY

LOCATION PITTSFIELD

MA 01201

#### NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)

MONITORING PERIOD

MA0003891 PERMIT NUMBER

YEAR MO DAY

06

009 1 DISCHARGE NUMBER

YEAR MO DAY

MAJOR (SUBR W ) F - FINAL

PROCESSES TO UNKAMET BROOK

\*\*\* NO DISCHARGE | 特殊长 NOTE: Read Instructions before completing this form.

Form Approved.

OMB No. 2040-0004

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Michael T. Carroll

TYPED OR PRINTED

Mgr. Pittsfield Remediation Prog.

submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Muchael 413 448-5902 SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT AREA NUMBER YEAR MO

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE DMRS 009A 4 009B. REPORT SUM OF LOAD 09A + 09B, FOR BOD, TSS, FLOW. SEE PAGE 11 OF PERMIT. SAMPLE AT DISCHARGE POINT TO BROOK FOR PH, DIL & GREASE, AND PCB

GENERAL ELECTRIC CORPORATION

ADDRESS ATTN: JEFFREY G. RUEBESAM 100 WOODLAWN AVENUE

NAME

PITTSFIELD MA 01201

FACILITY GENERAL ELECTRIC COMPANY

ON PITTEFIELD MA 01201

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

MONITORING PERIOD

MAOOO3891 PERMIT NUMBER

YEAR MO DAY

06 08 01

SUM A
DISCHARGE NUMBER

YEAR MO DAY

09 08 31

Form Approved. OMB No. 2040-0004

MAJOR (SUBR W ) F - FINAL

METALS: 001, 004, 005, 007, 009, 011

\*\*\* NO DISCHARGE | | | \*\*\*
NOTE: Read Instructions before completing this form.

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NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

EFFLUENT GROSS VALUEREQUIREMENT

Michael T. Carroll

Mgr. Pittsfield Remediation Prog.

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TYPED OR PRINTED

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel property gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and improtement for knowing violations.

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REPORT

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Michael To Carely

SIGNATURE OF PRINCIPAL EXECUTIVE

OFFICER OR AUTHORIZED AGENT

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COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SAMPLE

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PERMIT

GENERAL ELECTRIC CORPORATION

ADDRESS ATTN: JEFFREY G. RUEBESAM 100 WOODLAWN AVENUE

PITTSFIELD

NAME

MA 01201

FACILITY GENERAL ELECTRIC COMPANY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

MONITORING PERIOD

MA0003891 PERMIT NUMBER

SUM A DISCHARGE NUMBER

Form Approved. OMB No. 2040-0004

MAJOR (SUBR W ) F - FINAL

METALS: 001, 004, 005, 007, 009, 011

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GENERAL ELECTRIC CORPORATION

ADDRESS ATTN: JEFFREY G. RUEBESAM 100 WOODLAWN AVENUE

NAME

PITTSFIELD MA 01201

GENERAL ELECTRIC COMPANY LOCATION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

MONITORING PERIOD

YEAR MO DAY YEAR MO DAY

MA0003891 PERMIT NUMBER

SUM B DISCHARGE NUMBER

MAJOR

(SUBR W ) F - FINAL

TOXICS: 001, 004, 005, 007, 009, 011

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COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

MONTHLY DRY WEATHER TESTING. COMPOSITE PROPORTIONATE TO FLOW. FOR JULY, AUG., SEPT. REPORT ACUTE AND CHRONIC. SEE DMR SUMC FOR QUARTERLY WET WEATHER ACUTE. SUBMIT THIS DMR WITH A NODI '9' WHEN SUBMITTING

WET WEATHER RESULTS ON DMR SUMC

Form Approved. OMB No. 2040-0004

NAME GENERAL ELECTRIC CORPORATION
ADDRESS ATTN: JEFFREY G. RUEBESAM

100 WOODLAWN AVENUE

PITTSFIELD

MA 01201

FACILITY GENERAL ELECTRIC COMPANY

LOCATION PITTSFIELD MA

MA 01201

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

MONITORING PERIOD

07 01 TO 08

MAOOO3891 PERMIT NUMBER

YEAR MO DAY

FROM 06

SUM C DISCHARGE NUMBER

YEAR MO DAY

MAJOR (SUBR W )

> F - FINAL TOXICS: 001, 004, 005, 007, 009, 011

Form Approved.

OMB No. 2040-0004

\*\*\* NO DISCHARGE !\_\_! \*\*\*
NOTE: Read Instructions before completing this for

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COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

QUARTERLY WET WEATHER ACUTE. COMPOSITE PROPORTIONATE TO FLOW. SEE DMR SUMB FOR DRY WEATHER TESTING. SUBMIT THIS DMR WITH A NODI '9' WHEN SUBMITTING DRY WEATHER ON DMR SUMB.

# Attachment C

# NPDES Biomonitoring Report September 2006





October 4, 2006

Mr. Jeffrey Nicholson GE Corporate Environmental Programs 159 Plastics Avenue Pittsfield, MA 01201

Re: NPDES Biomonitoring Report for September 2006

Submission #: R2633066

Dear Mr. Nicholson:

Enclosed is our report on the Acute Whole Effluent Toxicity testing conducted in September 2006. The Outfall Composite samples were collected on 9/11/06 at 11:00 am. The Housatonic River samples were collected on 9/11/06 at 8:15 am. The Outfall Composite and Housatonic River samples were analyzed at Columbia Analytical Services for total cyanide, ammonia, total organic carbon, total phosphorus, chloride, total solids, total suspended solids, total residual chlorine, and total metals. Dissolved metals were analyzed for only on the Outfall Composite samples. Results are presented in Appendix 2. The Outfall Composite and Housatonic River samples were sent directly by General Electric to Aquatec Biological Services for the acute aquatic toxicity testing including the analysis of alkalinity, hardness, specific conductance, and pH. Results are presented in Appendix 1.

Should you have any questions please contact me at (585)288-5380 x130.

Thank you for allowing us to provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Carlton Beechler Project Manager

enc.

CC: Jill Piskorz, Pat Fuse and Nicole Evans vial email.

**NELAP Accredited** 

## NPDES BIOMONITORING REPORT

# GENERAL ELECTRIC COMPANY Pittsfield, MA NPDES PERMIT MA 0003891

Monthly Acute Toxicity Monitoring
Dry Weather Conditions
September 2006

## WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION

I certify under penalty of law that this document and all ATTACHMENTS were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on		
	(Date)	(Authorized Signature)
		Michael T. Carroll
		General Electric Co. – Pittsfield, MA Permit MA0003891

Prepared by: Carlton R. Beechler October 4, 2006

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I.	Summary	1
II.	Review of Toxicity Analytical Results	2
III.	Review of Wastewater Sampling Procedures	3
IV.	Review of Individual Discharges	5

## Table I – Summary of Analytical Test Results

## Appendices:

- 1. Chemical and Acute Toxicity Data from Aquatec Biological Sciences
- 2. Laboratory Reports from Columbia Analytical Services, Inc. and O'Brien & Gere, Inc.
- 3. Chain of Custody Forms

#### I. Summary

On September 10-11, 2006 sampling of wastewater discharges from the General Electric Company facility in Pittsfield MA was conducted in accordance with the dry weather toxicity testing requirement of the GE NPDES Permit MA0003891. Composite samples were collected from GE outfalls 001, 005-64T, 005-64G and 09B over a 24-hour period. These composite samples were combined in a flow-proportioned manner to generate a single wastewater sample that was shipped to Aquatec Biological Sciences in Williston, Vermont. A grab sample of Housatonic River water, to be used as dilution water in the toxicity test, was collected upstream of the GE discharges on September 11, 2006 and shipped to AquaTec along with the wastewater composite. AquaTec dechlorinated the composite sample prior to the acute toxicity test following the toxicity reduction procedures summarized in a letter dated November 11, 1993 to EPA Region I from JG Ruebesam of General Electric Company. The composite wastewater sample and the dilution water sample were tested for chemical constituents by O'Brien & Gere, Inc. and Columbia Analytical Services. The analytical results are summarized in Table I and the detailed laboratory test data are include as Appendices to this report. As a result of land transfer documents executed on April 27, 2005 and recorded in the Berkshire County Registry of Deeds on May 2, 2005, Outfalls 001 and 004 were transferred to the Pittsfield Economic Development Authority (PEDA). Outfalls 001 and 004 DMRs will no longer be submitted under the GE NPDES Permit No. MA0003891. However, GE's NPDES Permit requires that the metal and toxicity composites to be made by compositing samples from the following outfalls: 001, 004, 005, 007, and 009. These two composites will continue to include an aliquot of water from outfall 001 and outfall 004, and will be reported on GE's DMR until further actions by the Agencies.

The results from Aquatec Biological Sciences for the acute toxicity test on the wastewater discharge sample indicated a No Observed Acute Effect Level (NOAEL) of 100%.

## II. Review of Toxicity Test Results

The wastewater discharge sample collected on September 10-11, 2006 was tested for 48-hour acute toxicity using *Daphnia pulex* organisms. The sample did not require dechlorination with sodium thiosulfate (Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>) prior to toxicity testing. Aquatec Biological Sciences reported the results of this toxicity testing as follows:

Effluent toxicity as NOAEL =	100%
Effluent toxicity as $LC_{50} =$	>100%

No limit is established for wet weather NOAEL in the GE NPDES permit.

The following table summarizes the results of the control sample analyses performed by AquaTec during the acute toxicity bioassay:

Control Analysis	Result
Survival in 100% dilution water	100%
Survival in laboratory water	100%
Survival in laboratory water	
with 100 mg/L sodium thiosulfate	96%
LC <sub>50</sub> for Daphnia pulex in sodium chloride reference toxicant solution	3.068g NaCl/L September 13, 2006

The Daphnia survival rates in control solutions of upstream dilution water, laboratory water and reference toxicant solution were within acceptable limits, indicating that the results of the toxicity test are valid.

## III. Review of Wastewater Sampling Procedures

Composite samples of the individual NPDES wastewater discharges were collected over a 24-hour period. These samples were composited in a flow-weighted manner to generate a single combined discharge sample for toxicity testing and chemical analysis.

The 24-hour composite samples from the individual discharges were collected as follows:

Each automatic sampler (at outfall 001, 64T, 64G, and 09B) was programmed to collect approximately 7 liters of wastewater into a 10-liter glass container in a time-proportioned manner over a 24-hour period. Outfalls 004, 007, and 09A have been plugged and no longer flow.

All sample containers were packed in ice or refrigerated to keep the wastewater samples cold during the 24-hour collection period.

Flow meter readings were taken at the beginning and end of the 24-hour collection period to determine the total 24-hour flow for each wastewater discharge.

At the end of the 24-hour collection period, the discharge samples were taken to Building 64G where OB&G personnel composited these samples, in a flow weighted manner, to generate a single combined sample for the acute toxicity test and the chemical analyses, as follows:

The proportions of each individual discharge sample needed to produce a single combined sample were calculated from the flow measurements. The calculated sample volumes were then transferred from their original collection containers to a 2.5 or 5 gallon mixing container. The combined discharge sample was then split into various containers for toxicity testing and chemical analyses. These containers were shipped by vendor courier to AquaTec for toxicity testing and by FedEx (overnight) to Columbia Analytical Services for chemical analyses. All samples were chilled with ice packs during shipment.

A grab sample of Housatonic River water was collected on the second day of sampling at the Lyman Road Bridge in Hinsdale, MA, upstream of the GE site. This sample was split for chemical analysis and toxicity testing in a similar manner as the combined effluent sample (see above).

Details of the times and dates of sample collection as well as the names of the individuals collecting and transporting the samples are provided on the chain of custody forms in Appendix 3 of this report.

## IV. Review of Individual NPDES Discharges

The following is a brief description of each of the seven outfalls that are monitored for acute and chronic toxicity in accordance with NPDES Permit MA0003891 issued to the General Electric Company, Pittsfield, MA.

- 1. Outfall 001 is permitted to discharge storm water runoff from the oil/water separator in Building 31W to Silver Lake.
- 2. Outfall 004 is permitted to discharge storm water runoff to Silver Lake. (Outfall plugged)
- 3. Outfall 005 is permitted to discharge contact cooling water, non-contact cooling water, treated process water and storm water runoff from the Wastewater Treatment Plant in Building 64T, and treated groundwater from the Groundwater Treatment Plant in Building 64G to the Housatonic River. Monitoring samples are collected separately from the effluents of 64G and 64T. Both samples are included in the flow composite sample used for toxicity testing.
- 4. Outfall 007 is permitted to discharge stormwater runoff to the Housatonic River. (Outfall plugged)
- 5. Outfall 09A is permitted to discharge non-contact cooling water and stormwater runoff to Unkamet Brook. (Outfall plugged)
- 6. Outfall 09B is permitted to discharge non-contact cooling water, treated process water and stormwater runoff from the oil/water separator in Building 119W to Unkamet Brook.

Table I – Summary of Analytical results for

# NPDES Outfall Composite Sample and Housatonic River Dilution Water September 10-11, 2006

Aquatic Toxicity Results: No Observed Effect Level (NOAEL) = 100%LC50 = >100%

Chemical Analyses: (all results are mg/L unless otherwise indicated)

		Effluent	Housatonic
Parameter Tested	Laboratory	Composite	River
Ammonia	CAS	0.686	ND (0.0500)
Chloride	CAS	162	18.3
Total Alkalinity	CAS	279	104
Total Organic Carbon	CAS	7.67	5.16
Total Phosphorus	CAS	0.105	ND (0.0500)
Total Solids	CAS	583	147
Total Suspended Solids	CAS	1.70	1.10
Hardness	Aquatec	290	108
Spec. Conductance (umhos)	Aquatec	1102	281
pH (SU)	Aquatec	7.7	7.7
TRC (start of toxicity test)	Aquatec	ND	ND
,			**** (0.0100)
Cyanide	CAS	0.0191	ND (0.0100)
Aluminum, total	CAS	ND (0.100)	ND (0.100)
Aluminum, dissolved	CAS	ND (0.100)	NA
Cadmium, total	CAS	ND (0.00500)	ND (0.00500)
Cadmium, dissolved	CAS	ND (0.00500)	NA
Chromium, total	CAS	ND (0.0100)	ND (0.0100)
Chromium, dissolved	CAS	ND (0.0100)	NA
Copper, total	CAS	ND (0.0200)	ND (0.0200)
Copper, dissolved	CAS	ND (0.0200)	NA
Lead, total	CAS	ND (0.00500)	ND (0.00500)
Lead, dissolved	CAS	ND (0.00500)	NA
Nickel, total	CAS	ND (0.0400)	ND (0.0400)
Nickel, dissolved	CAS	ND (0.0400)	NA
Silver, total	CAS	ND (0.0100)	ND (0.0100)
Silver, dissolved	CAS	ND (0.0100)	NA
Zinc, total	CAS	ND (0.0200)	ND (0.0200)
Zinc, dissolved	CAS	0.0294	NA
pH (SU)	OB&G	7.79	7.74
Hardness	Aquatec	290	108

All results are mg/L unless otherwise indicated.

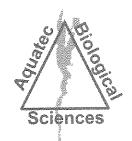
ND-Not detected (Number in parentheses is detection limit.)

NA - Not analyzed

## APPENDIX 1

Chemical and Acute Toxicity Data

Aquatec Biological Sciences



# **Aquatec Biological Sciences**









September 28, 2006

Mr. Carl Beechler Columbia Analytical Services, 1 Mustard Street – Suite 250 Rochester, NY 14609

Dear Mr. Beechler:

Enclosed please find one bound and one unbound copies of our report of the results for whole effluent toxicity testing of samples received from GE Pittsfield, Massachusetts on September 11, 2006.

According to the Chain-of-Custody documentation the samples for Whole Effluent Toxicity (WET) Testing were collected on September 11, 2006. The samples were transported to Aquatec Biological Sciences, Inc. by courier and delivered on the same day. The effluent sample (Sample 33327) was logged in for the acute 48-hour static toxicity test with *Daphnia pulex*. The receiving water sample (Sample 33328) was logged in for dilution water. A subsample of each sample was checked for residual chlorine (not detected) and for alkalinity and hardness measurements at Aquatec Biological Sciences, Inc. The toxicity test was started on September 12, 2006, within the specified holding time.

At the conclusion of the toxicity test on September 14, 2006, a final count of surviving organisms was completed. The average survival was 96 - 100 percent in all test concentrations. Acute toxicity to *Daphnia pulex* was not detected, and the 48-hour LC50 reported as >100% effluent (Section 4.1 of the report).

If you have any questions regarding the report, please call Dr. Philip C. Downey or me.

Sincerely,

John Williams

Manager, Environmental Toxicology

This report consists of the following numbered pages:

1-43

Whole Effluent Toxicity Testing
Of Wastewaters Discharged from
The General Electric Plant
Pittsfield, Massachusetts

Samples Collected in September 2006

Submitted to:
General Electric
Area Environmental & Facility Programs
100 Woodlawn Avenue
Pittsfield, Massachusetts 01201

SDG number: 9843

Effluent ID: Outfall Composite A7556C Aquatec sample number: 33327 Receiving water ID: Housatonic River A7555R Aquatec sample number: 33328

Study Director: John Williams

September 25, 2006

Submitted by:

Aquatec Biological Sciences, Inc. 273 Commerce Street Williston, Vermont 05454

Phone: (802) 860-1638 Fax: (802) 860-1638

Accreditation: NH Environmental Laboratory Accreditation Program NELAP / NELAC accredited for the requested analysis.

## Signatures and Approval

## Submitted by:

Aquatec Biological Sciences, Inc.

273 Commerce Street Williston, Vermont 05454 Phone: (802) 860-1638 Fax: (802) 860-1638

Study Director John Williams

Quality Assurance Officer

Philip C. Downey, Ph. D.

Date

## **Whole Effluent Toxicity Test Report Certification**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on: Date: 9/28/0 C
Authorized signature
John Williams
Name
Manager, Environmental Toxicology
Title
Aquatec Biological Sciences, Inc.
Laboratory

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#### Summary of Static Acute Toxicity Test with *Daphnia pulex*

Sponsor:

General Electric

Protocol title:

US EPA-821-R-02-012. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5<sup>th</sup> Ed., October

2002 Method 2021.0

Aquatec SDG:

9843

Test material:

Composite effluent from the General Electric Company located in Pittsfield, Massachusetts

GE sample ID:

**OUTFALL COMPOSITE A7556C** 

Dilution water:

Water from the Housatonic River (grab sample)

GE sample ID:

**HOUSATONIC RIVER A7555R** 

Dates collected:

September 11, 2006

Date received:

September 11, 2006

Test dates:

September 12 - 14, 2006

Test concentrations:

100%, 75%, 50%, 35%, 15%, 5% effluent.

Dilution water control (Housatonic River A7555R)

Laboratory control 1 (culture water)

Laboratory control 2 (culture water with sodium

thiosulfate)

Results:

The 48-hour LC50 value was determined to be >100% effluent. The Acute No-Observed-Effect-

Concentration (A-NOEC) was 100% effluent.

#### 1.0 Introduction

#### 1.1 Background

In 1972, amendments were made to the Clean Water Act (CWA) prohibiting the discharge of any pollutant from a point source to waters of the United States, unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Since the passing of the 1972 amendments to the CWA, significant progress has been made in cleaning up industrial wastewater and municipal sewage point source discharges. EPA defines point sources as discrete discharges via pipes or man-made ditches.

In 1984, the U.S. Environmental Protection Agency (EPA) released a national policy statement and a supporting document that recommended, where appropriate, effluent permit limits should be based on effluent toxicity as measured in aquatic toxicity tests. Generally, permits require that no toxic discharge occur in toxic amounts. The routine use of dilution-series toxicity tests and/or biologically-based criteria (i.e., invertebrate and vertebrate community studies) have become increasingly utilized to calculate or estimate the potential toxicity of a discharge.

EPA has the authority to delegate primary responsibility for the implementation, permitting, and enforcement of NPDES regulations to appropriate State regulatory agencies. Even when EPA delegates this authority to the states, EPA still maintains oversight responsibility.

#### 1.2 Objective of the General Electric Study

The objective of this study was to measure the acute toxicity of the composite wastewater discharged by the General Electric facility located in Pittsfield, Massachusetts to the Housatonic River. The water flea, *Daphnia pulex*, is exposed to effluent and dilutions of effluent under static conditions. *Daphnia pulex* is routinely used by regulatory agencies and by contract laboratories for toxicity testing and EPA has published guidance documents for the performance of this test (U.S. EPA, 2002).

A toxicity test was conducted from September 12 - 14, 2006 at Aquatec Biological Sciences, Inc. (Aquatec) located in Williston Vermont. Aquatec Biological Sciences, Inc. holds NELAC accreditation for the requested whole effluent toxicity test. All original raw data and the final report produced for this study are stored in Aquatec's archives in Williston, Vermont.

#### 2.0 Materials and Methods

#### 2.1 Protocol

Procedures used in this acute toxicity test followed those described in the Aquatec Standard Operating Procedure (SOP) TOX2-001, Daphnid Acute R5, May 4, 2006. This SOP generally follows the standard methodology presented in U.S. EPA. 2002 (EPA-821-R-02-012). *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, 5<sup>th</sup> Ed.,

September 25, 2006

October 2002, Method 2021.0 (as summarized in Appendix 2 of this report). A copy of the SOP is located in Appendix 6 (Controlled document, please do not copy or distribute.)

Additional SOPs used in this study are outlined below:

Title	SOP Number	Revision Date
Sample Acceptance	TOX1-017	Rev. 4, February, 2004
Hardness – total titrimetric method	TOX1-011	Rev. 3, May 2003
Alkalinity – total titrimetric method	TOX1-010	Rev. 6, April 2004
Thermo-Orion 145 A+ Conductivity Meter	TOX1-016	Rev. 1, April 2004
Dissolved oxygen	TOX1-006	Rev. 7, April 2004
pH measurement	TOX1-007	Rev. 2, April 2004
Salinity: refraction method	TOX1-008	Rev. 3, January, 2003

#### 2.2 Effluent and Receiving Water Samples

The effluent sample (Outfall Composite A7556C) was collected by GE personnel from September 10 - 11, 2006. The receiving water sample (Housatonic River A7555R) was a grab collected from the Housatonic River on September 11, 2006. Samples were delivered to Aquatec on the same day. Upon receipt at Aquatec on September 11, 2006, the temperature of the temperature blank contained within the cooler was 1.7°C. The effluent and receiving water were prepared for testing and characterized (Table 1). The receiving water was the dilution water for preparing effluent concentrations and was also the reference control for statistical comparisons.

#### 2.3 Control water

Laboratory control water for the toxicity test was a 1:1 mixture of laboratory reconstituted moderately hard water and 60-micron filtered river water collected from the Lamoille River, Vermont. This water was characterized for the following parameters: pH (7.9); dissolved oxygen (7.7 mg/L); conductivity (246 uS/cm). An additional dechlorination control (laboratory water with 0.2 N sodium thiosulfate added) was included in the test array, even though chlorine was not detected in the effluent sample.

#### 2.4 Test Organism

Daphnids (*Daphnia pulex*), less than 24-hours old were obtained from Aquatec laboratory cultures. The culture system consisted of several 1-liter glass beakers containing approximately 1-liter of culture medium and up to approximately 100 daphnids. The culture water was laboratory reconstituted moderately hard water. Prior to use, the culture water was characterized:

Parameter	Result
Total hardness (mg/L)	Within range of 80-110 mg/L
Alkalinity (mg/L as CaCO₃)	Within range of 60-70 mg/L
pH	Nominal 7.7 – 8.0

The culture area was maintained at a nominal temperature of 20°C (range 19 – 21°C) with a regulated photoperiod of 16 hours light and 8 hours of darkness.

Daphnid cultures were fed a combination of green algae (*Selenastrum* capricornutum) and YCT obtained from Aquatic BioSystems of Fort Collins, Colorado. The cultures were fed a ration of *Selenastrum* and YCT daily Monday through Friday. Daphnids were transferred to new culture medium weekly.

Approximately 24 hours before toxicity test initiation, all daphnid neonates were removed from the culture beakers. Offspring produced within 24 hours were used for toxicity testing.

#### 2.5 Test Procedures

Prior to initiating the toxicity test, a sub-sample of effluent and receiving water was decanted for subsequent alkalinity and hardness determination. A sub-sample was also check for presence of chlorine to determine whether dechlorination of effluent is required. Chlorine was not detected, therefore dechlorination of the effluent was not required. The sample was then aerated and warmed to test temperature.

The toxicity test was conducted at effluent concentrations of 100%, 75%, 50%, 35%, 15%, and 5% effluent. Test concentrations were prepared by diluting the appropriate volume of effluent with dilution water to a total volume of 400 mL. Test solutions were then decanted to five replicate 30-mL cups per concentration, each containing approximately 20 mL of test solution. Three sets of control replicates were also included in the test array, set up as the effluent replicates. The controls included: Housatonic River water (dilution control), a laboratory control (a mix of moderately hard water and Lamoille River, VT water), and a laboratory control with sodium thiosulfate added (dechlorination control). The dechlorination control was included in the test array even though residual chlorine was not detected in the effluent.

Prior to testing, daphnids less than 24-hours old were collected from the cultures, pooled in Carolina bowl, and fed. The test was initiated when the daphnid neonates were transferred to the replicate test cups, five daphnids per cup. The toxicity test cups were incubated to maintain temperature in the range of 19°C to 21 °C. The lighting cycle was 16 hours light and eight hours dark and a luminance of approximately 80 ft-c.

#### 2.6 Test Monitoring

The number of surviving daphnids was observed at approximately 24-hour intervals during the test, with the final count of surviving daphnids at approximately 48 hours. Temperature was measured daily in one replicate of each test treatment. The parameters of pH, dissolved oxygen, and conductivity were measured at the beginning and the end of the test.

Total hardness was measured by the EDTA titrimetric method and total alkalinity was measured by potentiometric titration to an endpoint of 4.5. The check for residual chlorine was performed with an acidified sample to which potassium iodide and starch indicator added. If chlorine was detected, the color was titrated away with 0.02 N sodium thiosulfate to determine the equivalent volume of 0.2 N sodium thiosulfate to add to effluent (if needed).

Dissolved oxygen was measured with a YSI Model 58 dissolved oxygen meter. A Beckman Phi 40 was used to measure pH. A Thermo-Orion Model 145 conductivity meter was used to measure conductivity. Salinity was measured with an Atago salinity refractometer.

#### 2.7 Reference Toxicant Test

A 48-hour standard reference toxicant (SRT) test was conducted concurrently with the effluent toxicity test. The SRT test was conducted as a quality control procedure to establish the health and sensitivity of the test organisms. The SRT included four concentrations of reagent grade sodium chloride (NaCl) with nominal concentrations of 0.75, 1.5, 3.0, 6.0, and 12 g NaCl/L. Four test replicates, each containing five daphnid neonates were test at each concentration and the laboratory control.

#### 3.0 Statistics

#### 3.1 Statistical protocol

The concentration-response relationships observed were characterized by the median lethal concentration (LC50), which was the calculated concentration lethal to 50 percent of the test organisms. If no concentrations resulted in 50% mortality, the LC50 was reported as greater than the highest concentration effluent (in this case >100% effluent), by direct observation. If greater than 50 percent mortality was observed in any effluent treatment, then a computer program (TOXIS2) was used to calculate the LC50 value, following the U.S. EPA statistical flowchart (Appendix 3).

The Acute-No-Observable-Effect Concentration (A-NOEC) was determined statistically using multiple comparison tests (TOXIS2), with the receiving water control as the reference.

#### 4.0 Results

#### 4.1 Effluent Toxicity Test

Results of effluent and receiving water characterizations performed at Aquatec as part of the toxicity test are presented in Table 1. Water quality parameters measured during the toxicity test are presented in Table 2. Measured temperatures during the test were within the range of 19°C to 21°C. The percent mortality data for the toxicity test are presented in Table 3. Acute toxicity was not

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demonstrated during this evaluation. The 48-hour LC50 value was >100% effluent. The A-NOEC was 100% effluent.

#### 4.2 Reference Toxicant Test

A standard reference toxicant (SRT) test was performed concurrently with the effluent toxicity test. The resulting 48-hour LC50, calculated by the Spearman-Karber method, was 3.07 g NaCl/L with 95% confidence intervals of 1.82 – 4.71 g/L. This LC50 value was within the Control Chart limits generated for tests in our laboratory.

#### 5.0 Qualifiers

#### 5.1 Qualifiers and Special Conditions

Qualifiers or special conditions were not applicable to the reported toxicity test.

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September 25, 2006

#### References

American Public Health Association, American Water Works Association, and Water Pollution Control Federation (APHA). 1989. Standard Methods for the Examination of Water and Wastewater. 17<sup>th</sup> Edition

U.S. Environmental Protection Agency, 2002. 5<sup>th</sup> Edition. *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*. EPA-821-R-02-012.

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September 25, 2006

Table 1. Results of the characterization of the General Electric Pittsfield Plant effluent and receiving water (Housatonic River).

Parameter	Effluent OUTFALL COMPOSITE A7556C	Housatonic River A7555R HOUSATONIC RIVER A7555R
Temperature	20.5	20.5
рН	7.7	7.7
Alkalinity (as CaCO <sub>3</sub> ), mg/L	268	100
Hardness (as CaCO <sub>3</sub> ), mg/L	290	108
Dissolved oxygen, mg/L	8.6	8.0
Specific conductivity, uS/cm	1100	281
Salinity (°/ <sub>00</sub> )	0	0
Total residual chlorine (mg/L)	ND	ND

Note: Characterizations reflect conditions of sample after preparation for the toxicity test. ND = not detected

Table 2. Water quality measurements recorded during the 48-hour static toxicity test with *Daphnia pulex* exposed to General Electric Pittsfield Plant effluent, September 12 - 14, 2006.

Test Concentration (% effluent)		рН		(	issolve Oxygei (mg/L)	า	Ter	nperat (°C)	ure
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0	24	48	0	24	48	0	24	48
Dechl. Control	7.9	-	7.7	7.8	-	8.2	21.0	20.1	20.2
Lab Control	7.9	***	7.9	7.7	***	8.1	20.7	20.1	20.3
Dilution Control	7.7	•••	7.9	8.0	•••	8.2	20.5	19.7	19.8
5%	7.7	-	7.9	8.4	•••	8.3	20.7	19.8	19.9
15%	7.7	see .	8.0	8.5	***	8.2	20.6	20.1	20.0
35%	7.7	-	8.1	8.5	-	8.2	20.7	20.1	20.0
50%	7.7	-	8.2	8.6	-	8.2	20.7	19.9	19.8
75%	7.7	-	8.3	8.6	-	8.3	20.6	19.8	19.7
100%	7.7	-	8.3	8.6	-	8.3	20.5	19.8	19.7

Measurements at time 0 were from a sub-sample of the prepared treatment. Measurements at time 48 were from the combined water from all replicates for each treatment.

Dechl. Control = laboratory water with sodium thiosulfate added (dechlorination control).

Lab Control = a mix of natural river water and moderately hard water. Dilution Control = receiving water (Housatonic River).

Table 3. Cumulative percent mortalities recorded during the 48-hour static acute toxicity test with *Daphnia pulex* exposed to General Electric Pittsfield Plant effluent, September 12 - 14, 2006.

Effluent Conc.			24-hou	ır				.,	48-h	our		
(%)	Α	В	С	D	E	Avg	Α	В	С	D	E	Avg
Dechl. Control	0	20	0	0	0	4	0	20	0	0	0	4
Lab Control	0	0	0	0	0	0	0	0	0	0	0	0
Rec. Control	0	0	0	0	0	0	0	0	0	0	0	0
5%	0	0	0	0	0	0	0	0	0	0	0	0
15%	0	0	0	0	0	0	0	0	0	0	0	0
35%	0	0	20	0	0	4	0	0	20	0	0	4
50%	0	0	0	0	0	0	0	0	0	0	0	0
75%	0	0	0	0	0	0	0	0	0	0	0	0
100%	0	0	0	0	0	0	0	0	0	0	0	0

Dechl. Control = laboratory water with sodium thiosulfate added (dechlorination control).

Lab Control = a mix of natural river water and moderately hard water.

Dilution Control = receiving water (Housatonic River).

Percent mortality = (# dead/5) X 100

NPDES Permit No. MA0003891 SDG: 9843 September 25, 2006

## Appendix 1 Chain-of-Custody Documentation

	Aquate	ec Biolog	c Biological Sciences	273 Commerce Street Williston, VT 05495	Street
		Chain-of-Custody Record	ody Record	TEL (802) 860-1638 FAX (802) 658-3189	1638 3189
COMPANY INFORMATION	COMPANY'S PROJECT INFORMATION	INFORMATION	SHIPPING INFORMATION	VOLUME/CONTAINER TYPE/ PRESERVATIVE	PE/
Name: General Electric Company	Project Name: GE PITTSFIEL		Carrier	i	~0° ~0°
Address; O'Brien & Gere 1000 East Street, Gate 64	Outfall Composite Project Number: 06004		i.hcill Al 1.	H <sub>2</sub> SO <sub>4</sub> H <sub>2</sub> SO <sub>4</sub>	28 / 28 /
City/State/Zip: Pittsfield, MA 01201	Sampler Name(s): MAKIC	CUTENERS		Plastic Plastic Glass Am	Amber Plastic
elephone: (****) *******************************	NPDES Permit #: MA0003891		Date Shipped: 4-11-06	<u></u>	Glass
ame: Mark Wasnewsky	Quote #: 10/05 Client	Code: GEPITTS	Hand Delivered: WYes No	1 gal 1/2 gal 1 L 40 ml 250	250 ml 0.51
ENTIFICATION	ECTION GRAB	COMPOSITE MATRIX	ANALYSIS (detection limits, mg/L.)	FR OF CONTAIN	
	9-11-00 11 PM	Effluent	Daphnia pulex 48-h Static Acute Toxicity (EPA Method 2021.0). Log in for A4RDPS		
Outfall Composite # 7535 C	11 cha	Effluent	Total Residual Chlorine		
Housatonic River A7555R	815/W	Receiving	Dilution Water		
Housatonic River A 7555 R	Sign (	Receiving	Total Residual Chlorine		
	E TIME Received hv.	v. (signatura)	NOTES TO SAMBI ED/S). (4). Commisse		
~	1		labels with clear tape. Tape the caps of the sample bottles to ensure that they do not become disjoidned during shirment.	the labels (Date, time, initials) and co he sample bottles to ensure that they	
shay	9-11-06 1145 Steward 11.	Handell	6°C. Results for samples received at temperatures exceeding 6°C will be qualified in the report.	it the samples in sufficient ice to main iperatures exceeding 6°C will be qual	iffied in the
/		y: (signature)	Notes to Lab: Ambient cooler temperature:	ature: 7 °C. Dechlorinate the efficent	offliont
<b>&gt;</b>		7	·Ē		
Relinquished by: (signature) DATE	E TIME Received by:	y: (signature)			

NPDES Permit No. MA0003891 SDG: 9843 September 25, 2006

## Appendix 2 Summary of Test Conditions

Client: GENERAL ELECTRIC, PITTSFIELD, MA. MA0003891

Test Description: Daphnid, Daphnia pulex, acute toxicity test

ASSOCIATED PROTOCOL: EPA 2002, 5<sup>th</sup> ed. (EPA-821-R-02-012) Methods for Measuring the Acute

Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Method 2002.0 Static, non-renewal 1. Test type: 2. Test temperature: 20 ± 1°C 3. Light quality: Ambient laboratory illumination 4. Photoperiod: 16 hr. light, 8 hr. dark 5. Test chamber size: 30 ml 6. Test solution volume: 15-20 ml / replicate 7. Renewal of test concentrations: None 8. Age of test organisms: Less than 24 h 9. No. organisms / test chamber: 5 10. No. of replicate chambers / concentration: 11. No. of organisms / concentration: 20 12. Feeding regime: Feed 0.1 ml of YTC and algal suspension prior to testing. Not fed during test. None 13. Cleaning: 14. Aeration: None 15. Dilution water: Receiving Water (Housatonic River) 5, 15, 35, 50, 75, 100% 16. Test concentrations: 17. Laboratory control: 1:1 mix of reconstituted moderately hard water and Lamoille River water. Dechlorination control. 18. Test duration: 48 h Day 0: temperature, DO, pH, and conductivity. 19. Monitoring: Day 1: temperature, DO, pH, and conductivity. Day 2: temperature, DO, pH Hardness, alkalinity, salinity, TRC Biological monitoring daily (survival) 19. End points: Survival 20. Reference toxicant test: Sodium chloride 48-h LC50 21. Test acceptability 90% or greater 22. Data interpretation: Acute: 48 h LC50 (Point estimate by EPA statistical flowchart using TOXIS 2) and A-NOEC by hypothesis test statistics compared to the receiving water control (EPA statistical flowchart using TOXIS 2)

SDG: 9843

## Appendix 3 U.S. EPA Region 1 Toxicity Test Summary and Statistical Flow Chart

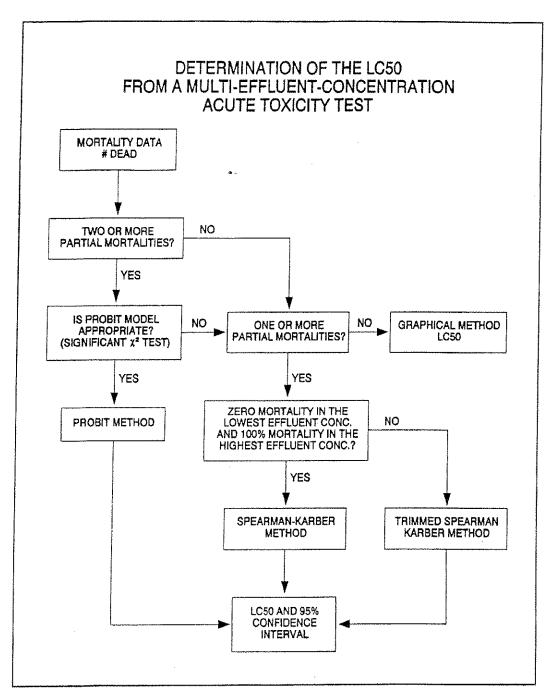


Figure 6. Flowchart for determination of the LC50 for multi-effluent-concentration acute toxicity tests.

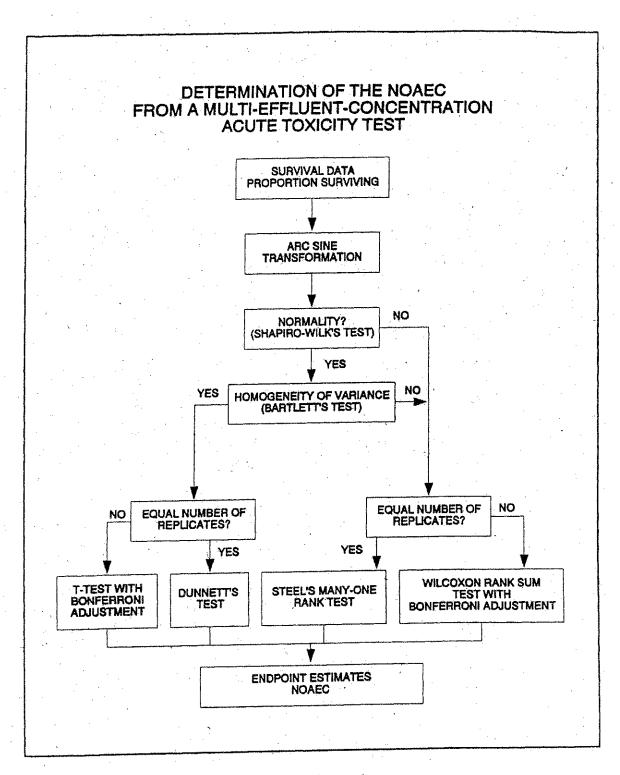


Figure 13. Flowchart for analysis of multi-effluent-concentration test data.

NPDES Permit No. MA0003891 SDG: 9843 September 25, 2006

## Appendix 4 Bench Data, *Daphnia pulex* Acute Toxicity Test

Aquatec Biological Sciences, Inc.

Test Date: 9/12/06 Sample Date: 9/11/06 Species: Daphnia pulex Test Type: Acute - 48 hours

Test Number: 50235 Test Material: Effluent - Industrial

Source: MA0003891

General Electric Company

Pittsfield, MA

		SUMM	ARY				
*********			Conc	#Reps	Mean	StDev	% Surv
and Point	Day	Transformation	C012C	#Kepa	rican	S C D C V	0 004.
roportion Alive	2	Arc sine sqrt w/ adj.					
TOPOLCION MATO			0.000 B	5	1.35	0.000	
		X	0.000 D	5	1.35	0.000	
		X	5.000 D	5	1.35	0.000	
		. Х	15.000 D	5	1.35	0.000	
		х	35,000 D	5	1.30	.106	
		Х	50.000 D	5	1.35	0.000	
		X	75.000 D	5	1.35	0.000	
		Х	100.000 D	5	1.35	0.000	
roportion Alive	2	No transformation					
102-1			0.000 B	5	1.00	0.000	
			0.000 D	5	1.00	0.000	
			5.000 D	5	1.00	0.000	
			15.000 D	5	1.00	0.000	
			35.000 D	5	. 96	.089	
			50.000 D	5	1.00	0.000	
			75.000 D	5	1.00	0.000	
			100.000 D	5	1.00	0.000	

X = indicates concentrations used in calculations

- HYPOTHESIS TEST -LOEC TU MSE MSD Day Transformation/Analysis NOEC End Point 2 Arc sine sqrt w/ adj. Proportion Alive Steel many-one rank test >100.000 >100.000 < 1.00

48- L LCGO: 7100% (direct observation)

24

#### WATER FLEA TEST DATA

Test Number: 50235

( ) Chronic (x) Acute 48 hours

Test Date: 12-Sep-06
Source: MA0003891 Test Material: EFF2 (%)

		Cont.			Survival	Prop	Total	Max
Conc	Rep	No. Sex	Start	1 2 3	4 5 6	End Alive	Young	Young
0.00 B	1	F	5	5		1.00		
0.00 B	2	F	5	5		1.00		
0.00 B	3	F	5	5		1.00		
0.00 B	4	P	5	5		1.00		
0.00 B	5	F	5	5		1.00		
0.00 D	1	F	5	5		1.00		
0.00 D	2	F	5	5		1.00		
0.00 D	3	F	5	5		1.00		
0.00 D	4	F	5	5		1.00		
0.00 D	5	F	5	5		1.00		
5.00 D	1	F	5	5		1.00		
5.00 D	2	F	5	5		1.00		
5.00 D	3	F	5	5		1.00		
5.00 D	4	F	5	5		1.00		
5.00 D	5	F	5	5		1.00		
15.00 D	1	F	5	5		1.00		
15.00 D	2	F	5	5		1.00		
15.00 D	3	F	5	5		1.00		
15.00 D	4	F	5	5		1.00		
15.00 D	5	F	5	5		1.00		
35.00 D	1	F	5	5		1.00		
35.00 D	2	P	5	5		1.00		
35.00 D	3	F	5	4		.80		
35.00 D	4	F	5	5		1.00		
35.00 D	5	F	5	5		1.00		
50.00 D	1	F	5	5		1.00		
50.00 D	2	F	5	5		1.00		
50.00 D	3	F	5	5		1.00		
50.00 D	4	F	5	5		1.00		
50.00 D	5	F	5	5		1.00		
75.00 D	1	F	5	5		1.00		
75.00 D	2	F	5	5		1.00		
75.00 D	3	F	5	5		1.00		
75.00 D	4	F	5	5		1.00		
75.00 D	5	F	5	5		1.00		
100.00 D	1	F	5	5		1.00		
100.00 D	2	F	5	5		1.00		
100.00 D	3	F	5	5		1.00		
100.00 D	4	F	5	5		1.00		
100.00 D	5	F	5	5		1.00		

Client: GENERAL ELECTRIC, PITTSFIELD, MA Test #: 50235 SDG: 9843

MA0003891

Test Description: Daphnia pulex 48-h daily renewal acute toxicity test

SURVIVAL DATA, SAMPLE 33327

Treatment (%)		Day 1 # Surviving	Day 2 # Surviving	
	<b>A</b> 5	5		
Water	<b>B</b> 5	<del>-</del>	2	
Contr C 5		<del></del>	<u> </u>	
	<b>D</b> 5	5	5	
	<b>E</b> 5	5	5 5 5 5	
	A 5		<u> </u>	
1	<b>B</b> 5	5 5	<u> </u>	
ì	5	5	5	
İ		2		
		5	5	
	5	<u> </u>	5 5	
	5	5	5	
E		5	5	
C	- L	5	5	
Ε		5	5	
E	5	5	5	
35 A	5	5	5	
E	5	5	5	
C	5	4	Ý	
D	5	5	5	
E	5	5	5	
50 A	5	5	5	
В	5	5	5	
С	5	5	5	
D	5		<u> </u>	
E		5	5	
75 A		5		
В	5	<u> </u>		
c	5		5	
			5	
D	5		5	
E	5	5	5	
100 A	5	5	5	
В	5	5	5	
С	5	5	5	
D	5	5	5	
E	5	5	5	
Sample #	33327			
I/D/T	KS 9113	KS 9/13 10:10	K5 9/14 9:40	
	9:40			

Client: GENERAL ELECTRIC, PITTSFIELD, MA Test #: 50235

MA0003891

Test Description: Daphnia pulex 48-h daily renewal acute toxicity test

SURVIVAL DATA, LAB CONTROL AND DECHLORINATION CONTROL

SDG: 9843

Treatmen (%)	ıt	Day 0	Day 1 # Surviving	Day 2 # Surviving
Lab	Α		5	5
Contr	В	5	5	5
	С	5	5	5
	D	5	5	5
	Ε	5	5	5
Dechlor.	Α	5	5	5
Control	В	5	4	4
	c	5	5	5
	D	5	5	5
	E	5	5	5
I/D/T	_	459/12	KS 9/13 10:00	KS 9/14 9:35
		9:25		

Note: Residual chlorine was not detected in the effluent sample, therefore sodium thiosulfate was not added to the effluent before toxicity testing. Although chlorine was not detected, an additional dechlorination control (0.1 mL of 0.25 N sodium thiosulfate per liter of moderately hard / Lamoille River water) was included in the test array.

Aquatec Biological Sciences, Inc. Williston Vermont
Reviewed by:
Date:

#### Daphnia pulex Culture Log

CULTURE ID	WATER RENEWAL? (Lot#)	FED (MWF Sel/YCT TuTh Sel)	CLEARED OF NEONATES? (TIME)	Culture Beakers Washed?	Temp.	DATE	INIT.
8-30 ABC 8-14A	<b>✓</b>	YC/Sel			70.4	9-1-de	KK
1	water	Sel		-		9-3-06	KS
8-30 A,B,C 8-14	<u> </u>	Yelsel	<b>/</b>		20,5	9-4-06	KS
		Sel	<del></del>			9-5-06	
8/30 A1B, C 8-14		Yelsel	<b>/</b>		20,4	9-6-06	KS
	**************************************	Sel	5/ <del>16-1</del>			9-7-06	KK
8/14 8/14	<u> </u>	Yc/Sel			20.9	9-8-06	
	**************************************	Sel				9-9-06	
8/14 8/14		sel		\		9-10-06	KS
	✓ <u> </u>	Yc/sel	V 9:45		20.8	9-11-06	KS
8/30 A,B,C	<b>✓</b>	Sel	V 9:10			7-12-06	KS
9-11 mass		Sel			,,,,,	1	-
		1					
		THE AVAILABLE AND AVAILABLE AN					

Selenastrum Lot#: 82906Sel YC or YCT Lot#: 8306YC

Toxicology QA/Tox Forms

Client: GENERAL ELECTRIC, PITTSFIELD, MA

MA0003891 OUTFALL 001

Test Description: Daphnia pulex 48-h daily renewal acute toxicity test

Treatment (%)	Parameter	Day 0	Day 1	Day 2
Lab	pН	7,9		7.9
Contr	DO	717		8,1
	Temp	20,7	20.1	20,3
	Cond.	246		366
Dechlorination	pН	719		777
Control	DO	78		8.2
	Temp	21.0	20.1	20,2
	Cond.	262	A1 4%	274
Rec.	pН	7,7		749
Water	DO	8.0		8.2
Contr	Temp	20,5	19.7	19.8
	Cond.	281		292
5.0	рН	7,7		79
	DO	8.4		8.3
	Temp	20.7	19.8	19.9
	Cond.	325		335
15	pН	7,7		8.0
	DO	77 85		8.2
	Temp	20,6	20.1	20.0
	Cond.	424	4-	412
35	рН	777		8.1
	DO	8,5		8,2
	Temp	20,7	20.1	20.0
	Cond.	575		577
50	pН	777		8.2
	DO	8.6		8.2
	Temp	2017	19.9	19.8
	Cond.	700	***	695
75	рН	7.7		8.3
	DO	8.6		8.3
	Temp	20,6	19.8	19.7
	Cond.	902		768
100	рН	717		83
[	OŒ	8.6		8,3
	Temp	20,5	19,8	19.7
	Cond.	1100		1039
Sample #		33327	33327	33327
I/D (2006)		KS 9/12	Ks 9/13	KS 9/14

Test #: 50235

SDG: 9843

# Alkalinity and Hardness Worksheet

	Hardness	290.0	108.0	324.0	112.0	100.0	88.0
	Analysis Date Ha	İ		9/14/06	3/14/06	9/15/06	9/15/06
ess	Analyst		KS				
Hardness	Final Titrant (ml)	41.5	46.9	26.2	31.8	45.2	17.8
	Initial Titrant (ml)	27	41.5	10	26.2	42.7	9.6
	Sample Volume	20	50	50	20	25	25
	Alkalinity	268.0	100.0	288.0	0.96	84.0	84.0
	Analysis Date A	9/13/06	9/13/06	9/14/06	9/14/06	9/17/06	9/17/06
inity	Analyst	Χ̈́	关	춫	츳	ΚS	ΚS
Alkalinity	Final Titrant (ml)	35.8	38.3	11.3	13.7	18	20.1
	initial Titrant (ml)	29.1	35.8	4.1	£.	15.9	8
	Sample Volume	25	25	25	25	25	25
	Sampling Date	9/12/06	9/12/06	9/14/06	9/14/06	9/15/06	9/15/06
	Sub ID Code						
	Sample LIMS Identifier Identifier	Outfall Composite	Housatonic River	A7558C	Housatonic River	Outfall Composite	Housatonic River A
	Sample	33329	33330	33366	33367	33399	33400

5/21/0x

Aquatec Biological Sciences, Inc. 273 Commerce Street Williston, VT 05495 (802) 860-1638

Total Residual Chlorine Analysis

Client SDG

GE Pittsfield, MA 9843

Sample #	Sample ID	Collection Date / Time	Analysis Date / Time / Analyst	Result (TRC mg/L)	Method
33327	Outfall Composite A7556C	9/11/06, 11:00	9/12/06, 12:02 JWW	<0.1 <sup>-</sup>	DPD Colorimetric
33328	Housatonic River A7555R	9/11/06, 08:15	9/12/06, 12:02 JWW	<0.1	DPD Colorimetric

#### **Sample Preparation**

Client: GENERAL ELECTRIC, PITTSFIELD, MA MA0003891 SDG: 9843

Test Description: Daphnia pulex acute toxicity test. Test #: 50235

#### Sample Identification:

Sample Description	Rec. Water (Housatonic River)	Effluent	
Sample #	33328	33327	

#### Sample Preparation:

Filtration	60 micr on	60 micron	60 micron	60 micron
Chlorine 1	nd	Nd		
Dechlorine 2				
Salinity <sup>(0/00)</sup>	0	0		
Prepared by (Init./date)	9-12-06 -	1		

<sup>&</sup>lt;sup>1</sup> Record vol. 0.025 N sodium thiosulfate to dechorinate 100 mL sample or record "ND" (not detected).

Dilution Plan for: Daphnia pulex static acute toxicity test

Receiving water is the dilution water

Lab Control = moderately hard water / Lamoille River 1:1 mix

Dechlorination Control = moderately hard water / Lamoille River 1:1 mix + sodium

#### thiosulfate

Osunaic			
Concentration (%)	Volume Effluent (mL)	Volume Diluent (mL)	Total Volume (mL)
Laboratory Control	0	400	400
Thiosulfate Control	0	400	400
Rec. Water Control	0	400	400
5.0	20	380	400
15	60	340	400
35	140	260	400
50	200	200	400
75	300	100	400
100	400	0	400
Total Volume	1120	1680	

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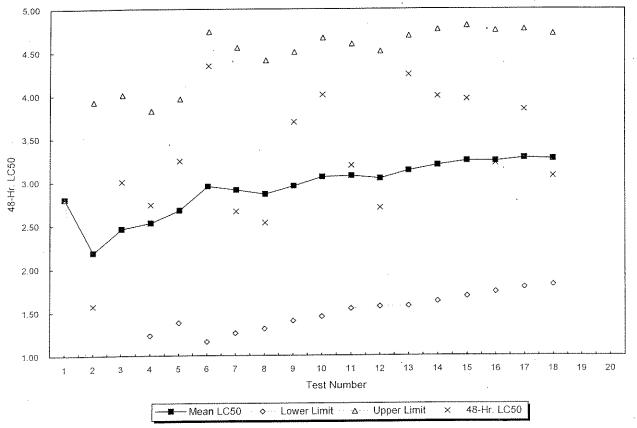
Collect alkalinity and hardness samples on each new effluent and receiving water sample.

<sup>&</sup>lt;sup>2</sup> Dechlorination required if detected. Record vol. 0.25 N sodium thiosulfate added per gallon effluent.

### Appendix 5 Standard Reference Toxicant test Control Chart

# Reference Toxicant Control Chart Daphnia pulex in Sodium chloride (g/L)

Test Number	Test Date	Organism Age (Days)	48-Hr. LC50	Mean LC50	Lower Limit	Upper Limit	Organism Source
4	06/10/98	1	2.801	2.80	2.80	2.80	Aquatec Biological Sciences
1		1	1.57	2.19	0.44	3.93	Aquatec Biological Sciences
2	09/17/98 12/15/98	1	3.002	2.46	0.91	4.01	Aquatec Biological Sciences
3	12/15/96	 	2.733	2.53	1.23	3.82	Aquatic BioSystems
4	10/06/05	1	3.241	2.67	1.38	3.96	Aquatic BioSystems
5	10/11/05	1	4.342	2.95	1.16	4.74	Aquatic BioSystems
6 7	11/02/05	1	2.655	2.91	1.26	4.55	Aquatec Biological Sciences
8	11/02/05	1	2.527	2.86	1.31	4.41	Aquatec Biological Sciences
9	12/07/05	1 '	3.693	2.95	1.40	4.50	Aquatec Biological Sciences
10	01/05/06	1	4.009	3.06	1.45	4.67	Aquatec Biological Sciences
10	02/08/06	1	3.189	3.07	1.54	4.60	Aguatec Biological Sciences
12	03/11/06	1	2.698	3.04	1.57	4.51	Aquatec Biological Sciences
13	04/06/06	1	4.243	3.13	1.57	4.69	Aquatec Biological Sciences
14	05/10/06	1	3.992	3.19	1.62	4.76	Aquatec Biological Sciences
15	06/07/06	1	3.959	3,24	1.68	4.81	Aquatec Biological Sciences
16	07/11/06	1	3.215	3.24	1.73	4.75	Aquatec Biological Sciences
17	08/08/06	1	3.839	3.28	1,79	4.77	Aquatec Biological Sciences
18	09/13/06	1	3.068	3.27	1.82	4.71	Aquatec Biological Sciences
19	00, 10,00	-					· •
20							



# Appendix 6 SOP TOX2-001, Standard Operating Procedure for Daphnid (*Ceriodaphnia dubia*, *Daphnia magna*, and *Daphnia pulex*) Acute Toxicity Test

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#### Standard Operating Procedure for

Daphnid (Ceriodaphnia dubia, Daphnia magna and Daphnia pulex) Acute Toxicity Test NELAC METHODS / U.S. EPA METHODS 2002.0 AND 2021.0

#### 1.0 IDENTIFICATION OF TEST METHOD

This SOP describes procedures for conducting an acute toxicity test with dapnids. This test is used to estimate the acute toxicity of whole effluents or other aqueous samples to the cladocerans, *Ceriodaphnia dubia*, *Daphnia magna* and *Daphnia pulex*. Aquatec Biological Sciences, Inc. holds NELAC accreditation for this method.

#### 2.0 APPLICABLE MATRIX OR MATRICES

The described test is used to assess toxicity of wastewaters (effluents, influents), receiving waters, and other prepared aqueous solutions.

#### 3.0 DETECTION LIMIT

Not applicable.

#### 4.0 SCOPE AND APPLICATION

This SOP describes procedures for performing a static or static-renewal acute toxicity test with cladocerans, *Ceriodaphnia dubia*, *Daphnia magna* and *Daphnia pulex*.

#### **5.0 SUMMARY OF TEST METHOD**

A summary of the test method is attached (Table 1 of this SOP). This test is used to estimate the acute toxicity of whole effluents or other aqueous samples to the freshwater cladocerans. Organisms are exposed, for 24, 48 or 96 hours, typically to five concentrations of effluent (or aqueous sample) and the controls. Acute toxicity is estimated by calculating the lethal concentration 50 value (LC50) and/or the acute no-observed-effect-concentration (A-NOEC). This procedure is based on the guidelines of EPA-821-R-02-012 (Methods 2002.0 and 2021.0).

#### 6.0 DEFINITIONS

<u>LC50</u>: The computed concentration that results in 50 percent mortality of the test organisms (may be computed from 48-h or 96-h data).

A-NOEC: The acute no-observed-effect-concentration; The highest concentration resulting in no statistically significant reduction in survival relative to the control (requires four test replicates for statistical analysis).

#### 7.0 INTERFERENCES

Not applicable.

#### 8.0 SAFETY

Samples acquired for toxicity testing may contain unknown toxicants or health hazards. Protective equipment (e.g., lab coats, disposable gloves) should be worn when handling samples.

#### 9.0 EQUIPMENT AND SUPPLIES

Calibrated Instrumentation and Water Quality Apparatus:

pH meter

Dissolved Oxygen (DO) meter

Thermometer (accurate to 0.1°C)

Conductivity meter

Alkalinity titration apparatus

Hardness titration apparatus

Additional Equipment:

Test chambers (30-ml disposable cups), color coded

Test board with randomized scheme, glass cover

Light table

Waste collection bucket

Aquatec Biological Sciences, Inc. TOX2-001 Daphnid acute R5 050406

Forms and Paperwork:

Survival and chemistry data form Alkalinity and hardness data form

#### 10.0 REAGENTS AND STANDARDS

Laboratory reconstituted water (soft water, moderately hard water, or hard water) Deionized water Reference toxicant solutions

#### 11.0 SAMPLE COLLECTION, PRESERVATION, SHIPMENT, AND STORAGE

Samples for acute toxicity tests are typically collected, cold-preserved, and shipped to Aquatec. Sample acceptance and log-in procedures are outlined in SOP TOX1-017. After receipt at Aquatec, samples should be refrigerated when not being prepared for use in toxicity tests. The holding time for effluent samples is 36 hours from the time of collection until the time of first use.

#### 12.0 QUALITY CONTROL

The acute toxicity test is judged to be acceptable and to have met Quality Control standards if the associated dilution water and laboratory control meet the survival criterion of 90% or greater. Also, the test conditions must be within the guidelines described in the protocol (Table 1). Standard reference toxicant (SRT) tests (48-h acute with sodium chloride as the toxicant) should be performed with a representative sub-set of the test organisms and result in an LC50 within the boundaries of the control chart. Deviations from acceptance standards should be documented and may result in the test being viewed as "conditionally acceptable" or "unacceptable" (See Section 19.0 below).

#### 13.0 CALIBRATION AND STANDARDIZATION

Not applicable for the toxicity test. Any instrumentation (e.g., water quality instrumentation) required for conducting the test must be calibrated on a daily basis following the relevant SOP or instrument quidelines.

#### 14.0 PROCEDURE

#### 14.1 Test System and Conditions

The test system and environmental conditions for the daphnid acute toxicity test are summarized in Table 1.

#### 14.2 Test Organisms

#### **Procurement and Documentation**

Test organisms for the daphnid acute test are obtained from Aquatec's laboratory cultures or commercial supplier. Neonates less than 24-h old are used for testing. Neonates collected for testing may be held in individual culture cups until distributed to tests. Feed neonates approximately 2 hours prior to test initiation by pipeting 0.1 ml yeast-Cerophyll-trout chow (YCT) and Selenastrum capricornutum to all neonate holding cups. Store the culture cups, covered, at test temperature ( $25 \pm 1^{\circ}$ C or  $20 \pm 1^{\circ}$ C).

#### **Evaluation of Daphnid Condition and Acclimation**

If, during examination, it appears that more than 10 percent of the parent females or the neonates collected for the test have died during the holding period preceding the test, notify the Toxicity Laboratory Director immediately. A decision will be made regarding the possibility of collecting an alternate stock of neonates for testing. If the test is to be delayed, document the reason on the Project Documentation form. Also, it may be necessary to notify the client.

Ordinarily, *C. dubia* neonates are maintained in laboratory water (1:1 mix of Lamoille River water and moderately hard water) up until the time of test initiation. *D. magna* neonates are maintained in hard water while *D. pulex* neonates are maintained in moderately hard water. The temperature of the neonate stock must be maintained at  $25 \pm 1^{\circ}$ C or ( $20 \pm 1^{\circ}$ C). Return parent stock females

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from the neonate cups to the source batch culture. Ceriodaphnia dubia are cultured in individual culture cups (one organism per cup) maintained at  $25 \pm 1^{\circ}$ C.

If acclimation to a client's receiving water is required, gradual water changes should be made (eg., 25%-50% hourly) to the parent organisms to receiving water. Neonate release and collection should occur in 100 percent receiving water, if acclimation is required.

#### Food

At the time of neonate collection, or on the morning of a scheduled test, feed neonates in each cup 0.1 ml Selenastrum and 0.1 ml yeast-Cerophyll-trout chow (YCT).

#### Sample Preparation

Procedures for effluent and diluent sample preparation are described in a separate SOP TOX1-013 ("Preparation of Effluent, Aqueous Samples, and Receiving Water for Toxicity Tests". The typical dilution factors are 0.5, however, consult applicable client permits for the appropriate dilution factor and included permit-limit concentrations when required.

#### 14.3 Initiate the Test

#### **Prepare Test Chambers**

For a test where receiving water is used as the diluent, an additional laboratory control must be included in the test array. New 30-mL disposable plastic condiment cups are used as test chambers. Each test treatment will have four true replicates (no water connection); therefore, 28 test cups will be required. When laboratory water is used as the diluent, 24 test cups are required. Label as:

Client Code

Treatment

Replicate (A, B, C, D)

#### **Measure Initial Chemistries**

Remove an aliquot (approximately 100 ml) from each test dilution and the controls. This aliquot is used to measure the following parameters: pH, DO, temperature, and conductivity. Record the data directly on the Toxicity Test Data Form for Day 0. The temperature of the solutions must be within a range of  $\pm$  1°C of the selected test temperature (20 °C or 25°C). Temperature, DO, and pH are to be recorded daily for all test concentrations.

#### Recommended water chemistry at time of test initiation

If solutions are not within the ranges specified below, notify the Toxicity Laboratory Director.

pH - acceptable range, 6.0-9.0

DO - acceptable range, 8.0-8.9 mg/L (20°C); 7.4-8.1 (25°C)

Temperature - acceptable range, 19-21°C or 24-26°C

Conductivity - often has a pattern of increasing conductance with increasing sample strength.

Collect a sub-sample of the control and 100% effluent solutions subsequent analysis of hardness and alkalinity. Label and store in a refrigerator at  $4^{\circ}$ C.

If test solutions are to be stored temporarily prior to starting the test, store the test solutions at the target test temperature.

Decant test solutions to the appropriate test cups, 25 ml per cup. Place the test cups in randomized positions on the test board. Water chemistry measurements are recorded for one replicate of each treatment each day of the test.

#### Prepare and distribute test organisms

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Select approximately 20 brood cups (containing neonates collected for the test), each with 8 or more neonates. Pool neonates in a crystallizing dish prior to distribution to the test. Randomly distribute neonates to test containers (5 per test container) with a transfer pipet.

Record the date / time of test start along with initials on the data form.

#### **Aeration**

Do not aerate daphnid acute tests.

#### Feeding

Daphnids are not fed during acute toxicity test of 24-48 hours duration. If the test duration is 96 hours the test animals are fed 2 hours prior to the 48 hour water change.

#### 14.4 Monitoring the test

#### Test solution renewal (if required) and biological monitoring

Test solutions in each test cup routinely are not renewed for 48 hour tests (unless the project protocol specifies daily renewal). If the test duration is 96 hours, renew test solutions at 48 hours (or daily, if specified in the project-specific protocol). During the renewal procedure, take care to avoid injuring neonates. Renew the controls first, then from low concentrations to higher test concentrations. This procedure will minimize the potential for back-contamination of a lower test concentration with a higher test concentration. The renewal procedure is conducted over a light table.

Remove the test board from the test rack and remove the glass cover. Carefully measure the temperature of one replicate of each test treatment. Record the data on the Final Chemistry Data form.

Fill four new cups coded for laboratory control with approximately 25 mL of laboratory control water. Remove laboratory control Replicate A test cup from the test board.

Transfer all surviving daphnids with a large-bore pipet to the new test cup containing new control solution. Record the number of survivors in the appropriate box for laboratory control, Replicate A.

Continue the water changes until all surviving animals in each treatment have been transferred to "new" water. Pool the "old test water" from the old test cups into a beaker. This must be saved for final chemistry analysis, when required. When renewals have been completed, record initials, date, and time for renewal in the remarks section of the daphnid acute data form. Replace all test cups in the assigned position on the test board.

#### Final Chemistry (daily during test, if required)

Measure the temperature, pH, and D.O., and conductivity of the pooled water sample decanted from the four replicates for each test treatment. It is preferable to do this immediately after completing the renewal to obtain an accurate representation of the test conditions. Discard the solution in the appropriate waste receptacle.

#### 14.5 Termination of the Toxicity Test

The daphnid acute test may be ended at 24 hours, 48 hours, or 96 hours depending on permit requirements or the project-specific protocol. The guidelines for actual duration of the test are: 24-h test ( $\pm$  15 minutes from time of test start); 48-h test ( $\pm$  30 minutes from time of test start); and 96-h test ( $\pm$  60 minutes from time of test start).

#### Daphnid survival (end of test)

For each replicate, determine the number of live daphnids remaining and record the results in the appropriate data box of the daphnid acute data form. A daphnid is scored as "alive" if any activity

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or self-propelled movement is observed. If necessary, examine organisms under a dissecting microscope to determine the number surviving.

Record the time of test completion in remarks section of the daphnid acute data form.

## Final Chemistry (end of test)

Measure and record temperature of one replicate from each test concentration. Combine the test solution from each replicate of each test concentration. Measure and record the final chemistry parameters (conductivity, pH and DO) as specified in 3.2.1 above.

## 15.0 CALCULATIONS

The 48-h LC50 (or 96-h) and A-NOEC (if required) are calculated using the TOXIS2 software program. Enter the test data into the TOXIS2 template prepared for each client. Run the statistical program for the EPA Acute Toxicity Test flow chart (EPA-821-R-02-012 Section 11 Figures 12 and 13) and print the entered test data and the statistical results. Check the entered data against the original hand-written test data and record the date and initials. Place the statistical printouts in the project folder (by SDG) and return the folder with all paperwork to the project holding file.

## **16.0 METHOD PERFORMANCE**

Test conditions should be at or near the limits outlined in the Protocol (Table 1).

## 17.0 POLLUTION PREVENTION

Effluents and receiving waters used in toxicity tests are stored refrigerated until the test data have been reviewed and deemed acceptable by the Laboratory Manager or the Director. Contact the Laboratory Manager or Director prior to discarding any stored samples. Effluent and receiving water samples may be discarded following a period of chlorination (e.g., 30 minutes). Effluent samples that have exhibited high toxicity in low test concentrations should be discarded in the "Aqueous Waste" drum for disposal by a certified waste handler. Other samples containing unknown or suspected toxic contaminants should be discarded in the "Aqueous Waste" drum.

## 18.0 DATA ASSESSMENT AND ACCEPTANCE CRITERIA FOR QUALITY CONTROL MEASURES

The Laboratory Manager and/or the Laboratory Director will review test data to ensure that all elements of the data package are available and complete (Log-in work sheets, test IDs, Chain-of-Custody documentation, toxicity test benchsheets, organism records, and SRT data). The reviewer will check to package for transcription errors, clarity of observations and notations, initials, and completeness. The reviewer will also compare the test data to the Quality Control standards outlined in Section 12.0 above. Any deficiencies will be addressed and resolved (with appropriate notation) prior to assembling the package for the final report.

## 19.0 CORRECTIVE ACTIONS FOR OUT-OF-CONTROL DATA

Data that do not meet Quality Control standards will be assessed and a decision will be made whether to reject the test data and deemed "unacceptable" (requiring a repeated test) or "provisionally acceptable" (requiring a qualifier in the final report). An example of and unacceptable test could include one where the controls fail to meet the 90% survival requirement. A designation of a "provisionally acceptable" test might include one where samples were received outside of prescribed holding temperatures or times.

## 20.0 CONTINGENCIES FOR HANDLING OUT-OF-CONTROL OR UNACCEPTABLE DATA

Analysts experiencing and "out-of-control" event (e.g., test replicate spills, test solutions improperly prepared, test temperatures out of target range, etc.) should note the event on the bench sheet and also notify the Laboratory Manager or Laboratory Director. A decision will be made by the Laboratory Manager or Laboratory Director as to whether to continue the test (with the appropriate qualifier) or whether to terminate the test. If the test is terminated, the client should be notified so that re-sampling and re-testing can be scheduled as soon as possible.

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## 21.0 WASTE MANAGEMENT

See 17.0 above.

## 22.0 REFERENCES

The test procedure is based upon the guidelines outlined in EPA-821-R-02-012, *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (5<sup>th</sup> Ed.). Regional guidelines may require in slight modifications of the test protocol (e.g., solution renewals, test duration, target test temperature).

## 23.0 TABLES, DIAGRAMS, FLOW CHARTS, AND VALIDATION DATA

Refer to Tables 12 and 13 (pp. 51 – 54 of EPA-821-R-02-012) and the EPA Statistical Flow Chart, Figures 12 and 13 of EPA-821-R-02-012 Section 11 and related discussions within that document.

## 24.0 TRAINING

Laboratory analysts performing this procedure must receive instruction from a previously trained analyst. Individual parts of the overall procedure may be performed under the guidance of a previously-trained analyst.

To be qualified for the overall procedure outlined in this SOP, the analyst must:

Read this SOP.

Receive verbal and visual instruction. Be trained on pertinent associated SOPs.

Approvals:	
Laboratory Manager:	Date:

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## Table 1. Test Protocol

PROTOCOL: EPA 2002. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Methods 2002.0 (Ceriodaphnia dubia) and 2021.0 (Daphnia magna and Daphnia pulex) acute toxicity tests.

1. Test type:	Static, no renewal; or daily renewal

2. Test temperature:  $25 \pm 1^{\circ}\text{C} \text{ (or } 20 \pm 1^{\circ}\text{C)}$ 

3. Light quality: Ambient laboratory illumination

4. Photoperiod: 16 hr. light, 8 hr. dark

5. Test chamber size: 30 ml

6. Test solution volume: 25 ml / replicate

7. Renewal of test concentrations: None if static test, daily if renewal test

8. Age of test organisms: Less than 24 h

9. No. organisms / test chamber: 5

10. No. of replicate chambers / concentration: 4

11. No. of organisms / concentration: 20

12. Feeding regime: Feed 0.1 ml of YTC and algal suspension prior

to testing. Not fed during test for 48-h tests. Feed 2 hours prior to 48-h (before renewal) for

96-h tests

13. Cleaning: None

14. Aeration: None

15. Dilution water: Receiving Water or laboratory water

16. Test concentrations: 6.25, 12.5, 25, 50, 100% (unless specified

otherwise by permit)

17. Laboratory control: Reconstituted water (soft, moderately hard, or

hard)

18. Test duration: 48 h; 96 h

19. Monitoring: Day 0: temperature, DO, pH, and conductivity.

Day 1: temperature. Day 2 (or 4): temperature, DO, pH, and conductivity. Hardness, alkalinity on each new sample. Biological monitoring

daily

19. End points: Survival

20. Reference toxicant test: Sodium chloride 48-h LC50

21. Test acceptability (Control performance): 90% or greater survival

22. Data interpretation: LC50 / A-NOEC using TOXIS2 statistical

program

## **DOCUMENT SIGNATURE PAGE**

**DOCUMENT NAME: SOP TOX2-001 Daphnid Acute Revision 5** 

Printed Name	I have read and I understand and I agree, to the best of my ability, to follow the procedures outlined in this SOP Signature	Initials	Date
		WING -	
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## APPENDIX 2

## **Laboratory Reports**

Columbia Analytical Services, Inc. O'Brien & Gere, Inc.

## NPDES Sampling GE Pittsfield Toxicity pH

1 exicity P	•
Date: 9/11/06  Acute Dry Acute Wet(Day 1,2 or 3)	Split Sample AD TOX + C, TOX AD Sept, 2006
Effluent Composite Sample # _A 7556 C  Date	·
River/Dilution Water Sample # A 7555 R  Date 9-11-06 Time F15 AM  pH 7.74 su	
Mark Watnewsky Signed & Dated	9-11-06

Reported: 09/21/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID: A7556C

Sample Matrix: WATER Order #: 927720

Date Sampled: 09/11/06 11:00 Date Received: 09/12/06 Submission #: R2633066

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA CHLORIDE TOTAL ALKALINITY TOTAL ORGANIC CARBON TOTAL PHOSPHORUS TOTAL SOLIDS	350.1 300.0 310.1 9060 365.1 160.3	0.0500 0.200 2.00 1.00 0.0500	0.686 162 279 7.67 0.105 583	MG/L MG/L MG/L MG/L MG/L MG/L	09/19/06 09/15/06 09/18/06 09/18/06 09/19/06 09/18/06	19:18 09:30 19:55 13:33	1.0 40.0 1.0 1.0 1.0
TOTAL SUSPENDED SOLIDS	160.2	1.00	1.70	MG/L	09/14/06	17:00	1.0

Reported: 09/21/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06

Client Sample ID : A7556CCN

Sample Matrix: WATER

Date Sampled: 09/11/06 11:00 Order #: 927725
Date Received: 09/12/06 Submission #: R2633066 Date Received: 09/12/06

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION	=
TOTAL CYANIDE	335.4	0.0100	0.0191	MG/L	09/19/06	10:32	1.0	<del>-</del>

Reported: 09/21/06

Sample Matrix: WATER

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06

Client Sample ID : A7556CTM

Date Sampled: 09/11/06 11:00 Order #: 927722
Date Received: 09/12/06 Submission #: R2633066

Date Received 63			- Control of the Cont			
ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ALUMINUM	200.7	0.100	0.100 U	MG/L	09/15/06	1.0
CADMIUM		00500	0.00500 U	MG/L	09/15/06	1.0
CALCIUM	200.7	1.00	66.9	MG/L	09/15/06	1.0
CHROMIUM		.0100	0.0100 U	MG/L	09/15/06	1.0
COPPER		.0200	0.0200 U	MG/L	09/15/06	1.0
LEAD		00500	0.00500 U	MG/L	09/15/06	1.0
MAGNESIUM	200.7	1.00	29.4	MG/L	09/15/06	1.0
NICKEL	*** **	.0400	0.0400 U	MG/L	09/15/06	1.0
NICKEL SILVER	v	.0100	0.0100 U	MG/L	09/15/06	1.0
ZINC		.0200	0.0200 U	MG/L	09/15/06	1.0

Reported: 09/21/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID : A7556CDM

Sample Matrix: WATER

Date Sampled: 09/11/06 11:00 Order #: 927721
Date Received: 09/12/06 Submission #: R2633066

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ALUMINUM	200.7	0.100	0.100 U	MG/L	09/15/06	1.0
ADMIUM	200.7	0.00500	0.00500 U	MG/L	09/15/06	1.0
HROMIUM	200.7	0.0100	0.0100 U	${ t MG/L}$	09/15/06	1.0
OPPER	200.7	0.0200	0.0200 U	MG/L	09/15/06	1.0
EAD	200.7	0.00500	0.00500 U	MG/L	09/15/06	1.0
ICKEL	200.7	0.0400	0.0400 U	MG/L	09/15/06	1.0
ILVER	200.7	0.0100	0.0100 U	MG/L	09/15/06	1.0
INC	200.7	0.0200	0.0294	MG/L	09/15/06	1.0

Reported: 09/21/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06

Client Sample ID : A7555R

Sample Matrix: WATER

Date Sampled: 09/11/06 08:15 Order #: 927719
Date Received: 09/12/06 Submission #: R2633066

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA	350.1	0.0500	0.0500 U	MG/L	09/19/06	10:58	1.0
CHLORIDE	300.0	0.200	18.3	MG/L	09/15/06	11:40	10.0
TOTAL ALKALINITY	310.1	2.00	104	MG/L	09/18/06	09:30	1.0
TOTAL ORGANIC CARBON	9060	1.00	5.16	MG/L	09/18/06	19:35	1.0
TOTAL PHOSPHORUS	365.1	0.0500	0.0500 U	MG/L	09/19/06	13:33	1.0
TOTAL SOLIDS	160.3	10.0	147	MG/L	09/18/06	15:30	1.0
TOTAL SUSPENDED SOLIDS	160.2	1.00	1.10	MG/L	09/14/06	17:00	1.0

Reported: 09/21/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06

Client Sample ID : A7555RCN

Sample Matrix: WATER

Date Sampled: 09/11/06 08:15 Order #: 927724 Date Received: 09/12/06 Submission #: R2633066

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION	
TOTAL CYANIDE	335.4	0.0100	0.0100 U	MG/L	09/19/06	10:32	1.0	

Reported: 09/21/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06

Client Sample ID : A7555RTM

Date Sampled: 09/11/06 08:15 Order #: 927723
Date Received: 09/12/06 Submission #: R2633066

Sample Matrix: WATER

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ALUMINUM	200.7	0.100	0.100 U	MG/L	09/15/06	1.0
CADMIUM	200.7	0.00500	0.00500 U	MG/L	09/15/06	1.0
CALCIUM	200.7	1.00	24.6	MG/L	09/15/06	1.0
CHROMIUM	200.7	0.0100	0.0100 U	MG/L	09/15/06	1.0
COPPER	200.7	0.0200	0.0200 U	MG/L	09/15/06	1.0
LEAD	200.7	0.00500	0.00500 U	MG/L	09/15/06	1.0
MAGNESIUM	200.7	1.00	9.47	MG/L	09/15/06	1.0
VICKEL	200.7	0.0400	0.0400 U	MG/L	09/15/06	1.0
SILVER	200.7	0.0100	0.0100 U	MG/L	09/15/06	1.0
ZINC	200.7	0.0200	0.0200 U	MG/L	09/15/06	1.0

## APPENDIX 3

**Chain of Custody Forms** 

Analytical Services	

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

An Employee - Owned Company One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE

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SR #

620 025510 Preservative Key
D. NONE
1. HCL
2. HNC3.
3. H2SO3.
4. NaOH
5. Zn. Acetate
5. MaCH
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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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An Employee - Owned Company One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE

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# Cooler Receipt And Preservation Check Form

	-Pittsfield						
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COMPANY INFORMATION	COMPANY'S PROJECT INFORMATION	SHIPPING INFORMATION	VOLUME/CONTAINER TYPE/ PRESERVATIVE
Name: General Electric Company	Project Name: GE PITTSFIELD	Carrier:	4°C 4°C 4°C 4°C 4°C
Address: O'Brien & Gere	Outfall Composite		H <sub>2</sub> SO <sub>4</sub>
1000 East Street, Gate 64	Project Number: 05004	Airbill Number:	
City/State/Zip: Pittsfield, MA 01201	Sampler Name(s): MARIC CUMS NEWS		Plastic Plastic Glass Amber Plastic Glass Glass
Telephone: (413) 434-0703	NYDEO TERRIT #: MANDOLSOS I	Date Snipped:	
Facsimile: Mark Wasnewsky	Quote #; 10/05 Client Code: GEPITTS	S Hand Delivered: Ves No	1 gal 1/2 gal 1 L 40 ml 250 ml 0.5 L
SAMPLE IDENTIFICATION DA	COLLECTION DATE TIME GRAB COMPOSITE MATRIX	tlX ANALYSIS (detection limits, mg/L)	NUMBER OF CONTAINERS
	্ত	ont Daphnia pulex 48-h Static Acute Toxicity (EPA Method 2021.0). Log in for A48DPS	
Outfall Composite A 7556 C	1 100 Effluent	ant Total Residual Chlorine	1
Housatonic River A 7555 R	S 15 Receiving	ung Dilution Water	1
Housatonic River A 7556	V SYS / Receiving	ving Total Residual Chlorine	
Relinguished by: (signature)	DATE TIME Received by: (signature)	NOTES TO SAMPLER(S): (1): Complet	NOTES TO SAMPLER(S): (1): Complete the labels (Date, time, initials) and cover the
//	1146	become dislodged during shipment. N	become dislodged during shipment. Nest the samples in sufficient ice to maintain 0°C – 6°C. Results for samples received at temperatures exceeding 6°C will be qualified in the
May	1	report.	
Relinquished by: (signature)	DATE TIME Received by: (signature)	Notes to Lab. Amhient cooler temperature:	erature: / 7.°C. Dechlorinate the effluent
7	9-11-06 16:30 Kato	-,=	_
Relinquished by: (signature)	DATE TIME Received by: (signature)		

9/11/2006

CHRONIC AQUATIC TOXICITY COMPOSITE 9C1

Split Sample ADTOX FC, TOX 1 Sept 2006

Month: SEP Week: 3 Fiscal Wk: 37

Weather: Chronic Composite Sample #1

	Gallons/Day	MI in Composite	Percent of Composite
001 004 007 64T 64G 09A 09B	107,630 0 0 6,550 86,340 0 6,730	7,789.87 - 474.07 6,248.97 - 487.09	51.93% 0.00% 0.00% 3.16% 41.66% 0.00% 3.25%
<b>*</b> * ***	207,250	15000	100.00%

The Chronic Toxicity Composite was made today by Murk Wasnewsky@ according to the table above, and given the sample ID#\_

Chain-of-Custody Form Number: OBG 091106 Analysis: C. TUX 1 + AD TOX 00AM Date: 9-11-06 Sample Label Serial Number

9-11-06

## Attachment D

# NPDES Chronic Biomonitoring Report September 2006





October 4, 2006

Mr. Jeffrey Nicholson GE Corporate Environmental Programs 159 Plastics Avenue Pittsfield, MA 01201

Re: NPDES Chronic Biomonitoring Report for September 2006

Submission #s: R2633066, R2633067 and R2633068

Dear Mr. Nicholson:

Enclosed is our report on the Chronic Whole Effluent Toxicity testing conducted in September 2006. The Outfall Composite samples were collected on 9/11/06 at 11:00 am, 9/13/06 at 11:00 am and 9/15/06 at 11:00 am. The Housatonic River samples were collected on 9/11/06 at 8:15 am, 9/13/06 at 8:15 am and 9/15/06 at 8:15 am. The Outfall Composite and Housatonic River samples were analyzed at Columbia Analytical Services for total cyanide, ammonia, total organic carbon, total phosphorus, chloride, total solids, total suspended solids, total residual chlorine, and total metals. Dissolved metals were analyzed for only on the Outfall Composite samples. Results are presented in Appendix 2. The Outfall Composite and Housatonic River samples were sent directly by General Electric to Aquatec Biological Services for the chronic aquatic toxicity testing including the analysis of alkalinity, hardness, specific conductance, and pH. Results are presented in Appendix 1.

Should you have any questions please contact me at (585)288-5380 x130.

Thank you for allowing us to provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Carlton Beechler Project Manager

enc.

CC: Jill Piskorz, Pat Fuse and Nicole Evans vial email.

## NPDES BIOMONITORING REPORT

# GENERAL ELECTRIC COMPANY Pittsfield, MA NPDES PERMIT MA 0003891

Reproductive Chronic Toxicity Monitoring September 2006

## WHOLE EFFLUENT TOXICITY TEST REPORT CERTIFICATION

I certify under penalty of law that this document and all ATTACHMENTS were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on		
	(Date)	(Authorized Signature)
		Michael T. Carroll
		General Electric Co. – Pittsfield, MA Permit MA0003891

Prepared by: Carlton R. Beechler October 4, 2006

## TABLE OF CONTENTS

		<u>PAGE</u>
I.	Summary	1
II.	Review of Toxicity Analytical Results	2
III.	Review of Wastewater Sampling Procedures	3
IV.	Review of Individual Discharges	5

## Table I – Summary of Analytical Test Results

## Appendices:

- 1. Chemical and Acute Toxicity Data from Aquatec Biological Sciences
- 2. Laboratory Reports from Columbia Analytical Services, Inc. and O'Brien & Gere, Inc.
- 3. Chain of Custody Forms

## I. Summary

On September 10-15, 2006 sampling of wastewater discharges from the General Electric Company facility in Pittsfield, MA was conducted in accordance with the chronic toxicity testing requirement of the GE NPDES Permit MA0003891. Three composite effluent samples were collected from GE outfalls 001, 005-64T, 005-64G and 09B over a 6-day period. Sampling dates were September 10-11, September 12-13 and September 14-15. If flow did not occur at an outfall during the 24 hour period, no sample was collected (see chain of custody records in Appendix 3 for details of the outfalls sampled during each period). Each set of samples were combined in a flow-proportioned manner to generate a single wastewater sample that was shipped via FedEx to Aquatec Biological Sciences in Williston, Vermont for chronic toxicity testing. Grab samples of Housatonic River water, to be used as dilution water in the toxicity test, were collected upstream of the GE discharges on September 11 - 13 - 15, 2006 and shipped to AquaTec along with the wastewater composite. AquaTec dechlorinated the composite sample prior to the acute toxicity test following the toxicity reduction procedures summarized in a letter dated November 11, 1993 to EPA Region I from JG Ruebesam of General Electric Company. The composite wastewater sample and the dilution water sample were tested for chemical constituents by O'Brien & Gere, Inc. and Columbia Analytical Services. The analytical results are summarized in Table I and the detailed laboratory test data are include as Appendices to this report. As a result of land transfer documents executed on April 27, 2005 and recorded in the Berkshire County Registry of Deeds on May 2, 2005, Outfalls 001 and 004 were transferred to the Pittsfield Economic Development Authority (PEDA). Outfalls 001 and 004 DMRs will no longer be submitted under the GE NPDES Permit No. MA0003891. However, GE's NPDES Permit requires that the metal and toxicity composites to be made by compositing samples from the following outfalls: 001, 004, 005, 007, and 009. These two composites will continue to include an aliquot of water from outfall 001 and outfall 004, and will be reported on GE's DMR until further actions by the Agencies.

The results from Aquatec Biological Sciences for the chronic toxicity test on the wastewater discharge sample indicated a No Observed Chronic Effect Level (NOCEL) of 100%. No Limit is established for NOCEL in the GE NPDES permit.

## II. Review of Toxicity Test Results

The wastewater discharge sample collected on September 10-11, September 12-13 and September 14-15, 2006 were tested for 7 day chronic toxicity using *Ceriodaphnia dubia* organisms. The sample did not require dechlorination with sodium thiosulfate (Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>) prior to toxicity testing. Aquatec Biological Sciences reported the results of this toxicity testing as follows:

Effluent toxicity as NOCEL =	100%
Effluent toxicity as $LC_{50} =$	>100%

No limit is established for NOCEL in the GE NPDES permit.

The following table summarizes the results of the control sample analyses performed by AquaTec during the chronic toxicity bioassay:

Control Analysis	Result	Acceptable Limit >80%
Survival in 100% dilution water	100%	≥00/0
Reproduction in 100% dilution water (average# of offspring/female/day)	31.1	>15%
Reproduction in 100% dilution water		_
(% of females having three broods)	100%	≥60%

The survival and reproduction rate of *Ceriodaphnia* in the upstream dilution water control samples was within acceptable limits, indicating that the results of the toxicity test are valid.

## III. Review of Wastewater Sampling Procedures

Three composite effluent samples of the individual NPDES wastewater discharges were collected over a 24-hour period. Each composite effluent sample was generated by combining samples from the individual NPDES discharges. Each group of individual samples collected over the same 24 hour period were composited in a flow-weighted manner to generate a single combined discharge sample for toxicity testing and chemical analysis.

The 24-hour composite samples from the individual discharges were collected as follows:

Each automatic sampler (at outfall 001, 64T, 64G, and 09B) was programmed to collect approximately 7 liters of wastewater into a 10-liter glass container in a time-proportioned manner over a 24-hour period. Outfalls 004, 007, and 09A have been plugged and no longer flow.

All sample containers were packed in ice or refrigerated to keep the wastewater samples cold during the 24-hour collection period.

Flow meter readings were taken at the beginning and end of the 24-hour collection period to determine the total 24-hour flow for each wastewater discharge.

At the end of the 24-hour collection period, the discharge samples were taken to Building 64G where O'Brien & Gere personnel composited these samples, in a flow weighted manner, to generate a single combined sample for the chronic toxicity test and the chemical analyses, as follows:

The proportions of each individual discharge sample needed to produce a single combined sample were calculated from the flow measurements. The calculated sample volumes were then transferred from their original collection containers to a 2.5 or 5 gallon mixing container. The combined discharge sample was then split into various containers for toxicity testing and chemical analyses. These containers were shipped by vendor courier to AquaTec for toxicity testing and by FedEx (overnight) to Columbia Analytical Services for chemical analyses. All samples were chilled with ice packs during shipment.

A grab sample of Housatonic River water was collected on the second day of each 24 hour period at the Lyman Road Bridge in Hinsdale, MA, upstream of the GE site. This sample was split for chemical analysis and toxicity testing in a similar manner as the combined effluent sample (see above).

Details of the times and dates of sample collection as well as the names of the individuals collecting and transporting the samples are provided on the chain of custody forms in Appendix 3 of this report.

## IV. Review of Individual NPDES Discharges

The following is a brief description of each of the seven outfalls that are monitored for acute and chronic toxicity in accordance with NPDES Permit MA0003891 issued to the General Electric Company, Pittsfield, MA.

- 1. Outfall 001 is permitted to discharge storm water runoff from the oil/water separator in Building 31W to Silver Lake.
- 2. Outfall 004 is permitted to discharge storm water runoff to Silver Lake. (Outfall plugged)
- 3. Outfall 005 is permitted to discharge contact cooling water, non-contact cooling water, treated process water and storm water runoff from the Wastewater Treatment Plant in Building 64T, and treated groundwater from the Groundwater Treatment Plant in Building 64G to the Housatonic River. Monitoring samples are collected separately from the effluents of 64G and 64T. Both samples are included in the flow composite sample used for toxicity testing.
- 4. Outfall 007 is permitted to discharge stormwater runoff to the Housatonic River. (Outfall plugged)
- 5. Outfall 09A is permitted to discharge non-contact cooling water and stormwater runoff to Unkamet Brook. (Outfall plugged)
- 6. Outfall 09B is permitted to discharge non-contact cooling water, treated process water and stormwater runoff from the oil/water separator in Building 119W to Unkamet Brook.

		<u>:</u>	No Observed F	ffect Level (NO	CEL) =		100%
Aquatic Toxicity Results:			110 00002700			LC50 =	>100%[
	Chemical Ana	lyses: (all results ar	e mg/L unless ot	herwise indicated	1)		
					6 . 13	Sept 14-15	Sept 15
		Sept 10-11	Sept 11	Sept 12-13	Sept 13		Housatonic
		Effluent	Housatonic	Effluent	Housatonic	Composite	River
Parameter Tested	Laboratory	Composite	River	Composite	<u>River</u> ND (0.0500)	0.348	ND (0.0500)
Ammonia	CAS	0.686	ND (0.0500)	0.906		53.0	19.0
Chloride	CAS	162	18.3	177	18.7		91.3
Total Alkalinity	CAS	279	104	310	ļ	6.22	5.81
Total Organic Carbon	CAS	7.67	5.16	7.76	4.89	0.114	ND (0.0500)
Total Phosphorus	CAS	0.105		0.110	ND (0.0500)	211	146
Total Solids	CAS	583	147	649	152		5.70
Total Suspended Solids	CAS	1.70	1.10	1,60	ND (1.00)	12.1	5.70 88
Hardness	Aquatec	290	108	324	112	100	
Spec. Conductance (umhos)	Aquatec	1095	281	1215	293	397	7.6
oH (SU)	Aquatec	7.9	7.8	7.6	7.6	7.3	ND
TRC (start of toxicity test)	Aquatec	ND	ND	ND	ND	ND	ND (0.0100)
Cyanide	CAS	0.0191	ND (0.0100)	0.0162	ND (0.0100)	ND (0.0100)	
Aluminum, total	CAS	ND (0.100)	ND (0.100)	ND (0.100)	ND (0.100)	0.530	0.209
Aluminum, dissolved	CAS	ND (0.100)	NA	ND (0.100)	NA	ND (0.100)	NA
Cadmium, total	CAS	ND (0.00500)	ND (0.00500)		ND (0.00500)	ND (0.00500)	ND (0.00500)
Cadmium, dissolved	CAS	ND (0.00500)	NA	ND (0.00500)	NA	ND (0.00500)	NA (2.0100)
Chromium, total	CAS	ND (0.0100)	ND (0.0100)	ND (0.0100)	ND (0.0100)	ND (0.0100)	ND (0.0100)
Chromium, dissolved	CAS	ND (0.0100)	NA	ND (0.0100)	NA	ND (0.0100)	NA
Copper, total	CAS	ND (0.0200)	ND (0.0200)	ND (0.0200)	ND (0.0200)	ND (0.0200)	ND (0.0200)
Copper, dissolved	CAS	ND (0.0200)	NA	ND (0.0200)	NA	ND (0.0200)	NA
Lead, total	CAS	ND (0.00500)	ND (0.00500)	ND (0.00500)	ND (0.00500)	ND (0.00500)	ND (0.00500)
Lead, dissolved	CAS	ND (0.00500)	NA	ND (0.00500)	NA	ND (0.00500)	NA
Nickel, total	CAS	ND (0.0400)	ND (0.0400)	ND (0.0400)	ND (0.0400)	ND (0.0400)	ND (0.0400)
Nickel, dissolved	CAS	ND (0.0400)	NA	ND (0.0400)	NA	ND (0.0400)	NA
Silver, total	CAS	ND (0.0100)	ND (0.0100)	ND (0.0100)	ND (0.0100)	ND (0.0100)	ND (0.0100)
Silver, dissolved	CAS	ND (0.0100)	NA	ND (0.0100)	NA	ND (0.0100)	NA
Zinc, total	CAS	ND (0.0200)	ND (0.0200)	ND (0.0200)	ND (0.0200)	0.0446	ND (0.0200)
Zinc, dissolved	CAS	0.0294	NA	0.0434	NA	0.0392	NA
pH (SU)	OB&G	7.79	7.74	7.86	7.91	7.81	7.83
Practices Hardness	Aquatec	290	108	324	112	100	88
	*						
All results are mg/L unless of	herwise indicate	d.					
NA – Not analyzed ND – Not detected (Number		.,	4				

## APPENDIX 1

Chemical and Acute Toxicity Data

Aquatec Biological Sciences



# **Aquatec Biological Sciences**









September 29, 2006

Mr. Carl Beechler Columbia Analytical Services, 1 Mustard Street – Suite 250 Rochester, NY 14609

Dear Mr. Beechler:

Enclosed please find one bound and one unbound copies of our report of the results for chronic whole effluent toxicity testing of samples received from GE Pittsfield, Massachusetts on September 12 - 18, 2006.

According to the Chain-of-Custody documentation, samples for Whole Effluent Toxicity (WET) Testing were collected on September 11, 13, and 15, 2006. The samples were transported to Aquatec Biological Sciences, Inc. by courier and delivered on the same day. The initial effluent sample was logged in for the short-term chronic toxicity test with *Ceriodaphnia dubia* (EPA Method 1002.0). Subsequent effluent samples were used for toxicity test renewals. The receiving water samples were logged in for dilution water. A subsample of each sample was checked for residual chlorine (not detected) and for alkalinity and hardness measurements at Aquatec Biological Sciences, Inc. The toxicity test was started on August 8, 2006, within the specified holding time.

At the conclusion of the toxicity test on September 18, 2006, a final count of surviving organisms and offspring (neonates) was completed. The average survival was 80 - 100 percent in all test concentrations. Acute toxicity or chronic to *Ceriodaphnia dubia* was not detected, with the 48-hour LC50 reported as >100% effluent and the Chronic No-Observed-Effect Concentration (C-NOEC) reported as 100% (Section 4.1 of the report).

If you have any questions regarding the report, please call Dr. Philip C. Downey or me.

Sincerety,

John Williams

Marager, Environmental Toxicology

This report consists of the following numbered pages:

1-58

# Chronic Whole Effluent Toxicity Testing Of Wastewaters Discharged from The General Electric Plant Pittsfield, Massachusetts

Samples Collected in September 2006

Submitted to:
General Electric
Area Environmental & Facility Programs
100 Woodlawn Avenue
Pittsfield, Massachusetts 01201

SDG number: 9843

Effluent ID: Outfall Composite A7556C Aquatec sample number: 33329 Effluent ID: Outfall Composite A7558C Aquatec sample number: 33366 Effluent ID: Outfall Composite A7560C Aquatec sample number: 33399

Receiving water ID: Housatonic River A7555R Aquatec sample number: 33330 Receiving water ID: Housatonic River A7557R Aquatec sample number: 33367 Receiving water ID: Housatonic River A7559R Aquatec sample number: 33400 Study Director: John Williams

September 25, 2006

Submitted by:

Aquatec Biological Sciences, Inc. 273 Commerce Street Williston, Vermont 05454

Phone: (802) 860-1638 Fax: (802) 860-1638

Accreditation: NH Environmental Laboratory Accreditation Program NELAP / NELAC accredited for the requested analysis.

## Signatures and Approval

## Submitted by:

Aquatec Biological Sciences, Inc.

273 Commerce Street Williston, Vermont 05454 Phone: (802) 860-1638 Fax: (802) 860-1638

Study Director John Williams

Quality Assurance Officer Philip C. Downey, Ph. D. Date

Date

## Whole Effluent Toxicity Test Report Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on:	Date:	9/29/06	
Authorized signatu	re		
and the same of th			
John Williams			
Name			
Manager, Envir	onmental	Toxicology	
Title			
Aquatec Biologi	cal Scien	ces, Inc.	
Laboratory			

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## Summary of

### Chronic Survival and Reproduction Toxicity Test with Ceriodaphnia dubia

Sponsor:

General Electric

Protocol title:

US EPA-821-R-02-013. Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4<sup>th</sup> Ed., October 2002.

Method 1002.0

Aquatec SDG:

9843

Test material:

Composite effluent from the General Electric Company located in Pittsfield, Massachusetts

GE sample ID:

Outfall Composite A7556C Outfall Composite A7558C Outfall Composite A7560C

Dilution water:

Water from the Housatonic River (grab sample)

GE sample ID:

Housatonic River A7555R Housatonic River A7557R Housatonic River A7559R

Dates collected:

September 11, 13, and 15, 2006

Date received:

September 11, 13, and 15, 2006

Test dates:

September 12 - 18, 2006

Test concentrations:

100%, 75%, 50%, 25%, 12.5%, 6.25% effluent.

Dilution water control (Housatonic River)

Laboratory control 1 (culture water)

Laboratory control 2 (culture water with sodium

thiosulfate)

**Acute Toxicity Values** 

Species	Exposure Period	48-hour LC50 (% effluent)	A-NOAC (% effluent)
Ceriodaphnia dubia	48 hours	>100%	100%

**Chronic Toxicity Values** 

Species	Endpoint	Exposure Period	C-NOEC (% effluent)	C-LOEC (% effluent)
Ceriodaphnia dubia	Survival	6 – 7 days	100%	>100%
Ceriodaphnia dubia	Reproduction	6 – 7 days	100%	>100%

#### 1.0 Introduction

#### 1.1 Background

In 1972, amendments were made to the Clean Water Act (CWA) prohibiting the discharge of any pollutant from a point source to waters of the United States, unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Since the passing of the 1972 amendments to the CWA, significant progress has been made in cleaning up industrial wastewater and municipal sewage point source discharges. EPA defines point sources as discrete discharges via pipes or man-made ditches.

In 1984, the U.S. Environmental Protection Agency (EPA) released a national policy statement and a supporting document that recommended, where appropriate, effluent permit limits should be based on effluent toxicity as measured in aquatic toxicity tests. Generally, permits require that no toxic discharge occur in toxic amounts. The routine use of dilution-series toxicity tests and/or biologically-based criteria (i.e., invertebrate and vertebrate community studies) have become increasingly utilized to calculate or estimate the potential toxicity of a discharge.

EPA has the authority to delegate primary responsibility for the implementation, permitting, and enforcement of NPDES regulations to appropriate State regulatory agencies. Even when EPA delegates this authority to the states, EPA still maintains oversight responsibility.

#### 1.2 Objective of the General Electric Study

The objective of this study was to measure the chronic toxicity of the composite wastewater discharged by the General Electric facility located in Pittsfield, Massachusetts to the Housatonic River. The water flea, *Ceriodaphnia dubia*, is exposed to effluent and dilutions of effluent under static conditions with daily renewal of test solutions. *Ceriodaphnia dubia* is routinely used by regulatory agencies and by contract laboratories for toxicity testing and EPA has published quidance documents for the performance of this test (U.S. EPA, 2002).

A toxicity test was conducted from September 12 - 18, 2006 at Aquatec Biological Sciences, Inc. (Aquatec) located in Williston Vermont. Aquatec Biological Sciences, Inc. holds NELAC accreditation for the requested whole effluent toxicity test. All original raw data and the final report produced for this study are stored in Aquatec's archives in Williston, Vermont.

#### 2.0 Materials and Methods

#### 2.1 Protocol

Procedures used in this chronic toxicity test followed those described in the Aquatec Standard Operating Procedure (SOP) TOX2-002, Cladoceran, *Ceriodaphnia dubia* Survival and Reproduction Toxicity Test R4, May 4, 2006. This SOP generally follows the standard methodology presented in U.S. EPA. 2002 (EPA-821-R-02-013). *Methods for Measuring the Chronic Toxicity of* 

Effluents and Receiving Waters to Freshwater Organisms, 4<sup>th</sup> Ed., October 2002, Method 1002.0 (as summarized in Appendix 2 of this report). A copy of the SOP is located in Appendix 6 (Controlled document, please do not copy or distribute.)

Additional SOPs used in this study are outlined below:

Title	SOP Number	Revision Date
Sample Acceptance	TOX1-017	Rev. 4, February, 2004
Hardness – total titrimetric method	TOX1-011	Rev. 3, May 2003
Alkalinity – total titrimetric method	TOX1-010	Rev. 6, April 2004
Thermo-Orion 145 A+ Conductivity Meter	TOX1-016	Rev. 1, April 2004
Dissolved oxygen	TOX1-006	Rev. 7, April 2004
pH measurement	TOX1-007	Rev. 2, April 2004
Salinity: refraction method	TOX1-008	Rev. 3, January, 2003

#### 2.2 Effluent and Receiving Water Samples

Effluent samples were collected by GE personnel from September 10-11, 2006 (initial sample); September 12-13, 2006 (first renewal sample), and September 14-15, 2006 (second renewal sample). Receiving water samples were grab samples collected from the Housatonic River on September 11, 13, and 15, 2006. Samples were delivered to Aquatec on the same day as they were collected. Upon receipt at Aquatec on the temperature of the temperature blank contained within the cooler was within the range of 0.0°C to 6.2°C. The effluent and receiving water were prepared for testing and characterized (Table 1). The receiving water was the dilution water for preparing effluent concentrations and was also the reference control for statistical comparisons.

#### 2.3 Control water

Laboratory control water for the toxicity test was a 1:1 mixture of laboratory reconstituted moderately hard water and 60-micron filtered river water collected from the Lamoille River, Vermont. This water was characterized for the following parameters: pH (7.8); dissolved oxygen (7.8 mg/L); conductivity (241 uS/cm). An additional dechlorination control (laboratory water with 0.2 N sodium thiosulfate added) was included in the test array, even though chlorine was not detected in the effluent sample.

#### 2.4 Test Organism

Daphnids (*Ceriodaphnia dubia*), less than 24-hours old and collected within and eight-hour period were obtained from Aquatec laboratory cultures. The culture system consisted of brood boards with 1-oz cups containing approximately 20 mL of culture medium and one daphnid. The culture water was laboratory reconstituted moderately hard water mixed in a 1:1 ratio with filtered Lamoille River, VT water. Prior to use, the culture water was characterized:

Parameter	Result
Total hardness (mg/L)	Within range of 50-110 mg/L
Alkalinity (mg/L as CaCO <sub>3</sub> )	Within range of 60-70 mg/L
рН	Nominal 7.7 – 8.0

The culture area was maintained at a nominal temperature of 25°C (range 24 – 26°C) with a regulated photoperiod of 16 hours light and 8 hours of darkness.

Daphnid cultures were fed daily a combination of green algae (*Selenastrum capricornutum*) and YCT obtained from Aquatic BioSystems of Fort Collins, Colorado. Daphnids were transferred to new culture medium daily.

Beginning approximately 24 hours before toxicity test initiation neonates were removed from the culture cups. Offspring produced within eight hours were used for toxicity testing when the neonates were 24 hours old or less.

#### 2.5 Test Procedures

Prior to initiating the toxicity test, a sub-sample of effluent and receiving water was decanted for subsequent alkalinity and hardness determination. A sub-sample was also check for presence of chlorine to determine whether dechlorination of effluent is required. Chlorine was not detected, therefore dechlorination of the effluent was not required. The sample was then aerated and warmed to test temperature.

The toxicity test was conducted at effluent concentrations of 100%, 75%, 50%, 25%, 12.5%, and 6.25% effluent. Test concentrations were prepared by diluting the appropriate volume of effluent with dilution water to a total volume of 300 mL. Test solutions were then decanted to ten replicate 30-mL cups per concentration, each containing approximately 20 mL of test solution. Three sets of control replicates were also included in the test array, set up as the effluent replicates. The controls included: Housatonic River water (dilution control), a laboratory control (a mix of moderately hard water and Lamoille River, VT water), and a laboratory control with sodium thiosulfate added (dechlorination control). The dechlorination control was included in the test array even though residual chlorine was not detected in the effluent.

Prior to testing, daphnids less than 24-hours old were collected from the cultures, pooled in Carolina bowl, and fed. The test was initiated when the daphnid neonates were transferred to the replicate test cups, one daphnid per cup. The toxicity test cups were incubated to maintain temperature in the range of 24°C to 26 °C. The lighting cycle was 16 hours light and eight hours dark and a luminance of approximately 80 ft-c.

The criteria for ending the toxicity test was based upon the controls reaching an average of 15 neonates or more per female and at least 60 percent of surviving females having produced three broods during the test.

#### 2.6 Test Monitoring

The number of surviving daphnids and the number of young produced was observed at approximately 24-hour intervals during the test, with the final count of surviving daphnids and young at the end of the test. Temperature was measured daily in one replicate of each test treatment. The parameters of pH, dissolved oxygen, and conductivity were measured daily on a composite of the test solutions before and after renewal.

Total hardness was measured by the EDTA titrimetric method and total alkalinity was measured by potentiometric titration to an endpoint of 4.5 on each new sample. The check for residual chlorine was performed with an acidified sample to which potassium iodide and starch indicator added. If chlorine was detected, the color was titrated away with 0.02 N sodium thiosulfate to determine the equivalent volume of 0.2 N sodium thiosulfate to add to effluent (if needed).

Dissolved oxygen was measured with a YSI Model 58 dissolved oxygen meter. A Beckman Phi 40 was used to measure pH. A Thermo-Orion Model 145 conductivity meter was used to measure conductivity.

#### 2.7 Reference Toxicant Test

A acute / chronic standard reference toxicant (SRT) test was conducted monthly. The SRT test was conducted as a quality control procedure to establish the health and sensitivity of the test organisms. The SRT included four concentrations of reagent grade sodium chloride (NaCl) with nominal concentrations of 0.25, 0.5, 1.0, 2.0, and 3.0 g NaCl/L. Ten test replicates, each containing one daphnid were test at each concentration and the laboratory control.

#### 3.0 Statistics

#### 3.1 Statistical protocol

The concentration-response relationships observed were characterized by the median lethal concentration (LC50, based on survival data at 48-hours of the test), which was the calculated concentration lethal to 50 percent of the test organisms. If no concentrations resulted in 50% mortality, the LC50 was reported as greater than the highest concentration effluent (in this case >100% effluent), by direct observation. If greater than 50 percent mortality was observed in any effluent treatment, then a computer program (TOXIS2) was used to calculate the LC50 value, following the U.S. EPA statistical flowchart (Appendix 3).

The Acute-No-Observable-Effect Concentration (A-NOEC) was determined statistically using multiple comparison tests (TOXIS2), with the receiving water control as the reference.

The Chronic-No-Observable-Effect Concentration (C-NOEC) was determined based on the end-of-test survival and reproduction data using multiple comparison tests (TOXIS2), with the receiving water control as the statistical reference.

#### 4.0 Results

#### **4.1 Effluent Toxicity Test**

Results of effluent and receiving water characterizations performed at Aquatec as part of the toxicity test are presented in Table 1. Water quality parameters measured during the toxicity test are presented in Table 2. Measured temperatures during the test were within the range of 24.0°C to 26.0°C. The percent survival data and number of offspring produced during the exposure for the toxicity test are presented in Table 3.

By day six, at least 60 percent of the reference control (receiving water) organisms had produced at least three broods with a minimum of 15 young per surviving female.

Acute toxicity was not demonstrated during this evaluation. The 48-hour LC50 value was >100% effluent. The A-NOEC was 100% effluent. Chronic toxicity was not demonstrated during this evaluation. The C-NOEC value was 100% effluent. And the C-LOEC was >100% effluent.

#### 4.2 Reference Toxicant Test

The most recent standard reference toxicant (SRT) test, conducted in September 2006, had a resulting 48-hour LC50 1.414 g NaCl/L and a chronic IC25 of 0.507 g NaCl/L. These values were within the Control Chart limits generated for SRT tests with *Ceriodaphnia dubia* in our laboratory.

#### 5.0 Qualifiers

#### 5.1 Qualifiers and Special Conditions

Qualifiers or special conditions were not applicable to the reported toxicity test.

NPDES Permit No. MA0003891 SDG: 9843 September 25, 2006

#### References

American Public Health Association, American Water Works Association, and Water Pollution Control Federation (APHA). 1989. Standard Methods for the Examination of Water and Wastewater. 17<sup>th</sup> Edition

U.S. Environmental Protection Agency, 2002. 4<sup>th</sup> Edition. *Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*. EPA-821-R-02-013.

Table 1. Results of the characterization of the General Electric Pittsfield Plant effluent and receiving water samples.

Parameter	OUTFALL COMPOSITE A7556C	OUTFALL COMPOSITE A7558C	OUTFALL COMPOSITE A7560C
Temperature	24.5	24.8	25.3
рН	7.9	7.6	7.3
Alkalinity (as CaCO₃), mg/L	268	288	84
Hardness (as CaCO <sub>3</sub> ), mg/L	290	324	100
Dissolved oxygen, mg/L	8.3	8.5	8.6
Specific conductivity, uS/cm	1095	1215	397
Total residual chlorine (mg/L)	ND	ND	ND

Parameter	Housatonic River A7555R	Housatonic River A7557R	Housatonic River A7559R
Temperature	24.5	25.1	25.5
рН	7.8	7.6	7.6
Alkalinity (as CaCO <sub>3</sub> ), mg/L	100	96	84
Hardness (as CaCO <sub>3</sub> ), mg/L	108	112	88
Dissolved oxygen, mg/L	7.9	8.7	8.4
Specific conductivity, uS/cm	281	293	248
Total residual chlorine (mg/L)	ND	ND	ND

Note: Characterizations reflect conditions of sample after preparation for the toxicity test. ND = not detected

Table 2. Water quality measurements (ranges) recorded during the chronic toxicity test with *Ceriodaphnia dubia* exposed to General Electric Pittsfield Plant effluent, September 12 - 18, 2006.

Test Concentration (% effluent)	рН	Dissolved Oxygen (mg/L)	Temperature (°C)	Conductivity (umhos/cm)
Dechl. Control	7.5 - 8.0	6.7 - 8.3	24.1 – 25.5	241-377
Lab Control	7.5 - 7.8	6.6 - 8.5	24.3 – 25.4	238 - 279
Reference Control	7.6-8.0	6.6- 8.9	24.0 – 25.5	243 - 320
6.25%	7.6 - 8.0	6.5 - 9.0	24.0 – 25.5	258 - 373
12.5%	7.5 – 8.1	6.5 - 9.0	24.0 – 25.5	267 - 430
25%	7.5 - 8.2	6.5 - 9.0	24.0 – 25.4	277 - 534
50%	7.5 - 8.3	6.6 - 8.9	24.0 – 25.3	296 - 764
75%	7.4 - 8.4	6.6 - 9.0	24.1 – 25.4	332 - 990
100%	7.3 – 8.4	6.6 - 9.0	24.5 – 25.4	396 - 1215

Dechl. Control = laboratory water with sodium thiosulfate added (dechlorination control).

Lab Control = a mix of natural river water and moderately hard water.

Dilution Control = receiving water (Housatonic River).

Table 3 a. Summary of percent survival and reproduction data recorded during the chronic toxicity test with *Ceriodaphnia dubia* exposed to General Electric Pittsfield Plant effluent, September 12 - 18, 2006.

Test Concentration (% effluent)	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Dechl. Control	100	100	100	100	100	100	-
Lab Control	100	100	100	100	100	90	-
Reference Control	100	100	100	100	100	100	-
6.25%	100	100	90	90	80	80	-
12.5%	100	100	100	100	100	100	-
25%	100	100	100	100	100	100	-
50%	100	100	100	100	100	100	***
75%	100	100	100	100	100	90	***
100%	100	100	100	100	100	100	*

Table 3 b. Summary of reproduction data (number of offspring produced) recorded during the chronic toxicity test with *Ceriodaphnia dubia* exposed to General Electric Pittsfield Plant effluent, September 12 - 18, 2006.

Test Concentration (% effluent)	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Mean
Dechl. Control	0	0	51	5	86	153	=	29.5
Lab Control	0	0	57	16	86	172	-	33.1
Reference Control	0	0	52	0	107	152	=	31.1
6.25%	0	0	47	17	64	130	<b>*</b>	25.8
12.5%	0	0	52	11	93	155	-	31,1
25%	0	0	48	0	114	153	-	31.5
50%	0	0	56	13	83	159	<b>I</b>	31.1
75%	0	0	50	24	75	150	•	29.9
100%	0	0	48	26	54	152	*	28.0

NPDES Permit No. MA0003891 SDG: 9843 September 25, 2006

Dechl. Control = laboratory water with sodium thiosulfate added (dechlorination control).

Lab Control = a mix of natural river water and moderately hard water.

Dilution Control = receiving water (Housatonic River).

Percent mortality = (# dead/5) X 100

NPDES Permit No. MA0003891 SDG: 9843 September 25, 2006

# Appendix 1 Chain-of-Custody Documentation

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		Chain-e	f-Custo	Chain-of-Custody Record		14 14	TEL: (802) 860-1638 FAX: (802) 658-3189	F1638 3-3189	
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City/State/Zip: Pittsfield, MA 01201 Telephone: (413) 494-6709 NF	Sampler Name(s): World NPDES Permit#: MA0003891	3	arrensky	The Chinad	Plastic Pla	Plastic Plastic	Glass	Amber Pla	Plastic
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Housatonic River A 7555R	SISM /		Receiving	Total Residual Chlorine				-	
	-								Ī
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	Ą	Aquatec B Chain-c	<b>IOlO</b> g f-Custo	C biological Sciences  ain-of-Custody Record		273 Commerce Street Williston, VT 05495 TEL: (802) 860-1638 EAY: (802) 650 3400	e Street 05495 0-1638	ng Gran
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Facsimile:	Ship these samples on Wedne	on Wednesday.		,	 		<u> </u>	1
	Quote #: 10/05	Client Code: C	Code: GEPITTS H	Hand Delivered: Yes No	1 gal   1/2 gal   1 L	40 mi	250 ml 0.5	5 L
ENTIFICATION	COLLECTION  DATE TIME GRAB	COMPOSITE	MATRIX	ANALYSIS	NIMBER OF	ANDU		
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1/228	2	7		Renewal 1				************
Outfall Composite A7558C	32	7	Effluent	Total Residual Chlorine			-	
Housatonic River A7557R	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Receiving	Dilution Water	2			
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Much Wysnewsky 9-3-06	1/2 /3cv 5/	has Men	h	become dislodged during shipment. Nest the samples in sufficient ice to maintain 0°C – 6°C. Results for samples received at temperatures exceeding 6°C will be qualified in the report.	t the samples in sufficie peratures exceeding 6°C	nt ice to n 3 will be q	naintain 0°c	C –
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Relinquished by: (signature) DATE	TIME	Received by: (signature)	re)					

	and the second second	Aquatec B	iologi	ec Biological Sciences		27 Wi	3 Comme	273 Commerce Street Williston, VT 05495	
		Chain-	of-Custo	Chain-of-Custody Record		# E	TEL: (802) 860-1638 FAX: (802) 658-3189	60-1638 358-3189	
COMPANY INFORMATION	COMPANY'S PF	COMPANY'S PROJECT INFORMATION	VION	SHIPPING INFORMATION	NOLL	VOLUME/CONTAINER TYPE/ PRESERVATIVE	ME/CONTAINER PRESERVATIVE	TYPE/	
Vame: General Electric Company	Project Name: GE PITTSFIELD	PITTSFIELD	Ü	Carrier:	4 <sup>0</sup> C 4 <sup>0</sup> C	1	707	۷0۲	,0°
Address: O'Brien & Gere	Outfall Composite	ite – RENEWAL SAMPLE	AMPLE			H <sub>2</sub> SO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	) t	H N S S
1000 East Street, Gate 64	- Project Number: 06004	6004	Ai	Airbill Number:	<u> </u> 	<u> </u>	<u> </u>		
City/State/Zip: Pittsfield, MA 01201 Telephone: (413) 494-6709	Sampler Name(s);   MADCK	MARK WASNEWSK	文		Plastic Plastic	c Plastic	Glass	Amber Glass	Plastic
=acsimile:	Ship these samples on Friday	s on Friday.	<u> </u>	Date Snipped:	/		İ	i	i
Contact Name: Mark Wasnewsky	Quote #: 10/05	Client Code: GEPITTS		Hand Delivered: Loves	1 gal 1/2 gal	1-	40 ml	250 ml	0.5
ENTIFICATION	COLLECTION DATE TIME GRAB	B COMPOSITE	MATRIX	ANALYSIS		NI MEED OF	- COLLAND	000	
Outfall Composite	-¥		Effluent	Ceriodaphnia dubia chronic suvival and	0			02 IN	
7025LH	15 Sept 1 20 Sep			reproduction (EPA Method 1002.0) –	N				
A7560C	35	\	Effluent	Total Residual Chlorine					
Housatonic River A7559R	\ \sigma_{\sigma_{\sigma}} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Receiving	Dilution Water	2				
Housatonic River A7559R	/ EX.		Receiving	Total Residual Chlorine					
shed by: (signature)	DATE TIME Re	Received by: (signature)	matche)	NOTES TO SAMPLER(S): (1): Complete the labels (Date, time, initials) and cover the labels with clear tape. Tape the caps of the sample bottles to ensure that they do not become dislodged during shipment. Nest the samples in sufficient ice to maintain 0°C – 6°C. Results for samples received at temperatures exceeding 6°C will be qualified in the	the labels (Da the sample bo st the samples	te, time, in ttles to en in suffici	nitials) ar sure that ent ice to	id cover they do remaintain qualified	he not noc-
	TIME	sig)	rre)	report.		,			
•	2 7 40	Phas Ch		Notes to Lab: Ambient cooler temperature: 6.3 °C. Dechlorinate the effluent sample if chlorine is detected.	ature: 6.3	°C. Dech	lorinate	the efflue	ti e
Relinquished by: (signature) D/	DATE TIME Re	Received by: (signature)	rre)						
The William Wi									

# Appendix 2 Summary of Test Conditions

Client: CAS / GE PITTSFIELD Test #: 50239 SDG: 9843

#### Test Description: Daphnid, Ceriodaphnia dubia acute / chronic survival and reproduction

ASSOCIATED PROTOCOL: EPA 1994. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. (EPA/600/4-91/002) Method 1002.0

Effluents and Receiving Waters to Freshwater C	<del>,,, , , , , , , , , , , , , , , , , , </del>
1. Test type:	Static, daily renewal
2. Test temperature:	25 <u>+</u> 1 <sup>0</sup> C
3. Light quality:	Ambient laboratory illumination
4. Photoperiod:	16 hr. light, 8 hr. dark
5. Test chamber size:	30 ml
6. Test solution volume:	15-20 ml / replicate
7. Renewal of test concentrations:	Daily
8. Age of test organisms:	Less than 24 h, released within an 8 hr. period
9. No. organisms / test chamber:	1
10. No. of replicate chambers / concentration:	10
11. No. of organisms / concentration:	10
12. Feeding regime:	0.1 ml each of YTC and algal suspension daily
13. Cleaning:	Transfer to new test solution and test chamber daily
14. Aeration:	None
15. Dilution water:	Receiving water
16. Test concentrations:	6.25, 12.5, 25, 50, 75, 100% effluent
17. Laboratory control:	1:1 Lamoille R. / MHW as additional control. Sodium thiosulfate in MHW as additional control
18. Test duration:	Until 60% of control females have three broods
19. Monitoring:	Daily temperature, dissolved oxygen, pH, and conductivity. Hardness, alkalinity on each new sample. Biological monitoring daily
19. End points:	Survival (Days 2 and end of test) and reproduction (end of test)
20. Reference toxicant test:	Sodium chloride LC50 / IC25
21. Test acceptability (control performance):	80% or greater survival and an average of 15 or more young/female. At least 60% of surviving females must have produced third brood
22. Data interpretation:	Acute: 48-h LC50 (point estimate); A-NOEC Chronic: C-NOEC by hypothesis test statistics compared to the Lab Control using TOXIS2

Aquatec Biological Sciences Williston, Vermont

Reviewed by: Date: 9/28/06 2 3

NPDES Permit No. MA0003891 SDG: 9843 September 25, 2006

# Appendix 3 U.S. EPA Region 1 Toxicity Test Summary and Statistical Flow Chart

## STATISTICAL ANALYSIS OF CERIODAPHNIA SURVIVAL AND REPRODUCTION TEST

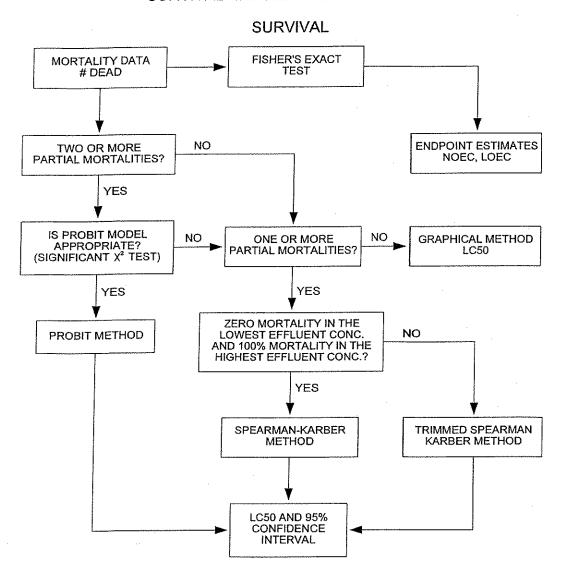


Figure 4. Flowchart for statistical analysis of the daphnid, Ceriodaphnia dubia, survival data.

#### STATISTICAL ANALYSIS OF CERIODAPHNIA SURVIVAL AND REPRODUCTION TEST

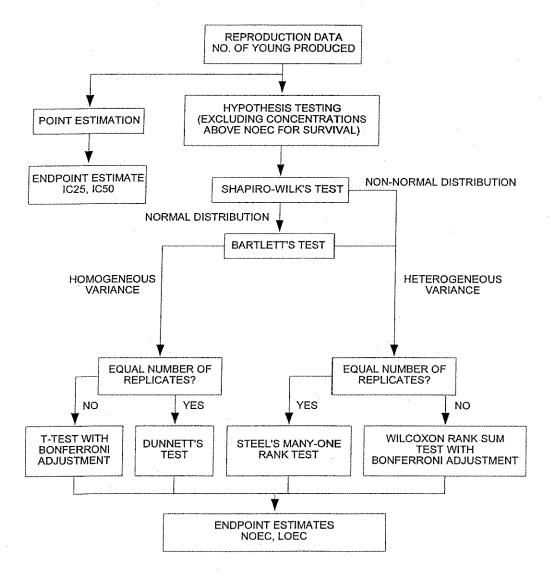


Figure 6. Flowchart for the statistical analysis of the daphnid, *Ceriodaphnia dubia*, reproduction data.

NPDES Permit No. MA0003891 SDG: 9843 September 25, 2006

## Appendix 4 Bench Data, *Ceriodaphnia dubia* Chronic Toxicity Test

Aquatec Biological Sciences, Inc.

Aquatec Biological Sciences, Inc.

Test Number: 50239

Test Material: Effluent - POTW

Source: MA0003891

Test Date: 9/12/06 Sample Date: 9/11/06 Species: Ceriodaphnia dubia Test Type: Chronic

General Electric Company

Pittsfield, MA

#=====================================		zzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzz	MMA	RY	Ç II II II II W W W W W			~=>====
   _==	========	****	11 12 M				****	
End Point	Day	Transformation		Conc	#Reps	Mean	StDev	% Surv
Proportion Alive		No transformation		-				
Proposition Asset				0.000 B	10	1.00	0.000	
			Х	0.000 D	10	1.00	0.000	
			X	6.250 D	10	1.00	0.000	
			Х	12.500 D	10	1.00	0.000	
			Х	25.000 D	10	1.00	0.000	
			х	50.000 D	10	1.00	0.000	
			Х	75.000 D	10	1.00	0.000	
			Х	100.000 D	10	1.00	0.000	
Proportion Alive	7	No transformation						
Proporcion with				0.000 B	10	. 90	.316	
			Х	0.000 D	10	1.00	0.000	
			Х	6.250 D	10	.80	.422	
			X	12.500 D	10	1.00	0.000	
			Х	25.000 D	10	1.00	0.000	
			х	50.000 D	10	1.00	0.000	
			Х	75.000 D	10	.90	.316	
			х	100.000 D	10	1.00	0.000	
Reproduction		No transformation						
Kehroduceron				0.000 B	10	33.10	4.332	
			X	0.000 D	10	31.10	4.533	
			Х	6.250 D	10	25.80	13.382	
			Х	12.500 D	10	31.10	4.818	
			х	25.000 D	10	31.50	3.749	
			х	50.000 D	10	31.10	3.446	
			Х	75.000 D	10	29.90	4.630	
			X	100.000 D	10	28.00	5.793	

X = indicates concentrations used in calculations

	X = indicates concentrations used in carculations
- ** # = 6	- HYPOTHESIS TEST -
z==z==zz==zz==zz==zz= End Point	Day Transformation/Analysis NOEC LOEC TU MSE MSD
Proportion Alive	2 No transformation Fisher Exact >100.000 >100.000 < 1.00  48-L LCSO = >100% (DIRECT OBSERVATION)
Proportion Alive	7 No transformation Fisher Exact >100.000 >100.000 < 1.00
Reproduction	No transformation Steel many-one rank test >100.000 >100.000 < 1.00 43.392 6.918

9/25/06	10:52 alli		IOXIS ANAI	IISIS SUMMARY		
Water Fle						
======= Lab	species			erial Permit	Protocol	========  Test Number
ABS	CD	9/12/2006	EFF1 (%)	MA000389	1 EPAF 94	50239
	THE STREET WITH STREET			s Parameters		
			PROPOR	TION	= = = = = = = = = = = = = = = = = = =	==========
End D	Point · TDA	Proportion	7.1 i 17.0			
Anal Trans	ysis: Fig form: No	sher Exact transforma e-tailed, de	Auto tion	growth select	1 control	
Cons	tant: -	01 ).00	_	Variance: lpha Normality: NOEC:	.01	
EC/LC Me	thod: F	(P,S,G,L,I	1)	Superdunne	et: 4000	_ !
			GR	HTWC		
Analj Trans Cons	ysis: EPA form: No Tail: One tant: -	Reproduction Flowchart transformate trailed, de .01	Auto g ion ecreasing	growth select  Variance: Lpha Normality: NOEC:	.01	
Calculate		(Y,N)		IC resample		
			Errors/	Warnings		
THE THE PARTY OF T				=======================================		
Type Num	mber					
EC/LC 71	of the			stimate can be ns < 100-p % o		
IC 71	No l: of tl	inear inter	polation e sponse mea	stimate can be ns < 100-p % o	calculated f the contro	- none
PROP 0	***	ysis comple	ted with n	o errors		

GROW 0 Analysis completed with no errors

=======  Cerioda	Ceriodaphnia   Proportion Alive												
====== Lab	Species	Date	Test Mat	erial	Permit	Prot	ocol Te	est Number					
ABS	CD	9/12/200	EFF1 (%)	FF1 (%)		391 EPAF	94 50	0239					
Fisher	Exact	Auto gr	== <b>==</b> ================================	ect	1 contro								
Transfo	rmation				Prop. Conc	Alive	P						
No tran	sformation	a				***************************************		••					
				Х	0.00B 0.00D	.90 1.00							
				X	6.25D	.80	.23	7					
				X	12.50D	1.00	1.000						
				X	25.00D		1.000						
				X	50.00D	1.00	1.000						
				X	75.00D	.90	.500						
				X	100.00D	1.00	1.000						
NOEC	LOEC	TU	Alpha	T	aíl	Based o	on						
>100	>100	<1	.05	One-	sided	Fisher E	xact						

=======  Cerioda	======= phnia			:			
====== Lab	Species	Date	Test Material	Permit	Protocol	Test Number	
ABS	CD	9/12/200	EFF1 (%)	MA0003891	EPAF 94	50239	

		Conc	Mean	SD	N 	Т	Sum of Ranks
Data	tr	ansformat	ion: No t	ransformat	ion		
		0.00B	33.10	4.332	10		
	Х	0.00D	31.10	4.533	10		
	X	6.25D	25.80	13.382	10	1.799	96.500
	X	12.50D	31.10	4.818	10	0.000	102.500
	X	25.00D	31.50	3.749	10	136	106.500
	X	50.00D	31.10	3.446	10	0.000	103.000
	X	75.00D	29.90	4.630	10	.407	96.500
	X	100.00D	28.00	5.793	10	1.052	88.500

NOEC	LOEC	TU	Alpha	Tail	Based on	Critical	Sum of I	Ran
>100	>100	<1	.05	One-sided	Steel	74		
						·		

Dunnett Test:	MSE	MSD Reduct from Co	Critical T		
	43.392	22.24	159	2.3485	
Kolmogorov Test for Normality:	Alpha  .01	D 	Cutoff 	D Normal? Yes	
Bartlett Test for Equal Variance:	Alpha 	B  28.848	P(B) 	Equal Var? No	

#### WATER FLEA TEST DATA

Test Number: 50239 (x) Chronic ( ) Acute hours
Test Date: 12-Sep-06
Source: MA0003891 Test Material: EFF1 (%) Test Number: 50239

	Cont.				lly	Sur	viva	al	Prop	Total	Max	
Conc	Rep	No. Sex	Start	1 2	3	4	5	6 End	Alive	Young	Young	
0.00 E	3 1	F	1	1				1	1.00	32	20	
0.00 É	2	F	1	1				1	1.00	28	17	
0.00 E	3	F	1	1				1	1.00	33	16	
0.00 B	4	F	1	1				1	1.00	38	22	
0.00 B	. 5	F	1	1				1	1.00	35	16	
0.00 B	. 6	F	1	1				1	1.00	29	18	
0.00 B	7	F	1	1				1	1.00	35	18	
0.00 B	8	F	1	1				1	1.00	36	17	
0.00 B	9	P	1	1				1	1.00	39	20	
0.00 B	10	F	1	1				0	0.00	26	1.3	
0.00 D	1	F	1	1				1	1.00	32	16	
0.00 D	2	F	1	1				1	1.00	33	15	
0.00 D	3	F	1	1				1	1.00	33	14	
0.00 D	4	F	1	1				1	1.00	33	17	
0.00 D	5	Ţ.	1	1				1	1.00	35	19	
0.00 D	б	F	1	1				1	1.00	29	1.4	
0.00 D	7	F	1	1				1	1.00	3 7	21	
0.00 D	8	F	1	1				1	1.00	21	8	
0.00 D	9	P	1	1				1	1.00	31	16	
0.00 D	10	F	1	1				1	1.00	27	12	
6.25 D	1	F	1	1				1	1.00	32	17	
6.25 D	2	F	1	1				1	1.00	38	16	
6.25 D	3	F	1	1				0	0.00	3	3	
6.25 D	4	F	1	1				1	1.00	34	18	
6.25 D	5	F	1	1				1	1.00	37	19	
6.25 D	6	F	1	1				1	1.00	28	19	
6.25 D	7	F	1	1				1	1.00	32	17	
6.25 D	8	F	1	1.				1	1.00	27	12	
6.25 D	9	F	1	1				1	1.00	27	12	
6.25 D	10	F	1	1				0	0.00	0	0	
12.50 D	1	F	1	1				1	1.00	29	16	
12.50 D	2	F	1	1				1	1.00	23	1.4	
12.50 D	3	F	1	1				1	1.00	38	19	
12.50 D	4	F	1	1				1.	1.00	28	14	
12.50 D	5	F	1	1				1	1.00	33	14	
12.50 D	6	F	1	1				1	1.00	26	16	
12.50 D	7	F	1	1				1	1.00	31	17	
12.50 D	8	F	1	1				1	1.00	38	18	
12.50 D	9	F	1	1				1	1.00	33	15	
12.50 D	10	F	1	1				1	1.00	32	13	
25.00 D	1	F	1	1				1	1.00	27	14	
25.00 D	2	F	1	1				1	1.00	34	16	
25.00 D	3	F	1	1				1	1.00	37	18	
25.00 D	4	F	1	1				1	1.00	33	15	
25.00 D	5	F	1	1				1	1.00	27	13	
25.00 D	6	F	1	1				1	1.00	34	17	
25.00 D	7	F <sup>2</sup>	1	1				1	1.00	3.0	18	

#### Aquatec Biological Sciences, Inc.

#### WATER FLEA TEST DATA

Test Number: 50239

 $(\mathbf{x})$  Chronic ( ) Acute hours

Test Date: 12-Sep-06

Source: MA0003891 Test Material: EFF1 (%)

		Cont.		Da	ily	Sui	viv	al	Prop	Total	Max
Conc	Rep	No. Sex	Start	1 2	3	4	5	6 End	Alive	Young	Young
25.00 D	8	F	1	1				1	1.00	36	17
25.00 D	9	F	1	1				1	1.00	28	13
25.00 D	10	F	1	1				1	1.00	29	1.3
50.00 D	1	F	1	1				1	1.00	33	18
50.00 D	2	F	1	1				1	1.00	29	17
50.00 D	3	F	1	1				1	1.00	28	11
50.00 D	4	F	1	1				1	1.00	32	1.8
50.00 D	5	F	1	1				1	1.00	34	15
50.00 D	6	F	1	1				1	1.00	34	23
50.00 D	7	F	1	1				1	1.00	25	16
50.00 D	8	F	1	1				1	1.00	36	17
50.00 D	9	F	1	1				1	1.00	28	12
50.00 D	10	F	1	1				1	1.00	32	14
75.00 D	1	F	1	1				1	1.00	24	14
75.00 D	2	F	1	1				1	1.00	28	16
75.00 D	3	F	1	1				1	1.00	32	15
75.00 D	4	F	1	1				0	0.00	23	9
75.00 D	5	F	1	1				1	1.00	37	17
75.00 D	6	F	1	1				1	1.00	35	14
75.00 D	7	F	1.	1				1	1.00	34	19
75.00 D	8	F	1	1				1	1.00	29	17
75.00 D	9	F	1	1				1	1.00	30	1.6
75.00 D	10	न्	1	1.				1	1.00	27	13
100.00 D	1	F	1	1				1	1.00	29	19
100.00 D	2	F	1	1				1	1.00	16	7
100.00 D	3	F	1	1				1	1.00	33	16
100.00 D	4	F	1	1				1	1.00	34	17
100.00 D	5	F	1	1				1	1.00	29	15
100.00 D	6	F	1	1				1	1.00	27	15
100.00 D	7	F	1	1				1	1.00	26	16
100.00 D	8	F	1	1				1	1.00	23	14
100.00 D	9	F	1	1				1	1.00	36	21
									1.00	27	13

Qc V 165 9/25/06 J-9/29/00

#### Aquatec Biological Sciences, Inc.

#### WATER FLEA DAILY REPORT

			50239 12-Sep-	-06		(	(x) C	hron!	nic (	( )	Acu	te	hours
		IRCE:				I	EST	MATE	ERIAL:	EF	F1	(웅)	
			Cont.	_	_				luctio		0		7.0
Conc	Ctrl	Rep	#	1	2	3	4	5	6	7	8	9	10
25.00		8				5 4	0	14 11	17 13,				Additional Angles of the State
25.00		9 10				5	0	11	13/				
25.00 50.00		1				5	Õ	10	18				
50.00		2				6	6	0	17				
50.00		3				б	0	11	11				
50.00		4				4	0	10	18				
50.00	D	5				6	0	13	15				
50.00	D	6				7	3	1	23				
50.00	D	7				5 5	4 0	$\begin{matrix} 0 \\ 14 \end{matrix}$	16 17				
50.00	D D	8 9				6	0	10	12				
50.00	D	10				6	Ŏ	$\frac{14}{14}$	12/				
75.00	D	1				4	6	0	14				
75.00	D	2				5	7	0	16				
75.00	D	3				5	0	12	15				
75.00	D	4				5	0	9	9				
75.00	D	5				5 7	4 0	$\frac{11}{14}$	17 14				
75.00	D	6 7				4	0	14 11	14 19				
75.00 75.00	D D	8				5	7	0	17				
75.00	D	9				6	Ó	8	16				
75.00	D	10				4	0	10	13 <b>J</b>				
100.00	D	1				5	5	0	19				
100.00	D	2				3	7	0	6				
100.00	D	3				5	0	12	16				
100.00	D	4				6 6	0 0	11 8	17 15				
100.00	D	5 6				7	4	1	15				
100.00	D D	7				4	6	0	16				
100.00	D	8				5	4	0	14				
100.00	D	9				4	0	11	21	,			
100.00	D	10				3	0	11	21 13 /				
									$\sim$	[		5/06	
									(y)	CV	10	206	

QCV 9/25/06 8/23/06

#### WATER FLEA DAILY REPORT

EST NUMBER: 50239 (x) Chronic () Acute hours
TEST DATE: 12-Sep-06
SOURCE: MA0003891 TEST MATERIAL: EFF1 (%) TEST NUMBER: 50239

	ORCH.	11100000.									, ,	
		Cont.			Daily							
Conc Ctrl	Rep	#	1	2	3	4	5	6	7	8	9	10
0.00 B 0.00 B 0.00 B 0.00 B 0.00 B 0.00 B 0.00 B 0.00 B 0.00 D 0.00 D 6.25 D 6.25 D 6.25 D 6.25 D 6.25 D 12.50 D	1234567890123456789012345678901234567				19 1576675556556446555666356555650546564465756564539 19 19 19 19 19 19 19 19 19 19 19 19 19	640006000000000000000000000000000000000	1 0 11 10 12 0 12 14 13 13 11 12 14 10 12 11 10 11 10 10 10 10 10 10 10 10 10 10	20 16 16 16 16 16 17 19 14 16 16 17 16 16 16 17 16 16 16 17 16 16 16 17 16 16 16 16 16 16 16 16 16 16 16 16 16				

#### Ceriodaphnia dubia Survival and Reproduction Data (Page 1 of 4)

Client: CAS / GE PITTSFIELD

Test #: 50239

SDG: 9843

Test Description: Ceriodaphnia dubia acute / chronic toxicity tests

Effluent (%)	Repl 1	Repl 2	Repl 3	Repl 4	Repl 5	Repl 6	Repl 7	Repl 8	Repl 9	Repl 10	Remarks
Lab Ctrl	0	0	0	0	0	0	0	0	0	0	Day 0
Rec. Ctrl.	0	0	0	0	0	0	0	0	0	0	Sample: 33329
6.25	0	0	0	0	0	0	0	0	0	0	Fed Sel / YCT
12.5	0	0	0	0	0	0	0	0	0	0	Sel Lot #: 91706Sel
25	0	0	0	0	0	0	0	0	0	0	YCT Lot #: 830640
50	0	0	0	0	0	0	0	0	0	0	Date/time/Init.
75	0	0	0	0	0	0	0	0	0	0	KS 9-12-06
100	0	0	0	0	0	0	0	0	0	0	17:Z0
Lab Ctrl	0	0	0	0	0	0	0	0	0	0	Day 1
Rec. Ctrl.	0	0	0	0	0	0	0	0	0	0	Sample: 33329
6.25	0	0	0	0	0	0	0	0	0	0	Fed Sel / YCT
12.5	0	0	0	0	0	0	0	0	0	0	Sel Lot#: above
25	0	0	0	0	0	0	0	0	0	0	YCT Lot #above
50	0	0	0	0	0	0	ව	0	0	0	Date/time/Init.
75	0	0	0	0	0	0	0	0	0	0	KS 9-13-06
100	0	0	0	0	6	0	0	0	0	0	16:25
Lab Ctrl	0	0	0	0	0	ල	$\circ$	0	0	0	Day 2
Rec. Ctrl.	0	0	0	0	0	0	0	0	$\bigcirc$	Ò	Sample: 33366
6.25	0	0	0	0	0	0	0	0	0	0	Fed Sel / YCT
12.5	0	0	0	0	0	$\bigcirc$	$\bigcirc$	0	0	0	Sel Lot#: alouve
25	0	0	0	0	0	0	0	0	0	0	YCT Lot#:above_
50	0	0	0	0	0	0	0	0	0	0	Date/time/Init.
75	0	0	0	0	0	0	0	0	0	0	KS 9-14-06
100	0	0	0	0	0	0	0	0	0	0	13:15

0=original organism surviving, no young; D=original organism dead; #=# young released; \*=lab-induced mortality. Receiving water is dilution water; Lab water is additional control.

Aquatec Biol	ogical Sciences Will	iston, v	vermont		
Reviewed by:		Date:	9/28/06	<u> </u>	6

#### Ceriodaphnia dubia Survival and Reproduction Data (Page 2 of 4)

Client: CAS / GE PITTSFIELD

Test #: 50239

SDG: 9843

Test Description: Ceriodaphnia dubia acute / chronic toxicity tests

Effluent (%)	Repl 1	Repl 2	Repl 3	Repl 4	Repl 5	Repl 6	Repl 7	Repl 8	Repl 9	Repl 10	Remarks
Lab Ctrl	5	7	6	6	7	5	5	5	0	5	Day 3
Rec. Ctrl.	5	6	5	6	4	4	6	5	เก	6	Sample:33366
6.25	6	6	3	5	6	5	5	6	(کا	Þ	Fed Sel / YCT
12.5	5	4	6	5	6	4	4	ی	5	7_	Sel Lot #: <b>912065e1</b>
25	.5	6	5	le	4	5	3	5	4	5	YCT Lot #:8306 YC
50	5	6	6	4	6	7_	5	5	6	6	Date/time/Init.
75	4	5	5	ÌŊ	<b>(</b> 5)	7	4	5	6	4	9-15-06
100	5	3	U)	6	6	7	4	5	4	3	14:30 JG
									_		Dov.4
Lab Ctrl	۵)	4	0	0	0	6	0	0	0	0	Day 4
Rec. Ctrl.	٥	O	0	0	0	0	0	0	0	0	Sample: 33399
6.25	9	4	0	0	D	4	0	0	0	D	Fed Sel / YCT
12.5	0	5	0	٥	0	6	0	0	0	0	Sel Lot #: SAME
25	0	0	0	0	0	0	0	0	0	0	YCT LOT#: SAME
50	0	(૭	0	0	0	3	Н	0	0	0	Date/time/Init. どに タ-16~0は、17:00
75	l9	7	0	0	Ч	0	Q	2	0	0	
100	5	7	0	0	0	4	6	4	0	0	
	1	T	1	- 1 - T	101		10		177	13	Day 5
Lab Ctrl	1	0		10	12	0	12	14	13	13	•
Rec. Ctrl.		12	14	<u> 10</u>	12	4	10	8	10	9	Sample: 33399 Fed Sel / YCT
6.25	0	10	<u>%</u>	Щ	12	0	/0	9	10	D	l
12.5	8	0	13	9	13	0	/0	14	/3	13	Sel Lot #: above
25	8	12	14	12		12	9	14	11		YCT Lot #: above
50	10	0	11	10	13		0	14	10	14	Date/time/Init.
75	0	0	12	9	11	14		0	8	10	KS 9-17-06
100	0	()	12		8		0	0	11	[]	13:05

0=original organism surviving, no young; D=original organism dead; #=# young released; \*=lab-induced mortality. Receiving water is dilution water; Lab water is additional control.

Aquatec Biol	ogical Sciences	Williston, V	ermont	
Reviewed by:	<u> </u>	Date:	9/28/16	 7

#### Ceriodaphnia dubia Survival and Reproduction Data (Page 3 of 4)

Client: CAS / GE PITTSFIELD Test #: 50239 SDG: 9843

Test Description: Ceriodaphnia dubia acute / chronic toxicity tests

Effluent (%)	Repl 1	Repl 2	Repl 3	Repl 4	Repl 5	Repl 6	Repl 7	Repl 8	Repl 9	Repl 10	Remarks
Lab Ctrl	20	17	16	22	160	18	18	17	20	8/D	Day 6
Rec. Ctrl.	16	15	14	17	19	14	21	8	16	12	Sample: above
6.25	17	16	D	18	19	19	17	12	12	D	Fed Sel / YCT
12.5	16	14	19	14	14	160	17	18	15	12	Sel Lot #:
25	14	16	18	15	12	17	18	17	13	13	YCT Lot #:
50	18	17	11	18	15	23	16	17	12	12	Date/time/Init.
75	IL	16	15	9/D	17	14	19	17	16	13	KS 9-18-06
100	19	6	16	17	15	15	16	14	٦١	13	14:35
Lab Ctrl											Day 7
Rec. Ctrl.			i								Sample:
6.25											Fed Sel / YCT
12.5											Sel Lot#:
25											YCT Lot #:
50											Date/time/Init.
75		ر مر	,,,,,								
100											
Lab Ctrl							> [				Day 8
Rec. Ctrl.											Sample:
6.25											Fed Sel / YCT
12.5											Sel Lot #:
25											YCT Lot #:
50											Date/time/Init.
75											
100											

0=original organism surviving, no young; D=original organism dead; #=# young released; \*=lab-induced mortality. Receiving water is dilution water; Lab water is additional control .

Aquatec Biol	ogical Sciences	Williston, V	/ermont	
Reviewed by:		Date:	9/28/0	<u></u>

Ceriodaphnia dubia Survival and Reproduction Data (Page 4 of 4)

Client: CAS / GE PITTSFIELD

Test #: 50239

SDG: 9843

Test Description: Ceriodaphnia dubia acute / chronic toxicity tests

Sodium thiosulfate control

Effluent	Repl	Repl	Repl	Repl	Repl	Repl	Repl	Repl	Repl	Repl	
(%)	1	2	3	4	5	6	7	8	9	10	Remarks
Na thio	0	0	0	0	0	0	0	0	0	0	Day 0 Fed 145 9-12-06 12:05
Na thio	Q	0	0	0	0	0	0	0	0	0	Day 1 Fed <i>KS</i> 9-13-06 16:00
Na thio	<b>(</b> )	0	0	0	0	0	0	0	0	D	Day 2 Fed KS 9-14-06 /3:∞
Na thio	6	4	5)	5	מו	le	4	5	5	le	Day 3 Fed 9-15-06 141307G
Na thio	0	0	0	0	0	Ď	0	0	0	0	Day 4 Fed 1216 9-16-06 11130
Na thio	12	8		12	11	0		0	10		Day 5 Fed KS 9-17-06 12:35
Na thio	19	15	17	I	12	(8	16	16	10	16	Day 6 Fed KS 14:15 9-18-06
Na thio											Day 7 Fed
Na thio											Day 8 Fed

0=original organism surviving, no young; D=original organism dead; #=# young released; \*=lab-induced mortality. Receiving water is dilution water; Lab water is additional control.

## Documentation of Collection of Ceriodaphnia dubia for Toxicity Testing

Date / Time Init. when cleared of Neonates	Date / Time Init. when neonates collected	No. Cups with 8 or more neonates	Fed YCT / Selenastrum / (Lot #s)
KS 9/11 13:15		A	V 830646 \$290681
KS 9/11 13:30			V
,			
KS 9/11-	→17:05	35	V
KS 9/11	→ 17:10	Z8	1
	•		
	5 00 3 x 5 2 5 x 5 x 1.		
	Init. when cleared of Neonates KS 9/II 13:15 KS 9/II 13:30	Init. when   Init. when   cleared of   neonates   collected	Init. when cleared of Neonates collected neonates $ XS / I  =  XS$

Project Description / Test Use:	
cdcall.dac	

Water Chemistry Data Test Description: C. dubia acute / chronic toxicity \*

Client: CAS / GE PITTSFIELD

SDG: 9843

Test #: 50239

			INITIAL V	INITIAL WATER CHEMIST		RY DATA				FINAL	FINAL WATER CHEMISTRY DATA	HEMISTRY	' DATA		
	Day:	0	<b>***</b> -	2	3	4	5	9	<b></b>	2	3	4	2	9	
Lab	Hd	242	76	9.5	7.7	こ で	94		24	77	7.6	9,6	75	24	
Contr	DO	7-18	<u>~</u>	~ &∂	8.5	8.5	<u> </u>		44	44	7.6	9. 80	76	00	
 	Temp.	24.7	34.8	6.42		25,1	35.3		6.42	247	25.2	15.4	8,4E	h'52	
,	Conduct.	34	734	270	238	21.2	243	```	2F37R	249	442	253	8h8	279	
Rec. W	Hd	74.E	790	0.6	7.8	2.6	44		7-18	8'0	8,0	2.6	34	78	
Contr	00	39	80	6.5	0.0	≫; 7*	0×0		45	H6	t. <del>+</del>	6.6	74	0,0	
<u>.</u>	Temp.	24.5	34.0	3	- 52	35° 3°	25,2		24.5	24.5	25.0	55.4	248	25.1	
Water)	Conduct.	28	278	293	292	248	6hE		320	93E	360	243	260	259	
6.25%	H	7	[+]  -		2.9	2	746		8.0	2,0	8,0	6.6	78	54	
	DO	8	) Š		59.90	≫. 1.	8.0		75	24	46	\$. \$.	43	6.0	
	Temp.	24.6	0,748		25.0	15.4	25.52		74.7	24.7	25.0	6.52	548	75,2	
	Conduct.	336	335	353	358	2002	100		373	346	360	250	898	258	
12.5%	Hd	749	748	1.6	7.9	56	-3E		8.0	-38	<i>o</i> .⊗	Ø. ⊙.	748	545	
	DO	8.	8 U	8.6°	0-6	h.8	8,0		450	76	7.6	28/	23	S S	
	Temp.	74.4	34,6	0.22	25·c	h.52	5.52		8/18	8,75	25.	25.4	25.0	2,52	
	Conduct.	389	380	113	417	270	40		430	400	7.17	6/7	277	2000	fot
25%	Hd	79	24	1.00	1.9	1.5	-3E		- 8	8,2	8,1	ōò	748	49	
4	DO	8.2	8.5	9.8	9.0	<i>h</i> :8	0'8		75	24	7.6	8.7	73	S	
1	Temp.	5 N.C	34.c	249	24.9	J. 72	25,3		8.hC	1249	25.2	25.3	25.0	25.3	
	Conduct.	190	767	530	533	288	288		53/	965	533	534	298	Sych Color	££1
20%	Hd	79	J. 38	9.6	8.0	5.6	94		8	83	72'8	2.8	8£	54	
·	OO	80	<u>۶</u> ۲	9.8	8.8	h8	<i>b</i> Ł		75	94	4.6	80	43	9,9	
	Temp.	h'hZ	0760	5.62	O :S7	25.3	25,0		349	8'hZ	1.52	2.52	25.0	25.3	
	Conduct.	694	663	NoH	764	323	325		724	hb9	760	196	334	HEES	96
75%	Hd	79	8.0	1.0	8.0	1.7,4	1 35		8.3	8.4	4'8	8.3	248	139	
	00	2.8	Ь' <u>%</u>	8.5	0.6	8.5	<u> 4</u>		35	36	46	28	44	6.6	
	Temp.	24,2	વવા	24.8	24.9	25.1	24.9		24.9	25.0	25.1	2.52	25.0	25.4	
	Conduct.	105/8/31	1894	686	990	300	359		968	168	8±6	826	1374	535C	22
100%	Hd	49	8.0	9.6	8.0	7.3	35		8.3	h'8	8,4	8.3	34	<i>5</i> 4	
	DO	8.3	8,3	8.5	9.0	<i>3</i> ).8	54		75 2	36	7.6	9.0	7.4	0.0	
	Temp.	24,5	34.6	8.42	25.2	35.3	24.7		15.0	75.0	25.2	1·52	25.1	25.4	
	Conduct.	1096	1093	1215	1212	39.7	396		1069	1085	1185	1/80	427	132524	aS
	Sample#	33329	33329	3336de	333/ale	33399	35399	33399	ij	1	+	-	1	1	;
2006	Init./Date	Z1/65X	189113	KK 9/14	0 1/15	24 9/16	£3/1/5		KS 9/13	1459/14	1989-15	זנג שאנה	KS9/17	KS 9//8	·
Aquatec t	Aquatec Biological Sciences Williston, Vermont	nces Willis	ton, Vermo	int		D20 60		declaringon	י פפרטשל	\$ 0 \$	ハウスア	200	B		

Color Color

Reviewed by:

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lient: C	Client: CAS / GE PITTSFIELD	SFIELD	Test	Test Description: C. dubia	on: C. dub	ia acute / (	acute / chronic toxicity '	cicity *		Tes	Test#: 50239	6		SDG: 9843	843	
			INITIAL	INITIAL WATER CHEMISTRY DATA	HEMISTRY	DATA					FINAL	FINAL WATER CHEMISTRY DATA	HEMISTR	Y DATA		
	Day:	0	<b>*</b>	2	3	4	5	9	<u> </u>	<b></b>	2	3	4	r,	9	7
Na thio	Hd	0'8	0.2 0.8	8.0	7.9	0.0	34			749	44	4,80	2.0	35	44	
Control	00	200	<u>1</u>	8,0	8.3	8.1	77			174	75	7.6	6.6	73	たる	
MAC	Temp.	22.2 24.1	24"[	24.3	24.5	8.162	J.P.C			24.5	5'h2	25.1	H92	24,6	25.5	
	Conduct.	1324	3 14	324	325	238	अना		7. T.	光光	349	878	828	252	348	
206	からら Init/Date   KS 9/12   KS 9/13   W 9/W   08/5	KS 9/12	KS 9/17	14.7 9/W	2/60	VX 9/160	£1/681	7	<u>×</u>	81/65	11/65X	OJ ST B	11/6 11	710 3/ 1/6 /1 ST ST 0 11/05/ 18/1657	01/657	

Aquatec Biological Sciences Williston, Vermont

Reviewed by: \_\_

\_ Date: \_\_\_

42

# Alkalinity and Hardness Worksheet

		- V 104.							
	Hardness		290.0	108.0	324.0	0.4.0	112.0	100.0	88.0
	Analysis Date		9/12/06	9/12/06	9/14/08		00/4	9/15/06	9/15/06
Hardness	Analyst	(	X N	Ϋ́S	ž	<u> </u>	£ :	λ	Νſ
Harc	Final Titrant (ml)	L	υ, <del>- 1</del>	46.9	26.2	χ. α	) (	45,2	11.8
	Initial Titrant (ml)	7.0	77	41.5	10	26.2	1 1	1.74	9.6
	Sample Volume	, u	3	20	20	20	3 6	C7	25
	Alkalinity	268.0	) (	100.0	288.0	96.0	. V	2.	84.0
	Analysis Date	9/13/06		8/13/00	9/14/06	9/14/06	9/17/08		9/17/06
Alkalinity	Analyst	축	<u> </u>	2	춪	춪	X.	2	ΚS
Alka	Final Titrant (ml)	35.8	0.00	0.00	11.3	13.7	<del>ζ</del>		20.1
	Initial Titrant (ml)	29.1	α Υ	9	4.1	11.3	15.9		<del>~</del>
	Sample Volume	25	ر م	3	22	25	25	ļ	25
	Sampling Date	9/12/06	9/12/06		9/14/06	9/14/06	9/15/06	1	9/15/06
	Sub ID Code								
	Sample LIMS Identifier Identifier	Outfall Composite	Housatonic River	11	Arssac	Housatonic River	Outfall Composite	A south	Todasatoliic Sival A
	Sample Identifier	33329	33330	00000	23300	33367	33339	33400	

30/12/65

Aquatec Biological Sciences, Inc. 273 Commerce Street Williston, VT 05495 (802) 860-1638

Total Residual Chlorine Analysis

Total Residual Omornio / maryore	
Client	SDG
GE Pittsfield, MA	9843

Sample #	Sample ID	Collection Date / Time	Analysis Date / Time / Analyst	Result (TRC mg/L)	Method
33327	Outfall Composite A7556C	9/11/06, 11:00	9/12/06, 12:02 JWW	<0.1	DPD Colorimetric
33328	Housatonic River A7555R	9/11/06, 08:15	9/12/06, 12:02 JWW	<0.1.	DPD - Colorimetric

#### **Sample Preparation**

Client: CAS / GE PITTSFIELD Test #: 50239 (C. dubia) SDG: 9843
Test Description: Ceriodaphnia dubia acute / chronic toxicity tests

#### Sample Identification:

Sample Description	Effluent	Receiving Water	Effluent	Receiving Water	Effluent	Receiving Water
Sample #	33329	33330	33366		33399	33400

#### Sample Preparation:

Filtration	60 micron	60 mieron	60 micron	60 mieron	60 micron	60 micron
Chlorine 1	nd	nd	ND	ND	ND	MD
Dechlorine <sup>2</sup>	No	No	No	No	No	No
Prepared by (Init./date)	9-12-06		9-14-06		b	9/15/06

<sup>&</sup>lt;sup>1</sup> Record vol. 0.025 N sodium thiosulfate to dechorinate 100 mL sample or record "ND" (not detected).

Daily Dilution Plan for: Ceriodaphnia dubia chronic toxicity test

Concentration (%)	Volume Effluent (mL)	Volume Diluent (mL)	Total Volume (mL)
Lab Water	0	300	300
(Additional Control)  Na thiosulfate control	0	300	300
Receiving water			
(Dilution Water)	0	300	300
6.25	18.8	281.2	300
12.5	37.5	262.5	300
25	75	225	300
50	150	150	300
75	225	75	300
100	300	0	300
Total Volume	806.3	1893.7	

#### Comments:

Collect alkalinity and hardness samples on each new effluent and receiving water sample.

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Reviewed by:		Date:	9/28/26	 =

<sup>&</sup>lt;sup>2</sup> Dechlorination not required per instructions from client.

NPDES Permit No. MA0003891 SDG: 9843 September 25, 2006

# Appendix 5 Standard Reference Toxicant test Control Chart

Ceriodaphnia dubia Reference Control Chart for NaCl Acute Toxicity

Mean	IC-25	3 17	27	100	, v	- 00	3 00	2 6	1 0	> 00	2 10	000	98.0	38	14	. 4 60	142	141	. 17	42	J
Ž	2	С	• •		0 0	2 0	) C	) C	· C		) C	· C	) C	· C	C	0		· C	o C	· C	,
IC-25	(a/L)	0.171	0.375	0.49	0.192	0.178	0.25	0.587	0.837	0.305	0.352	0.573	0 333	0.339	0.78	0.693	0.313	0.155	0.488	0.579	į
Test	Date	02/03/05	03/02/05	04/01/05	05/03/05	06/02/05	07/05/05	08/02/05	90/90/60	10/07/05	11/08/05	12/06/05	01/03/06	02/02/06	03/02/06	04/18/06	05/02/06	06/13/06	07/25/06	08/14/06	;
Test	Number	1	7	co	4	· ro	φ	۲.	ω	თ	10	· ·	12	13	4	15	16	7	6	<u>⇔</u>	
			Sciences	Sciences	Sciences	Sciences	Sciences	Sciences	Sciences	Sciences	Sciences	Sciences	Sciences	Sciences	Sciences	Sciences	Sciences	Sciences	Sciences	Sciences	
Organism	Source		Aquatec Biological Sciences	Aquatec Biological Sciences	Aquatec Biological Sciences	Aquatec Biological Sciences	Aquatec Biological Science	Aquatec Biological Science	Aquatec Biological Sciences	Aquatec Biological Science	Aquatec Biological Sciences	Aquatec Biological Sciences	Aquatec Biological Science	Aquatec Biological Science	Aquatec Biological Science	Aquatec Biological Sciences	Aquatec Biological Sciences	Aquatec Biological Sciences	Aquatec Biological Sciences	Aquatec Biological Sciences	
limits	Lower		1.25	1,44	1.58	1.60	1.65	1.45	1.51	1.54	1.59	1.52	1.56	1.39	1.40	1.43	1.30	1.28	3	1 34	
Calculated limits	Upper		2.79	2.84	2.82	2.72	2.76	2.80	2.82	2.86	2.87	2.85	2.84	. 2.89	2.95	2.96	2.99	2.96	2.97	2.96	
Mean	LC50	1.74	2.02	2.14	2.20	2.16	2.21	2.13	2.16	2.20	2.23	2.19	2.20	2.14	2.18	2.19	2.14	2.12	2.14	2.15	
LC50	(g/L)	1.744	2.289	2.395	2.375	2.000	2.450	1.625	2.422	2.522	2.450	1.782	2.328	1.414	2.672	2,450	1,361	1.782	2.450	2.395	•
Test	Date	02/03/05	3/2/2005	4/1/2005	5/3/2005	6/2/2005	7/5/2005	8/2/2005	9/6/2005	10/7/2005	11/8/2005	12/6/2005	1/3/2006	2/2/2006	3/2/2006	4/18/2006	5/2/2006	6/13/2006	7/25/2006	8/14/2006	0000000
est	Number	τ-	ς,	62	4	иD	9	7	00	ത	<u></u>	έ Έ	12	<del>رن</del> دن	4	ب ا	16	17	<del>ب</del> ش	<u>Ф</u>	ć

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0.56 0.67 0.61 0.57

Organism Source

Calculated limits

Ceriodaphnia dubía Reference Control Chart for NaCl Chronic Toxicity

Upper

Aquatec Biological Sciences Aquatec Biological Sciences Aquatec Biological Sciences

-0.01 -0.02 -0.01 -0.09 -0.05

0.54 0.65 0.86

0.83

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0.00

0.84 0.87 0.85 0.83 0.83 0.83

Aquatec Biological Sciences Aquatec Biological Sciences

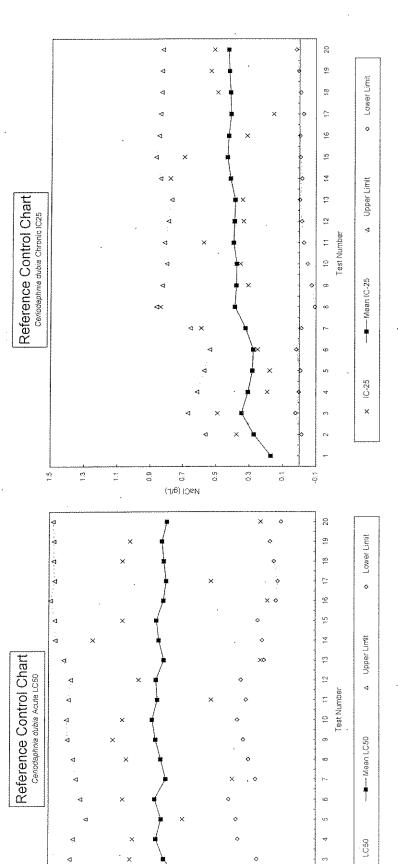
0.03 0.00 0.00 -0.02

0.77 0.81

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-0.03 -0.01 0.00 0.02

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\qaqc\srts\Cd acute chronic SRT

N

1.000

2.750

2.500

2.250

2.000

NaCl (g/L)

1,750

1.500

1.250

3.000

NPDES Permit No. MA0003891 SDG: 9843 September 25, 2006

# Appendix 6 SOP TOX2-002, Standard Operating Procedure for Cladoceran, *Ceriodaphnia dubia*, Survival and Reproduction Toxicity Test

## Standard Operating Procedure for Cladoceran, Ceriodaphnia dubia Survival and Reproduction Toxicity Test U.S. EPA Method 1002.0 (NELAC ACCREDITED METHOD)

#### 1.0 IDENTIFICATION OF TEST METHOD

This SOP describes procedures for conducting a chronic toxicity test with the cladoceran, *Ceriodaphnia dubia*. This test is used to estimate the chronic toxicity of whole effluents or other aqueous samples with this test species.

#### 2.0 APPLICABLE MATRIX OR MATRICES

The described test is used to assess toxicity of wastewaters (effluents, influents), receiving waters, and other prepared aqueous solutions.

#### 3.0 DETECTION LIMIT

Not applicable.

#### 4.0 SCOPE AND APPLICATION

This SOP describes procedures for performing a static-renewal chronic toxicity test with cladoceran, *Ceriodaphnia dubia*.

#### **5.0 SUMMARY OF TEST METHOD**

A summary of the test method is attached (Table 1). Organisms are exposed, for 6 – 8 days, typically to five concentrations of effluent (or aqueous sample) and the controls. Chronic toxicity is estimated by calculating the chronic no-observed-effect-concentration (C-NOEC). The IC25 is an additional chronic value that may be used to estimate chronic toxicity to *Ceriodaphnia dubia*. This procedure is based on the guidelines of EPA-821-R-02-013 (Method 1002.0). In some US EPA regions, NPDES permits require calculation of acute values from the 48-h survival data within the chronic test. The A-NOEC and 48-h LC50 are calculated from the 48-h data using TOXIS2.

#### 6.0 DEFINITIONS

<u>LC50</u>: The computed concentration that results in 50 percent mortality of the test organisms (may be computed from 48-h data).

A-NOEC: The acute no-observed-effect-concentration. The highest concentration resulting in no statistically significant reduction in survival or reproduction relative to the control.

<u>C-NOEC</u>: The chronic no-observed-effect-concentration. The highest concentration resulting in no statistically significant reduction in survival relative to the control.

IC25: A value calculated by linear interpolation to provide a point-estimate of effluent (or other aqueous samples) that causes a 25% reduction in reproduction relative to the control. Initial chemistry: Water chemistry parameters (temperature, pH, dissolved oxygen, and conductivity) measured from a sub-sample of all test concentrations and controls before the time of test start and daily before test solution renewals.

<u>Final chemistry</u>: Water chemistry parameters (temperature, pH, dissolved oxygen, and conductivity) measured in all test concentrations and controls daily after test solution renewals (old water from the test cups) and at the end of the test.

#### 7.0 INTERFERENCES

Not applicable.

#### 8.0 SAFETY

Samples acquired for toxicity testing may contain unknown toxicants or health hazards. Protective equipment (e.g., lab coats, disposable gloves) should be worn when handling samples.

#### 9.0 EQUIPMENT AND SUPPLIES

Calibrated Instrumentation and Water Quality Apparatus:

Aquatec Biological Sciences, Inc. TOX2-002 Cd chronic R4 050406

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pH meter

Dissolved Oxygen (DO) meter

Thermometer (accurate to 0.1°C)

Conductivity meter

Alkalinity titration apparatus

Hardness titration apparatus

Additional Equipment:

Test chambers (30-ml disposable cups), color coded

Test board with randomized scheme, glass cover

Light table

Waste collection bucket

Forms and Paperwork:

Survival and reproduction data form Initial and final chemistry data form Alkalinity and hardness data form

#### **10.0 REAGENTS AND STANDARDS**

Laboratory reconstituted water (soft water, moderately hard water) or culture water Deionized water

Reference toxicant solutions

#### 11.0 SAMPLE COLLECTION, PRESERVATION, SHIPMENT, AND STORAGE

Samples for chronic toxicity tests are typically collected, cold-preserved, and shipped to Aquatec. Sample acceptance and log-in procedures are outlined in SOP TOX1-017. After receipt at Aquatec, samples should be refrigerated when not being prepared for use in toxicity tests. The holding time for effluent samples is 36 hours from the time of collection until the time of first use. Typically a series of three samples (effluent and receiving water) are shipped and received for testing. The first samples are used for Days 0 (test start) and renewal on Day 1; the second samples are used for renewal on Days 2 and 3; the third samples are used for renewal on Days 4, 5, and 6 (and 7 and 8, if required).

#### 12.0 QUALITY CONTROL

For the test to be acceptable, survival in the controls must equal or exceed 80 percent. Also, the control females must have produced an average of 15 or more young per female and at least 60% of the surviving females in the controls must have produced a third brood. Also, the test conditions must be within the guidelines described in the protocol (Table 1).

Standard reference toxicant (SRT) tests (monthly 48-h acute tests with sodium chloride as the toxicant and quarterly chronic SRT tests with sodium chloride as the toxicant) are performed with a representative sub-set of the test organisms and result in an LC50 (for acute SRTs) or IC25 (for chronic SRTs) within the boundaries of the control chart. Deviations from acceptance standards should be documented and may result in the test being viewed as "conditionally acceptable" or "unacceptable" (See Section 19.0 below).

#### 13.0 CALIBRATION AND STANDARDIZATION

Not applicable for the toxicity test. Any instrumentation (e.g., water quality instrumentation) required for conducting the test must be calibrated on a daily basis following the relevant SOP or instrument guidelines.

#### 14.0 PROCEDURE

#### 14.1 Test System and Conditions

The test system and environmental conditions for the chronic toxicity test are summarized in Table 1.

#### 14.2 Test Organisms

#### **Procurement and Documentation**

Test organisms for the *Ceriodaphnia* chronic test are obtained from Aquatec Biological Sciences, Inc. laboratory cultures. Neonates less than 24-h old and all collected within an 8-h period are used for testing. Documentation of brood board source and date and time must be included in the project data package. *Ceriodaphnia dubia* are cultured in individual culture cups (one organism per cup) maintained at  $25 \pm 1^{\circ}$ C. Neonates collected for testing may be held in individual culture cups until distributed to tests.

#### Evaluation of Ceriodaphnia Condition and Acclimation

If, during examination, it appears that more than 10 percent of the parent females or the neonates collected for the test have died during the 24-h period preceding the test, notify the Toxicity Laboratory Manager immediately. A decision will be made regarding the possibility of collecting an alternate stock of neonates for testing. If the test is to be delayed, document the reason on the Project Documentation form. Also, it may be necessary to notify the client.

**NOTE**: Brood boards for a test are started 7-10 days prior to the test. These brood boards must be carefully monitored for general health and reproductive condition. Documented tracking of parent organisms for survival and reproduction must be performed daily prior to collecting neonates for a chronic toxicity test. Any problems with brood board *Ceriodaphnia dubia* stocks should be reported to the Laboratory Manager immediately.

Ordinarily, *C. dubia* neonates are cultured in laboratory water (1:1 mix of Lamoille River water and moderately hard water amended with selenium and vitamin B12) up until the time of test initiation. The temperature of the parent and neonate stocks should be maintained at  $25 \pm 1^{\circ}$ C. Return parent stock females from the neonate cups to the source batch culture.

If acclimation to a client's receiving water is required, gradual water changes should be made (eg., 25%-50% hourly) to the test organisms to receiving water.

#### Food

At the time of neonate collection, or on the morning of a scheduled test, feed neonates in each cup 0.1 ml *Selenastrum* and 0.1 ml yeast-Cerophyll-trout chow (YCT).

#### Sample Preparation

Procedures for effluent and diluent sample preparation are described in a SOP TOX1-013. The typical dilution factors are 0.5, however, consult applicable client permits for the appropriate dilution factor and included permit-limit concentrations when required.

#### 14.3 Initiate the Test

#### Prepare the test chambers

For a test where receiving water is used as the diluent, an additional laboratory control (e.g., soft water, moderately hard water, or culture water) must be included in the test array. New 30-mL disposable plastic condiment cups are used as test chambers. Each test treatment will have ten true replicates (no water connection), therefore, 70 test cups will be required. Test cups should be color coded with stick-on dots as follows:

Color Code	Test Treatment
Green	Laboratory Control
Dark Blue	Receiving water Control
Light Blue	Lowest test concentration
Orange	Next lowest test concentration
Yellow	Middle test concentration
Red	Next highest test concentration
Star	Highest test concentration

Typically the receiving water is the dilution water and statistical control for a toxicity test, however, there are cases where a client's permit requires that laboratory water be used as dilution water (and statistical control) and the receiving water is used as an additional (non-statistical) control.

#### Measure Initial Chemistries

Remove an aliquot (approximately 100 ml) from each test dilution and the controls. This aliquot is used to measure the following parameters: pH, DO, temperature, and conductivity. Record the data directly on the Toxicity Test Data Form for Day 0. The temperature of the solutions must be within a range of  $\pm$  1°C of the selected test temperature (25°C).

#### Recommended water chemistry ranges at time of test initiation

If solutions are not within the ranges specified below, notify the Toxicity Laboratory Director.

pH - acceptable range, 6.0-9.0

DO - acceptable range, 4.0 - 8.5 mg/L

Temperature - acceptable range, 24-26°C

Conductivity - often has a pattern of increasing conductance with increasing sample strength.

Collect a sub-sample of each new sample of the controls and 100% effluent for subsequent analysis of hardness and alkalinity. Label and store in a refrigerator at 4°C.

If prepared solutions are to be stored temporarily prior to starting the test, store the test solutions at the target test temperature (24-26°C).

Decant test solutions to the appropriate test cups, approximately 20 mL per cup. Place the test cups in randomized positions on the test board.

#### Prepare and distribute test organisms

Select approximately 20 brood cups (containing neonates collected for the test), each with 8 or more neonates. Pool neonates in a crystallizing dish prior to distribution to the test. Randomly distribute neonates to test containers (5 per test container) with a transfer pipet.

#### Distribution of test organisms and test initiation

Neonates are distributed to the test board following the blocking procedure outlined in EPA-600-4-91/002. This blocking procedure allows the performance of each parent female to be tracked. If a particular female produces one weak offspring or male for use in the test, the likelihood of producing all weak offspring or all males is greater. By using the known parentage technique, poor performance of young from a given female can be omitted from all concentrations. The procedure is as follows:

 Select 10 brood cups (containing neonates collected for the test), each with 8 or more neonates. From a single cup, distribute (with a transfer pipet) one neonate to the

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laboratory control cup, then one to the diluent control, one to the low test concentration, etc., working from low to high test concentration in test column 1.

- Rinse the pipet with deionized water.
- Select a second neonate up and distribute neonates to column 2 in the same manner as in Step a.
- Continue distributing neonates from a single neonate cup the the remaining test columns as in Step a. until all test chambers contain a single neonate.
- Record the date and time of test initiation on the Ceriodaphnia Survival and Reproduction Data form.

#### Aeration

Do not aerate Ceriodaphnia dubia chronic tests.

#### Feed the test organisms

Add 0.1 mL of Selenastrum and 0.1 mL of YCT solution to each test cup. Record the feeding time on the Survival and Reproduction Data form.

#### 14.4 Monitoring the test

#### **Daily Monitoring and Test Solution Renewal**

The procedures described below pertain to Days 1-8 of the test (The test starts Day 0).

#### Sample preparation

Generally, samples collected on three separate occasions are used for the chronic test (e.g., samples are delivered on Day 0, Day 2 and Day 4). Samples are prepared according to the procedures outlined in SOP TOX1-013. Use the most recently collected samples (effluent and dilution water) for the renewal procedure. The initial chemistry parameters of temperature, pH, dissolved oxygen, and conductivity should be measured daily and recorded on each test concentration prior to completing the test solution renewal.

#### Test solution renewal and biological monitoring

Test solutions in each test cup are renewed daily. During the renewal procedure, take care to avoid injuring neonates. The controls should be renewed first, then the low concentrations and then the higher test concentrations. This procedure will minimize the potential for back-contamination of a lower test concentration with a higher test concentration. Conduct the renewal procedure over a light table.

- Remove the test board from the test rack and remove the glass cover.
   Measure the temperature of one replicate of each test treatment
   Record the data on the Final Chemistry Data form.
- Fill ten new cups coded for laboratory control with approximately 15-20 mL of laboratory control water. Remove laboratory control Replicate 1 test cup from the test board.
- If the parent organism in this replicate is alive, transfer the organism with a large-bore pipet to the new test cup containing new control solution. Record a zero (if no neonates are present) in the data box for Laboratory Control, Replicate 1.
- If the organism is dead, record a "D" in the data box for this replicate. (It is helpful at this point to record "D" in the box for this replicate for subsequent test days to prevent that data box from being used in the future.)
- Examine the original test cup carefully to see whether any neonates were released by the parent organism in the prior 24-hour period. (Neonate production does not normally start until Day 3 or Day 4 of the test.) If live neonates are present in the cup, the exact neonate count must be

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recorded in the data box for the replicate. If the parent organism has died record: D / # of neonates released. If a parent organism is accidentally injured and dies, designate as "\*" and footnote the occurrence of the accidental mortality. This organism will be deleted from the data analysis. Place marble to fill any location that is empty due to mortality. If the parent organism is missing, it should be scored as "D" (unless a known and documented laboratory error resulted in the loss of the organism.

 Continue the procedure outlined above for Control Replicates 2-10. Pool the "old test water" from the old test cups into a beaker or cup.
 This must be saved for final chemistry analysis.

The decanted water ("old water") from the ten replicates must be pooled and saved for final chemistry determinations. Continue renewals for all test solutions working from low to high test concentrations.

When renewals have been completed, record your initials, date, and time of renewal in the remarks section of the Survival and Reproduction Data form. Also, indicate the sample number used for renewal. Replace all test cups in the assigned position on the test board.

#### **Final Chemistry**

Measure the pH, D.O., and conductivity (Temperature has already been measured in "a." above.) of the pooled water sample decanted from the ten replicates for each test treatment. It is preferable to do this immediately after completing the renewal to obtain an accurate representation of the test conditions. Discard the solution in the appropriate waste receptacle.

#### Feeding

As soon as the renewal procedure has been completed, add 0.1 ml of *Selenastrum* and 0.1 ml of YCT to each test cup. Record the time fed in the Remarks section of the Survival and Reproduction Data form. Replace the glass cover on the test board and return the test board to the testing area.

#### 14.5 Termination of the Toxicity Test

The Ceriodaphnia dubia chronic test may be ended on Day 6, 7, or 8. The test should be ended when 60% or more of the surviving females in the controls have produced their third brood and have released an average of at least 15 neonates per female during the test. If this requirement has not been reached on Day 8, the final test data (survival and reproduction) should be recorded and the test should be ended.

#### Final Biological Monitoring (Survival and Reproduction)

- Measure and record temperatures from the test.
- For each replicate, determine whether the parent female is alive or dead and record
  the results in the appropriate data box of the Survival and Reproduction Data form.
  Also, count the number of neonates released by the parent female in the prior 24
  hours and record the data in the appropriate box.

Because of the rapid rate of development of *Ceriodaphnia*, all observations of organism survival and neonate production should be completed within two hours. Record the time of test completion in remarks section.

#### Final Chemistry (end of test)

Combine the test solution from each replicate of a test treatment. Measure and record the final chemistry parameters (pH, DO, and conductivity) as specified above.

#### 15.0 CALCULATIONS

The C-NOEC is calculated using the TOXIS2 software program. The IC25 can also be computed automatically using the TOXIS2 program. Enter the test data into the TOXIS2 template prepared for each client. The dilution water control should be entered as the "D" control and is used for statistical comparisons. The additional control is entered as the "B" control. Run the statistical program for the EPA chronic Toxicity Test flow chart (Figures 4 and 6, pages 168 and 173 of EPA-821-02-013) and print the entered test data and the statistical results. Check the entered data against the original hand-written test data and record the date and initials. Place the statistical printouts in the project folder (by SDG) and return the folder with all paperwork to the project holding file.

#### **16.0 METHOD PERFORMANCE**

Test conditions should be at or near the limits outlined in the Protocol (Table 1).

#### 17.0 POLLUTION PREVENTION

Effluents and receiving waters used in toxicity tests are stored refrigerated until the test data have been reviewed and deemed acceptable by the Laboratory Manager or the Director. Contact the Laboratory Manager or Director prior to discarding any stored samples. Effluent and receiving water samples may be discarded following a period of chlorination (e.g., 30 minutes). Effluent samples that have exhibited high toxicity in low test concentrations should be discarded in the "Aqueous Waste" drum for disposal by a certified waste handler. Other samples containing unknown or suspected toxic contaminants should be discarded in the "Aqueous Waste" drum.

### 18.0 DATA ASSESSMENT AND ACCEPTANCE CRITERIA FOR QUALITY CONTROL MEASURES

The Laboratory Manager and/or the Laboratory Director will review test data to ensure that all elements of the data package are available and complete (Log-in work sheets, test IDs, Chain-of-Custody documentation, toxicity test bench sheets, organism records, and SRT data). The reviewer will check to package for transcription errors, clarity of observations and notations, initials, and completeness. The reviewer will also compare the test data to the Quality Control standards outlined in Section 12.0 above. Any deficiencies will be addressed and resolved (with appropriate notation) prior to assembling the package for the final report.

#### 19.0 CORRECTIVE ACTIONS FOR OUT-OF-CONTROL DATA

Data that do not meet Quality Control standards will be assessed and a decision will be made whether to reject the test data and deemed "unacceptable" (requiring a repeated test) or "provisionally acceptable" (requiring a qualifier in the final report). An example of and unacceptable test could include one where the controls fail to meet the 80% survival requirement. A designation of a "provisionally acceptable" test might include one where samples were received outside of prescribed holding temperatures or times.

#### 20.0 CONTINGENCIES FOR HANDLING OUT-OF-CONTROL OR UNACCEPTABLE DATA

Analysts experiencing and "out-of-control" event (e.g., test replicate spills, test solutions improperly prepared, test temperatures out of target range, etc.) should note the event on the bench sheet and also notify the Laboratory Manager or Laboratory Director. A decision will be made by the Laboratory Manager or Laboratory Director as to whether to continue the test (with the appropriate qualifier) or whether to terminate the test. If the test is terminated, the client should be notified so that re-sampling and re-testing can be scheduled as soon as possible.

#### 21.0 WASTE MANAGEMENT

See 17.0 above.

#### 22.0 REFERENCES

The test procedure is based upon the guidelines outlined in EPA-821-R-02-013, Short-term Methods for Measuring the Chronic Toxicity of Effluents and Receiving Water to Freshwater

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*Organisms* (4<sup>rd</sup> Ed.). Regional guidelines may require in slight modifications of the test protocol (e.g., solution renewals, test duration, target test temperature).

#### 23.0 TABLES, DIAGRAMS, FLOW CHARTS, AND VALIDATION DATA

Refer to Table 3 (pp. 164 of EPA-821-R-02-013) and the EPA Statistical Flow Chart (Figure 4 page 168 of EPA-821-R-02-013 and related discussions within that document.

#### 24.0 TRAINING

Laboratory analysts performing this procedure must receive instruction from a previously trained analyst. Individual parts of the overall procedure may be performed under the guidance of a previously-trained analyst.

To be qualified for the overall procedure outlined in this SOP, the analyst must:

Read this SOP.

Receive verbal and visual instruction.

Achieve a daily neonate count that agrees (± 5%) with the count of an experienced analyst.

Be trained on pertinent associated SOPs.

Table 1. Test Protocol for Ceriodaphnia dubia survival and reproduction test ASSOCIATED PROTOCOL: EPA 2002. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. (EPA-821-R-02-013), Method 1002.0

Method 1002.0	
1. Test type:	Static, daily renewal
2. Test temperature:	25 <u>+</u> 1°C
3. Light quality:	Ambient laboratory illumination
4. Photoperiod:	16 hr. light, 8 hr. dark
5. Test chamber size:	30 ml
6. Test solution volume:	15 - 25 ml / replicate
7. Renewal of test concentrations:	Daily using most recent samples collected
8. Age of test organisms:	Less than 24 h (released within 8-h period)
9. No. organisms / test chamber:	1
10. No. of replicate chambers / concentration:	10
11. No. of organisms / concentration:	10
12. Feeding regime:	Feed 0.1 ml of YTC and algal suspension daily
13. Cleaning:	None, new color-coded cups daily with renewal
14. Aeration:	None
15. Dilution water:	Receiving water or laboratory water
16. Test concentrations:	6.25, 12.5, 25, 50, 100% (unless specified otherwise by permit)
17. Laboratory control:	Reconstituted water (soft, or moderately hard) or culture water
18. Test duration:	6 – 8 days
19. Monitoring:	Daily: temperature, DO, pH, and conductivity before and after renewal. Hardness, alkalinity on each new sample. Biological monitoring (survival and neonate counts) daily
19. End points:	Survival and reproduction
20. Reference toxicant test:	Sodium chloride 48-h LC50 and IC25
21. Test acceptability (Control performance):	80% or greater survival and an average of 15 neonates per surviving female. 60% of the control organisms must have produced three broods.
22. Data interpretation:	C-NOEC and IC25 (if client or permit requires) using Toxis2 statistical software.

#### **DOCUMENT SIGNATURE PAGE**

DOCUMENT NAME: SOP TOX2-002 Ceriodaphnia dubia chronic Revision 4

	I have read and I understand and I agree, to the best of my ability, to follow the procedures outlined in this SOP		
Printed Name	Signature	Initials	Date
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		NATION AND ADDRESS OF THE PARTY	
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#### APPENDIX 2

#### **Laboratory Reports**

Columbia Analytical Services, Inc. O'Brien & Gere, Inc.

Reported: 09/21/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06

Client Sample ID : A7556C

Sample Matrix: WATER

Date Sampled: 09/11/06 11:00 Order #: 927720 Submission #: R263306 Submission #: R2633066

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA	350.1	0.0500	0.686	MG/L	09/19/06	10:58	1.0
CHLORIDE	300.0	0.200	162	MG/L	09/15/06	19:18	40.0
TOTAL ALKALINITY	310.1	2.00	279	MG/L	09/18/06	09:30	1.0
TOTAL ORGANIC CARBON	9060	1.00	7.67	MG/L	09/18/06	19:55	1.0
TOTAL PHOSPHORUS	365.1	0.0500	0.105	MG/L	09/19/06	13:33	1.0
TOTAL PHOSPHORUS	160.3	10.0	583	MG/L	09/18/06	15:30	1.0
TOTAL SUSPENDED SOLIDS	160.2	1.00	1.70	MG/L	09/14/06	17:00	1.0

Reported: 09/21/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID : A7556CCN

Date Sampled: 09/11/06 11:00 Order #: 927725
Date Received: 09/12/06 Submission #: R2633066 Sample Matrix: WATER

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL CYANIDE	335.4	0.0100	0.0191	MG/L	09/19/06	10:32	1.0

Reported: 09/21/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID : A7556CTM

Sample Matrix: WATER Order #: 927722

Date Sampled : 09/11/06 11:00 Date Received: 09/12/06 Submission #: R2633066

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ALUMINUM	200.7	0.100	0.100 U	MG/L	09/15/06	1.0
CADMIUM		0.00500	0.00500 U	MG/L	09/15/06	1.0
CALCIUM	200.7	1.00	66.9	MG/L	09/15/06	1.0
CHROMIUM	200.7	0.0100	0.0100 U	MG/L	09/15/06	1.0
COPPER	200.7	0.0200	0.0200 U	MG/L	09/15/06	1.0
LEAD		0.00500	0.00500 U	MG/L	09/15/06	1.0
MAGNESIUM	200.7	1.00	29.4	MG/L	09/15/06	1.0
	200.7	0.0400	0.0400 U	MG/L	09/15/06	1.0
NICKEL	200.7	0.0100	0.0100 U	MG/L	09/15/06	1.0
SILVER ZINC	200.7	0.0200	0.0200 U	MG/L	09/15/06	1.0

Reported: 09/21/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID : A7556CDM

Date Sampled: 09/11/06 11:00 Order #: 927721
Date Received: 09/12/06 Submission #: R2633066 Sample Matrix: WATER

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ALUMINUM	200.7	0.100	0.100 U	MG/L	09/15/06	1.0
CADMIUM	200.7	0.00500	0.00500 U	MG/L	09/15/06	1.0
CHROMIUM	200.7	0.0100	0.0100 U	MG/L	09/15/06	1.0
COPPER	200.7	0.0200	0.0200 U	MG/L	09/15/06	1.0
LEAD	200.7	0.00500	0.00500 U	MG/L	09/15/06	1.0
NICKEL	200.7	0.0400	0.0400 U	MG/L	09/15/06	1.0
SILVER	200.7	0.0100	0.0100 U	MG/L	09/15/06	1.0
ZINC	200.7	0.0200	0.0294	MG/L	09/15/06	1.0

Reported: 09/21/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID: A7555R

Sample Matrix: WATER

Date Sampled: 09/11/06 08:15 Order #: 927719
Date Received: 09/12/06 Submission #: R2633066

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA	350.1	0.0500	0.0500 U	MG/L	09/19/06	10:58	1.0
CHLORIDE	300.0	0.200	18.3	MG/L	09/15/06	11:40	10.0
TOTAL ALKALINITY	310.1	2.00	104	MG/L	09/18/06	09:30	1.0
TOTAL ORGANIC CARBON	9060	1.00	5.16	MG/L	09/18/06	19:35	1.0
TOTAL PHOSPHORUS	365.1	0.0500	0.0500 U	MG/L	09/19/06	13:33	1.0
TOTAL SOLIDS	160.3	10.0	147	${ t MG/L}$	09/18/06	15:30	1.0
TOTAL SUSPENDED SOLIDS	160.2	1.00	1.10	MG/L	09/14/06	17:00	1.0

Reported: 09/21/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06

Client Sample ID : A7555RCN

Sample Matrix: WATER

Date Sampled: 09/11/06 08:15 Order #: 927724 Submission #: R2633066

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE TIME ANALYZED ANALYZED DILUTION	
TOTAL CYANIDE	335.4	0.0100	0.0100 U	MG/L	09/19/06 10:32 1.0	

Reported: 09/21/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID : A7555RTM

Sample Matrix: WATER

Date Sampled: 09/11/06 08:15 Order #: 927723
Date Received: 09/12/06 Submission #: R2633066

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ALUMINUM	200.7	0.100	0.100 U	MG/L	09/15/06	1.0
CADMIUM	200.7	0.00500	0.00500 U	MG/L	09/15/06	1.0
CALCIUM	200.7	1.00	24.6	MG/L	09/15/06	1.0
CHROMIUM	200.7	0.0100	0.0100 U	MG/L	09/15/06	1.0
COPPER	200.7	0.0200	0.0200 U	MG/L	09/15/06	1.0
LEAD	200.7	0.00500	0.00500 U	MG/L	09/15/06	1.0
MAGNESIUM	200.7	1.00	9.47	MG/L	09/15/06	1.0
NICKEL	200.7	0.0400	0.0400 U	MG/L	09/15/06	1.0
SILVER	200.7	0.0100	0.0100 U	MG/L	09/15/06	1.0
ZINC	200.7	0.0200	0.0200 U	MG/L	09/15/06	1.0

#### NPDES Sampling GE Pittsfield Toxicity pH

Date: 9/11/06	Split Sample
Acute Dry / Acute Wet _ (Day 1,2 or 3)	AD TOX + C. TOX 1 AD Sept, 2006
Effluent Composite Sample #	
River/Dilution Water Sample #	
Mark Watnewsky	9-11-06

Reported: 09/22/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06

Client Sample ID : A7558C

Order #: 927727 Sample Matrix: WATER

Date Sampled: 09/13/06 11:00 Date Received: 09/14/06 Submission #: R2633067

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA	350.1	0.0500	0.906	MG/L	09/19/06	10:58	1.0
CHLORIDE	300.0	0.200	177	$\mathtt{MG/L}$	09/15/06	21:01	40.0
TOTAL ALKALINITY	310.1	2.00	310	MG/L	09/21/06	09:30	1.0
TOTAL ORGANIC CARBON	9060	1.00	7.76	$\mathtt{MG/L}$	09/18/06	20:33	1.0
TOTAL PHOSPHORUS	365.1	0.0500	0.110	MG/L	09/19/06	13:33	1.0
TOTAL SOLIDS	160.3	10.0	649	${ t MG/L}$	09/18/06	15:30	1.0
TOTAL SUSPENDED SOLIDS	160.2	1.00	1.60	MG/L	09/18/06	16:30	1.0

Reported: 09/22/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID: A7558CCN

Sample Matrix: WATER

Date Sampled: 09/13/06 11:00 Order #: 927732
Date Received: 09/14/06 Submission #: R2633067

					···		
ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL CYANIDE	335.4	0.0100	0.0162	MG/L	09/19/06	10:32	1.0

Reported: 09/22/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID: A7558CTM

Sample Matrix: WATER

Date Sampled: 09/13/06 11:00 Order #: 927729
Date Received: 09/14/06 Submission #: R2633067

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ALUMINUM	200.7	0.100	0.100 U	MG/L	09/19/06	1.0
CADMIUM	200.7	0.00500	0.00500 U	MG/L	09/19/06	1.0
CALCIUM	200.7	1.00	73.5	MG/L	09/19/06	1.0
CHROMIUM	200.7	0.0100	0.0100 U	MG/L	09/19/06	1.0
COPPER	200.7	0.0200	0.0200 U	MG/L	09/19/06	1.0
LEAD	200.7	0.00500	0.00500 U	MG/L	09/19/06	1.0
MAGNESIUM	200.7	1.00	33.4	MG/L	09/19/06	1.0
NICKEL	200.7	0.0400	0.0400 U	MG/L	09/19/06	1.0
SILVER	200.7	0.0100	0.0100 U	MG/L	09/19/06	1.0
ZINC	200.7	0.0200	0.0200 U	MG/L	09/19/06	1.0

Reported: 09/22/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID : A7558CDM

Sample Matrix: WATER

Date Sampled: 09/13/06 11:00 Order #: 927728
Date Received: 09/14/06 Submission #: R2633067

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ALUMINUM	200.7	0.100	0.100 U	MG/L	09/19/06	1.0
CADMIUM	200.7	0.00500	0.00500 U	MG/L	09/19/06	1.0
CHROMIUM	200.7	0.0100	0.0100 U	MG/L	09/19/06	1.0
COPPER	200.7	0.0200	0.0200 U	MG/L	09/19/06	1.0
LEAD	200.7	0.00500	0.00500 U	MG/L	09/19/06	1.0
NICKEL	200.7	0.0400	0.0400 U	MG/L	09/19/06	1.0
SILVER	200.7	0.0100	0.0100 U	MG/L	09/19/06	1.0
ZINC	200.7	0.0200	0.0434	MG/L	09/19/06	1.0

Reported: 09/22/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06

Client Sample ID : A7557R

Sample Matrix: WATER

Date Sampled: 09/13/06 08:15 Order #: 927726
Date Received: 09/14/06 Submission #: R263306 Submission #: R2633067

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA	350.1	0.0500	0.0500 U	MG/L	09/19/06	10:58	1.0
CHLORIDE	300.0	0.200	18.7	MG/L	09/15/06	13:53	10.0
TOTAL ALKALINITY	310.1	2.00	112	MG/L	09/21/06		1.0
TOTAL ORGANIC CARBON	9060	1.00	4.89	MG/L	09/18/06	20:14	1.0
TOTAL PHOSPHORUS	365.1	0.0500	0.0500 U	MG/L	09/19/06	13:33	1.0
TOTAL SOLIDS	160.3	10.0	152	MG/L	09/18/06	15:30	1.0
TOTAL SUSPENDED SOLIDS	160.2	1.00	1.00 U	MG/L	09/18/06	16:30	1.0

Reported: 09/22/06

Sample Matrix: WATER

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06

Client Sample ID : A7557RCN

Date Sampled: 09/13/06 08:15 Order #: 927731

Date Received: 09/14/0	96	Submission	#: R2633067				
ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL CYANIDE	335.4	0.0100	0.0100 U	MG/L	09/19/06	10:32	1.0

Reported: 09/22/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID: A7557RTM

Sample Matrix: WATER

Date Sampled: 09/13/06 08:15 Order #: 927730 Date Received: 09/14/06 Submission #: R2633067

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ALUMINUM	200.7	0.100	0.100 U	MG/L	09/19/06	1.0
CADMIUM	200.7	0.00500	0.00500 U	MG/L	09/19/06	1.0
CALCIUM	200.7	1.00	26.4	MG/L	09/19/06	1.0
THROMIUM	200.7	0.0100	0.0100 U	MG/L	09/19/06	1.0
COPPER	200.7	0.0200	0.0200 U	MG/L	09/19/06	1.0
LEAD	200.7	0.00500	0.00500 U	MG/L	09/19/06	1.0
MAGNESIUM	200.7	1.00	10.6	MG/L	09/19/06	1.0
VICKEL	200.7	0.0400	0.0400 U	MG/L	09/19/06	1.0
SILVER	200.7	0.0100	0.0100 U	MG/L	09/19/06	1.0
ZINC	200.7	0.0200	0.0200 U	MG/L	09/19/06	1.0

#### NPDES Sampling GE Pittsfield Toxicity pH

Date: 9/13/06	
Acute Dry Acute Wet Chronic (Day 1,2 or 3)	
Effluent Composite Sample # A755 6 Date 975 0 6 Time 1/00 AM pH 7,86 su	
River/Dilution Water Sample # _A7557R  Date9-13-06 Time75 AM  pH791su  Manh When May 9-13  Signed & Dated	<u>8-0</u> 6

Reported: 09/26/06

Sample Matrix: WATER

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06

Client Sample ID : A7560C

Date Sampled: 09/15/06 11:00 Order #: 927734
Date Received: 09/16/06 Submission #: R2633068

				****			
ANALYTE	METHOD PQL		RESULT UN		DATE UNITS ANALYZED		DILUTION
AMMONIA	350.1	0.0500	0.348	MG/L	09/19/06	10:58	1.0
CHLORIDE	300.0	0.200	53.0	MG/L	09/20/06	20:26	40.0
TOTAL ALKALINITY	310.1	2.00	89.7	MG/L	09/21/06	09:30	1.0
TOTAL ORGANIC CARBON	9060	1.00	6.22	MG/L	09/19/06	15:15	1.0
TOTAL PHOSPHORUS	365.1	0.0500	0.114	MG/L	09/19/06	13:33	1.0
TOTAL SOLIDS	160.3	10.0	211	MG/L	09/20/06	18:00	1.0
TOTAL SUSPENDED SOLIDS	160.2	1.00	12.1	MG/L	09/20/06	15:15	1.0

Reported: 09/26/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID: A7560CCN

Sample Matrix: WATER

Date Sampled: 09/15/06 11:00 Order #: 927739
Date Received: 09/16/06 Submission #: R2633068

3,100							
ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL CYANIDE	335.4	0.0100	0.0100 Ŭ	MG/L	09/26/06	12:11	1.0

Reported: 09/26/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID: A7560CTM

Sample Matrix: WATER

Date Sampled: 09/15/06 11:00 Order #: 927736
Date Received: 09/16/06 Submission #: R2633068

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ALUMINUM	200.7	0.100	0.530	MG/L	09/19/06	1.0
CADMIUM	200.7	0.00500	0.00500 U	MG/L	09/19/06	1.0
CALCIUM	200.7	1.00	22.4	MG/L	09/19/06	1.0
CHROMIUM	200.7	0.0100	0.0100 U	MG/L	09/19/06	1.0
COPPER	200.7	0.0200	0.0200 U	MG/L	09/19/06	1.0
LEAD	200.7	0.00500	0.0104	MG/L	09/19/06	1.0
MAGNESIUM	200.7	1.00	9.63	MG/L	09/19/06	1.0
NICKEL	200.7	0.0400	0.0400 U	${ m MG/L}$	09/19/06	1.0
SILVER	200.7	0.0100	0.0100 U	MG/L	09/19/06	1.0
ZINC	200.7	0.0200	0.0446	MG/L	09/19/06	1.0

Reported: 09/26/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID : A7560CDM

Sample Matrix: WATER

 Date Sampled : 09/15/06 11:00
 Order #: 927735

 Date Received: 09/16/06
 Submission #: R2633068

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ALUMINUM	200.7	0.100	0.100 U	MG/L	09/19/06	1.0
CADMIUM	200.7	0.00500	0.00500 U	$\mathtt{MG}/\mathtt{L}$	09/19/06	1.0
CHROMIUM	200.7	0.0100	0.0100 U	MG/L	09/19/06	1.0
COPPER	200.7	0.0200	0.0200 U	MG/L	09/19/06	1.0
LEAD	200.7	0.00500	0.00500 U	MG/L	09/19/06	1.0
NICKEL	200.7	0.0400	0.0400 U	MG/L	09/19/06	1.0
SILVER	200.7	0.0100	0.0100 U	MG/L	09/19/06	1.0
ZINC	200.7	0.0200	0.0392	MG/L	09/19/06	1.0

Reported: 09/26/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06 Client Sample ID : A7559R

Sample Matrix: WATER

Date Sampled: 09/15/06 08:15 Order #: 927733
Date Received: 09/16/06 Submission #: R2633068

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
AMMONIA	350.1	0.0500	0.0500 ប	MG/L	09/19/06	10:58	1.0
CHLORIDE	300.0	0.200	19.0	MG/L	09/20/06	20:12	10.0
TOTAL ALKALINITY	310.1	2.00	91.3	MG/L	09/21/06	09:30	1.0
TOTAL ORGANIC CARBON	9060	1.00	5.81	MG/L	09/19/06	14:56	1.0
TOTAL PHOSPHORUS	365.1	0.0500	0.0500 U	MG/L	09/19/06	13:33	1.0
TOTAL SOLIDS	160.3	10.0	146	MG/L	09/20/06	18:00	1.0
TOTAL SUSPENDED SOLIDS	160.2	1.00	5.70	MG/L	09/20/06	15:15	1.0

Reported: 09/26/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06

Client Sample ID : A7559RCN

Date Sampled : Date Received:		Order Submission		927738 R2633068		Sample Matr	cix: WATER	2
ANALYTE	METHOD	PQL		RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
TOTAL CYANIDE	335.4	0.0100	(	).0100 U	MG/L	09/26/06	12:11	1.0

Reported: 09/26/06

General Electric

Project Reference: GE-PITTSFIELD BIOMONITORING - 9/06

Client Sample ID : A7559RTM

Date Sampled: 09/15/06 08:15 Order #: 927737
Date Received: 09/16/06 Submission #: R2633068 Sample Matrix: WATER

	7/10/00	DUDINIBBIO	#: K2633U66			
ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ALUMINUM	200.7	0.100	0.209	MG/L	09/19/06	1.0
CADMIUM	200.7	0.00500	0.00500 U	MG/L	09/19/06	1.0
CALCIUM	200.7	1.00	20.8	MG/L	09/19/06	1.0
CHROMIUM	200.7	0.0100	0.0100 U	MG/L	09/19/06	1.0
COPPER	200.7	0.0200	0.0200 U	MG/L	09/19/06	1.0
LEAD	200.7	0.00500	0.00500 U	MG/L	09/19/06	1.0
MAGNESIUM	200.7	1.00	8.20	MG/L	09/19/06	1.0
NICKEL	200.7	0.0400	0.0400 U	MG/L	09/19/06	1.0
SILVER	200.7	0.0100	0.0100 U	MG/L	09/19/06	1.0
ZINC	200.7	0.0200	0.0200 U	MG/L	09/19/06	1.0

## NPDES Sampling GE Pittsfield Toxicity pH

Date: 9/15/06
Acute Dry Acute Wet(Day 1,2 or 3)
Effluent Composite Sample #
River/Dilution Water Sample #
Madelanementy 9-15-06
Signed & Dated

## APPENDIX 3

**Chain of Custody Forms** 

Analytical Services nc.

## UILINIA OF CUSTODY/LABOHATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE

SR#

Cosame Preservative Key 0. NONE HNO3-H2SO4 NEOH Zn. Acetate MeOH NaHSO4 REMARKS/ ALTERNATE DESCRIPTION INVOICE INFORMATION Officer . ನೆಪ್ಕೆಪ್ರೆಗ್ ಯ ANALYSIS REQUESTED (Include Method Number and Container Preservative) CAS Contact BIL 70 REPORT REQUIREMENTS II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + OC and Calibration I. Results Only R TURNAROUND REQUIREMENTS 8 T 1/8 RUSH (SURCHARGES APPLY) Special Land REQUESTED FAX DATE STANDARD 24 hr PRESERVATIVE NUMBER OF CONTAINERS Sampler's Printed Name

MARIC LU ASAMPLING
FICE USE ONLY
SAMPLING
AR IN
DATE TIME MATRIX 790 H20 JSEED ON 1100 100/1 1,00 M 413 448 5935 9-11-00 927722 FOR OFFICE USE ONLY + DISSOVED(P) 22220 927723 927721 Samples Packed in タンころ Project Number Report CC BEFFE ittetieda na ¥ ₩ 1Nagne Nied Name アンセング SPECIAL INSTRUCTIONS/COMMENTS Metals 1014(0) るのひと J Nichalson CLIENT SAMPLE ID いかとかした CE CEP 0918-A7569 64T-A7522 2911-475769 An Employee - Owned Company
www.castab.com 64G-A7565 AZSSR **የ**たわ & 11 150

CUSTODY SEALS: Y N RELINGUISHED BY Plinled Name MANNER SAMPLE RECEIPT: CONDITION/COOLER TEMP: and Willemon THRKUINSNEWS MADOC ISHED BY Fing-11-06 See OAPP

9:30 Distribution: White - Return to Originator; Yellow - Lab Copy, Pink - Retained by Client

Dale/Illed /

SCOC-1102-0

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SUBMISSION #:

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RELINGUISHED BY

RECEIVED BY

L TV. Dala Validation Report with Raw Data V. Speicalized Forms / Custom Report

REQUESTED REPORT DATE

Printed Name Signature

Printed Name

Printed Name

Signature

Signature

Date/Time Firm

Dale/Time

Date/Time

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## Analytical Services Inc. An Employee - Owned Company www.caslab.com

## CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Muslard SI., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-685-7222 x11 • FAX (585) 288-8475 PAGE

CAS Contact

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Preservative Key 0. NONE HCL HNO3 H2SO4 NaOH Zn. Acetate MeOH NaHSO4 REMARKS/ ALTERNATE DESCRIPTION INVOICE INFORMATION Other よるなよららて ANALYSIS REQUESTED (include Method Number and Container Preservative) SUBMISSION # Prinled Name BILL TO Signalure Date/Time ğ Ē . IV. Date Validation Report with Raw Date V. Speicalized Forms / Custom Report II. Results + OC Summaries ILCS, DUP, MS/MSD as required) £ REPORT REQUIREMENTS Ś III. Results + QC and Calibration HELINOUISHED BY . Results Only Edata Printed Name Dale/Time Signature E 7 TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) RECEIVED BY REQUESTED REPORT DATE REQUESTED FAX DATE STANDARD 24 hr Painted Name Signature Date/Time PHESERVATIVE Ē CUSTODY SEALS: Y NUMBER OF CONTAINERS RELINQUISHED BY HZO MATRIX Sample's Pinjed Name ASNEW SICY 927719 9-11-06 815 AM SAMPLING Prinled Name Date/Time DATE Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Relained by Client FOR OFFICE USE ONLY 92224 927720 927720 927720 grono 927728 Project Number 11000 6144 917719 Report OC SAMPLE RECEIPT: CONDITION/COOLER TEMP; Niche Isam SPECIAL INSTRUCTIONS/COMMENTS AT-OULA INSARTASI more CLIENT SAMPLE ID ACHESTED BY 877 E 7555 R 7556 See OAPP

## Cooler Receipt And Preservation Check Form

٠		Pittsfield  12-06 by: K  seals on outside of papers properly for arrive in good co	of cool	er? ut (ink	signed, etc.)?	YES	VELOCITY O	CLIENT
	4. Did any VOA 5. Were Ice or I	vials have signing ce packs present?  hottles originate	cant a ?	ir Ottor	1es? 3.1°	YES YES CAS/RO	NO (N/A NO )C, CLIENT	
	7. Temperature	of cooler(s) upon ature within 0° - 6	° C?:		Yes Yes No No	Yes No	Yes Yes	
•	If No, Explain Date/Time To	Take	IR G	9-1a	-06 @ 91 Reading From: T	147) Temp Blank	or Sample I	Bottle
÷.	If out of Temperate PC Secondary Review Cooler Breakdown:  1. Were all bot 2. Did all bottle	Date:tle labels and tags a	e (i.e. 1	Run  Analysi  tests i	Samplesby: s, preservation, etc stody papers? odicated?	c.)? YES YES YES	NO NO NO	•
	Air Samiles	Cassettes / Tul	bes int	act	Canisters Pressur	ized Tedlar	® Bags Inflated	N/A
	4. Air Samples Explain any discrep	Cassettes / Tul	bes int	act	Canisters Pressur Sample I.D.	ized Tedlar Reagent	Bags Inflated     Vol. Added	N/A Final pH
	4. Air Samples Explain any discrep	Cassettes / Tul	bes Int	act	Canistas i ressu			
•	4. Air Samples Explain any discrep	: Cassettes / Tul	bes Int	act	Canistas i ressu			
•	4. Air Samples Explain any discrep  pH ≥12	cassettes / Tul	bes Int	act	Canistas i ressu			
•	4. Air Samples Explain any discrep	cassettes / Tul ancies: Reagent NaOH	bes Int	act	Canistas i ressu			
	4. Air Samples Explain any discrep  pH  ≥12  ≤2  ≤2	Reagent NaOH HNO2 H <sub>2</sub> SO <sub>4</sub> for TCN & Phenol	YES .	NO	Sample I.D.	Reagent	Vol. Added	
	4. Air Samples Explain any discrep  pH  ≥12  ≤2  ≤2  Residual Chlorine (+/-)  YES = All samples OK	Reagent NaOH HNO3 H <sub>2</sub> SO <sub>4</sub> for TCN & Phenol	YES	NO	Canistas i ressu	Reagent PC OK to ad	Vol. Added	

	Ad	Aquateo Br		Biological Sciences IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	7.7.1 Sommerce Street 7.7.1 Sommerce Street 7.7.1 Sommerce Street 7.7.1 Sommerce Street 7.7.1 Sommerce Street 7.7.1 Sommerce Street	
COMPANY INFORMATION	COMPANY'S PROJECT INF	ROJECT INFORMATION	NOI	SHIPPING INFORMATION	VOLUME/CONTAINER TYPE/ PRESERVATIVE	
Name: General Electric Company	Project Name: GE PITTSFIELD	PITTSFIELD	_ <u> </u>	Carrier.	4°C 4°C	(2)
Address: O'Brien & Gere	Outfall Compo	Outfall Composite - INITIAL SAMPLE			H <sub>2</sub> SO <sub>4</sub> H <sub>2</sub> SO <sub>4</sub> H <sub>2</sub> SO <sub>4</sub> H <sub>1</sub> SO <sub>4</sub> H <sub>1</sub> SO <sub>4</sub> H <sub>1</sub> SO <sub>4</sub> H <sub>2</sub> SO	<u></u>
1000 East Street, Gate 64	Project Number: 06004	90004	A	Airbill Number:	2)32(D	\$
City/State/Zip: Pittsfield, MA 01201 Telephone: (413) 494-6709	Sampler Name(s): Mark NPDES Permit #: MA0003891	10003891	assensky D	Date Shipped: 9-1/-06	Glass Glass	2
Facsimile: Mark Wasnewsky	Ship these samples on Monday Quote #: 10/05 Client (	s on Monday.		Hand Delivered: Ves No	1gal 1/2 gal 1 L 40 ml 250 ml 0.5 L	1 ::
SAMPI FIDENTIFICATION DATE	COLLECTION GRAB	AB COMPOSITE	MATRIX	ANALYSIS	NUMBER OF CONTAINERS	
	5		1	Ceriodaphnia dubia chronic suvival and		
A7556C 00	0 F	<u>\</u>		reproduction (EPA Method 1002.0) Initial sample		
0	100 J	\	Effluent	Total Residual Chlorine	1	
Housatonic River A-7555 R	Z Z		Receiving	Dilution Water	2	
	2 /2 /2 /2 /2 /2 /2 /2 /2 /2 /2 /2 /2 /2		Receiving	Total Residual Chlorine		
Relinquished by: (signature)	DATE TIME IF	Received by: (signature)	(nre	NOTES TO SAMPLER(S): (1): Complet labels with clear tape. Tape the caps o	NOTES TO SAMPLER(S): (1): Complete the labels (Date, time, initials) and cover the labels with clear tape. Tape the caps of the sample bottles to ensure that they do not	
11.6 Wewerth is the All	SH11 90-11-6	Charles Marie		become dislodged during shipment. N 6°C. Results for samples received at te report.	become dislodged during shipment. Nest the samples in sunicient ice to maintain b C = 6°C. Results for samples received at temperatures exceeding 6°C will be qualified in the report.	± وا
) (6		Received by: (signature	ture)	 	Antions and a temperature $\mathcal{I} \cap {}^{0}C$ . Declining to the efficient	<del>-</del>
6	08:91 90-11-b	Kato S	The second second	sample if chlorine is detected.	gradie. // C. Decironista de cinada	
Relinquishad by: (signature) Dr	DATE TIME	Received by: (signature)	ture)			

9/11/2006

CHRONIC AQUATIC TOXICITY COMPOSITE 9C1

Month: SEP Week: 3 Fiscal Wk: 37

Weather: Chronic Composite Sample #1

Split Sample ADTOX FC, TOX 1 Sept 2006

	Gallons/Day	MI in Composite	Percent of Composite
001 004 007 64T 64G 09A	107,630 0 0 6,550 86,340 0 6,730	7,789.87 - 474.07 6,248.97 - 487.09	51.93% 0.00% 0.00% 3.16% 41.66% 0.00% 3.25%
09B	207,250	15000	100.00%

Chain-of-Custody Form Number: OBG091106

Analysis: C. TUX 1 + 4D TOX

Location: 1100AM Date: 9-11-06

TIME

Sample Label Serial Number A 7556C

Marke Wasnewsky Signed 9-11-06

## Columbia Analytical Scrvices mc In Employee - Owned Company www.castab.com

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Sulte 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE

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CAS Conlact

**Б** 

Preservative Key 0. NONE REMARKS/ ALTERNATE DESCRIPTION HNO3 H2SO4 NaOH Zn. Acetate MeOH NaHSO4 SUBMISSION F. 23.067 INVOICE INFORMATION ひしたみよららて ANALYSIS REGUESTED (Include Method Number and Container Preservative) Printed Name Signature BIL 70 Dale/Time IV. Data Validation Report with Raw Data V. Speicalized Forms / Custom Report £ II. Results + QC Summaries (LCS, DUP, MS/MSD as required) REPORT REQUIREMENTS III, Results + QC and Calibration RELINQUISHED BY 1. Results Only Printed Name Signature Date/Time E TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) RECEIVED BY REQUESTED REPORT DATE REQUESTED FAX DATE STANDARD ... 24 hr Printed Name Date/Time PRESERVATIVE CUSTODY SEALS: Y иомвен оf соитыиеня RELINQUISHED BY MATRIX WASNEWSKY 113 448 893C SAMPLING NATE TIME -13-068 m Date/Time DATE MANOWA Candylan Distribution: White - Return to Originator, Yellow - Lab Copy, Pink - Retained by Clien FOR OFFICE USE ONLY 22232 Perry Pronz 922231 927726 927726 Report CC Data/Timeq11/06 SAMPLE RECEIPT: CONDITION/COOLER TEMP. NPDES FORM SPECIAL INSTRUCTIONS/COMMENTS S CLIENT SAMPLE ID See QAPP

Columbia Analytical Scrvices MC.
V

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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CAS Conlact

SH #

P.

Preservative Key HNO3 H2SO4 NaOH Zn. Acelate MeOH NaHSO4 HEMARKS/ ALTERNATE DESCRIPTION Officer ANALYSIS REQUESTED (Include Method Number and Container Preservative) PRESERVATIVE илмвен ог соитыменз MATRIX WASNEWSKY 1-13-008 mg SAMPLING DATE TIME FOR OFFICE USE ONLY 22232 non 92222 Project Number 927726 922231 927726 Report CC 7557RCN CLIENT SAMPLE ID VPDES

RECEIVED BY REQUESTED REPORT DATE CUSTODY SEALS: Y RELINQUISHED BY RECEIVED BY SAMPLE RECEIPT: CONDITION/COOLER TEMP: See QAPP

SUBMISSION # 23067

2

a Yes HELINGUISHED BY

Printed Name

Printed Name

Printed Name

Punted Name

Esmerian

Signalure

Signature

Date/Time

Film Date/Time

**Date/Time** 

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INVOICE INFORMATION

REPORT REQUIREMENTS

TURNAHOUND REQUIREMENTS

RUSH (SURCHARGES APPLY)

SPECIAL INSTRUCTIONS/COMMENTS Metals

I. Results Only

7

24 hr 48 hr

STANDARD
HEOVESTED FAX DATE

HI 10

III. Results + QC and Calibration

IV. Data Validation Report with Raw Data
V. Speicalized Forms / Custom Report

õ

II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

Distribution: White - Return to Originator, Vellow - Lab Copy, Pink - Retained by Client

## Cooler Receipt And Preservation Check Form

Project/Client 6	Waterford		S	ubmission Numbe	<u> </u>	*	
Project/Client $6$	14-06 by: 1	KE.	COU	RIER: CAS U	PS FEDEX	VELOCITY (	CLIENT
<ol> <li>Were custod</li> <li>Did all bottle</li> <li>Did any VO</li> <li>Were Ice or</li> <li>Where did the</li> </ol>	y seals on outside y papers properly es arrive in good c A vials have signif Ice packs present he bottles originate e of cooler(s) upon	filled of ondition ficant a ??	n (unb	roken):	YES YES YES YES CAS/RO	NO NO NO NO NO CLIENT	
	rature within 0° - 0			Yes Yes	Yes	Yes Y	es
If No, Expla				No No 4-06 @ 1	No	No N	0
Date/Time I	Cemperatures Take	en:					
Thermomete	er ID: 161 or (	IR G	N	Reading From:	Femp Blank	or Sample 1	Bottle)
If out of Temperat	,	<u> </u>					
PC Secondary Revi	ew:	7 14	WL.				•
1. Were all bot			يوجم سلادك	is, preservation, et	YES	NO	
2. Did all bottl	le labels and tags a ct containers used s: Cassettes / Tu	igree w for the bes Int	tests i act	ndicated?	YES	NO NO ® Bags Inflated	N/A
<ol> <li>Did all bottl</li> <li>Were correct</li> <li>Air Sample</li> </ol>	le labels and tags a ct containers used s: Cassettes / Tu	igree w for the bes Int	tests i act	ndicated? Canisters Pressur	YES	NO	N/A Final pH
<ol> <li>Did all bottl</li> <li>Were correct</li> <li>Air Sample</li> </ol>	le labels and tags a ct containers used s: Cassettes / Tu	for the	tests i	ndicated? Canisters Pressur	YES rized Tedlar	NO  ® Bags Inflated	
<ol> <li>Did all bottl</li> <li>Were correct</li> <li>Air Sample: Explain any discrept</li> </ol>	te labels and tags a ct containers used s: Cassettes / Tul pancies:	for the	tests i	ndicated? Canisters Pressur	YES rized Tedlar	NO  ® Bags Inflated	
<ol> <li>Did all bottl</li> <li>Were correct</li> <li>Air Sample: Explain any discrep</li> </ol>	le labels and tags a ct containers used s: Cassettes / Tul pancies:	for the	tests i	ndicated? Canisters Pressur	YES rized Tedlar	NO  ® Bags Inflated	
<ul> <li>2. Did all bottl</li> <li>3. Were correct</li> <li>4. Air Sample: Explain any discrep</li> <li>pH</li> <li>≥12</li> </ul>	le labels and tags a et containers used s: Cassettes / Tul pancies:  Reagent  NaOH	for the	tests i	ndicated? Canisters Pressur	YES rized Tedlar	NO  ® Bags Inflated	
2. Did all bottl 3. Were correct 4. Air Sample: Explain any discrep  pH  ≥12  ≤2	Reagent NaOH HNO3 H <sub>2</sub> SO <sub>4</sub> In Indian TCN & Phenol	for the bes Int	nth cuitests i	ndicated? Canisters Pressur  Sample I.D.	YES ized Tedlar Reagent	NO  ® Bags Inflated  Vol. Added	
2. Did all bottl 3. Were correct 4. Air Sample: Explain any discrep  pH  ≥12  ≤2  ≤2	Reagent NaOH HNO3 H <sub>2</sub> SO <sub>4</sub> for TCN & Phenol	for the bes Int	nth cuitests i	ndicated? Canisters Pressur	YES rized Tedlar	NO  ® Bags Inflated  Vol. Added	
2. Did all bottl 3. Were correct 4. Air Sample: Explain any discrep  pH  ≥12  ≤2  ≤2  Residual Chlorine (+/-) YES = All samples OK	Reagent NaOH HNO3 H <sub>2</sub> SO <sub>4</sub> for TCN & Phenol	yes won	nth cuitests i	ndicated? Canisters Pressur  Sample I.D.	YES rized Tedlar Reagent PC OK to adj	NO  ® Bags Inflated  Vol. Added	

27.6 Commelce Street  Williston Africa 95  THE PERSON BEGINSTE	VOLUME/CONTAINER TYPE/ PRESERVATIVE	4°C 4°C	HNO <sub>3</sub>	- Plastic Plastic Plastic Glass Amber Plastic	Glass	10 ml 250 ml 051	14. yal	NUMBER OF CONTAINERS			-	2					NOTES TO SAMPLER(S): (1): Complete the labels (Date, time, initials) and cover the	labels will clear rape. Take the cape of the company of the come dislocated during shipment. Nest the samples in sufficient ice to maintain 0°C –		Ambient cooler temperature: $2$ , $8$ °C. Dechlorinate the effluent ne is detected.	
Biological Sciences m-of-custody Record	SHIPPING INFORMATION	Carrier:		Airbiil Number:	Date Shipped: 9-13-06		rand Denvereu: Clas	ANALYSIS	Ceriodaphnia dubia chronic suvival and	reproduction (EPA Method 1002.0) – Renewal 1	Total Residual Chlorine	Dilution Water	Total Residual Chlorine				NOTES TO SAMPLER(S): (1): Com	become disloaged during shipmen	report.	Notes to Lab: Ambient cooler te sample if chlorine is detected.	
Aguatec Biologi Cham-oleouste	COMPANY'S PROJECT INFORMATION		WAL SAMPLE		LWashewsty	on Wednesday.	I WUS CHERI COGE: GERTI IS I	GRAB COMPOSITE MATRIX	Effluent	7	Z Effluent	Receiving	Receiving				Received by: (signature)	1100		Received by: (signaturē)	Received by: (signature)
8	COMPANY'S	Project Name: GE PITTSFIELD	Outfall Com	Project Number: 06004	Sampler Name(s): Mur. I	Ship these sam	1	COLLECTION DATE 0	<	2/2 2/2	W7011	W.S.S	\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	-			DATE TIME		2	DATE TIME	DATE TIME
	COMPANY INFORMATION	Name: General Electric Company	Address: O'Brien & Gere	1000 East Street, Gate 64	City/State/Zip: Pittsfield, MA 01201 Telephone: (413) 494-6709	Facsimile: Mark Wasnewsky	Contact Name:	SAMPLE IDENTIFICATION		A7558C	<b>[,</b> ]	Housatonic River A7557R	<b>L</b> i				Refinantished by: (signature)	and I .	Most adaptivesty	Relinquished by: (signature)	Relinquished by: (signature)

9/13/2006

## CHRONIC AQUATIC TOXICITY COMPOSITE 9C2

Month: SEP Week: 3 Fiscal Wk: 37

Weather: Chronic Composite Sample #2

	Gallons/Day	MI in Composite	Percent of Composite
001	105,870	7,114.98	47.43%
004	0	, <u> </u>	0.00%
004	Ő	-	0.00%
64T	7,060	474.47	3.16%
64G	110,240	7,408.67	49.39%
09A	0	-	0.00%
09B	28	1.88	0.01%
	223,198	15000	100.00%

The Chronic Toxicity Composite was made today by Mark Nosnewsky according to the table above, and given the sample ID#\_

Chain-of-Custody Form Number 086091306

TIME

A 7558 Sample Label Serial Number

Columbia Analytical Services An Employee - Owner Company An employee - Owner Company
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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0869 • (585) 288-5360 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE

<u>P</u>

CAS Contact

# HS

12633068 ALTERNATE DESCRIPTION Preservative Key INVOICE INFORMATION SUBMISSION ANALYSIS REQUESTED (include Method Number and Container Preservative) Printed Name Date/Time Signature BILL TO: Firm LTV. Data Validation Report with Raw Data V. Speicalized Forms / Custom Report £ II. Results + QC Summaries (LCS, DUP, MS/MSD as required) REPORT REQUIREMENTS ill. Results + QC and Calibration RELINQUISHED BY 168 I. Results Only Edata Printed Name Oale/Time E TURNAHOUND REQUIREMENTS 24 hr 48 hr 5 day RUSH (SURCHARGES APPLY) RECEIVED BY REQUESTED REPORT DATE REQUESTED FAX DATE Printed Name Date/Time PRESERVATIVE CUSTODY SEALS: NUMBER OF CONTAINERS + Dissolved (8) Listed on HELINQUISHED BY SAMPLING NATRIX MARKO ANEWSKY 7-14-06 1030M Date/Time 917737 8-15-61 ESMEN AN Samples Packed in 951626 FOR OFFICE USE ONLY LAB ID 920039 Project Number Report CC 10 V SAMPLE RECEIPT: CONDITION/COOLER TEMP: So Car noversh 一たちたし Z Z Sanpr CLIENT SAMPLE ID RELINGUISHED BY Project Name #ST See CAPP マイグ 不つら A75

Distribution: White - Refurn to Originator; Yelfow - Lab Copy; Pink - Retained by Client

Columbia Analytical Services nc	
V	

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

An Employee - Owned Company One Mustard St., Sulle 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 ×11 • FAX (585) 288-8475 PAGE

<u>Р</u>

± TO

CAS Contact

Project Name	ANALYSIS REQUESTED (#	ANALYSIS REQUESTED (Include Method Number and Container Preservative)	eservative)
ر ر	PRESERVATIVE	330	
Company Middless SE CEP 159 Plastics Ave Bldg 59	3070	Smoy ds of	Preservative Key  0. NONE  1. HCL  2. HNCL  3. H-2SQ4  4. NaOH  5. Zn. Acetate  6. MeCH  7. NaHSO4
Sarple's Finish	1		8. Olher
ندا		XX	
R 22733	- ~ ~ ~	XX	
5560C 42733 1875		X	
550 C 92734 V 1/02 V			
SPECIAL INSTRUCTIONS/COMMENTS	TURNAROUND REQUIREMENTS  RUSH (SURCHARGES APPLY)	REPORT REOUINEMENTS	INVOICE INFORMATION
	24 hr 48 hr 6 day STANDARD REQUESTED FAX DATE	II. Pesulis + CC Summaries (LCS, DUP, MS/MSD as required) III. Resulis + QC and Calibration Summaries	PO# BILL TO:
woles Pichel in lea	REQUESTED REPORT DATE	V. Spercalized Forms / Custom Report	
	EAI & V	Edala Yes No	SUBMISSION F. R 26 33061
SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTOUT SEALOR RELINQUISHED BY RECEIVED BY RELINQUISHED BY	-	RELINQUISHED BY	RECEIVED BY
M Wahm Magnaling 19 11 Jungary Signature	Signalure	Signature	Sgnature
Kal MSM ZW Ving Nafie	Printed Name	Printed Name	Printed Name
Constrain Film	Firm	Firm	Fig.
5.06 of 12 (A)	Сать/Птв	Date/Time	Date/ lime

## Cooler Receipt And Preservation Check Form

Project/Client_GE_	Pittsfield		S	ubmission Number		· · · · · · · · · · · · · · · · · · ·	
Cooler received on	16-06 by: K	1	COUF	RIER: CAS UF	S FEDEX	VELOCITY (	CLIENT
<ol> <li>Were custody</li> <li>Were custody</li> <li>Did all bottles</li> <li>Did any VOA</li> <li>Were Ice or Ice</li> <li>Where did the</li> <li>Temperature</li> <li>Is the temperature</li> <li>If No, Explain</li> <li>Date/Time Temperature</li> </ol>	seals on outside of papers properly for arrive in good control vials have significe packs present? The bottles originate of cooler(s) upon ature within 0° - 60 in Below the cooler of t	of cooledilled or ordition icant and receipt r	er? ut (ink u (unb) ir bubb	yes Yes No No Reading From: T	Yes No	NO NO NO NO NO NO OC. CLIENT  Yes Ye No No No Sample I	es 0
PC Secondary Revie	:w:	-18	<u>06</u>	by:			•
Cooler Breakdown:  1. Were all bot	de labels compléi	e (i.e. 8	nalys	is, preservation, etc	c.)? YES YES	NO NO	•
2. Did all bottle	e labels and tags a t containers used : Cassettes / Tul	igree w for the bes Int	tests i act	ndicated?  Canisters Pressur	YES	NO r® Bags Inflated	1 N/A
<ol> <li>Did all bottle</li> <li>Were correct</li> <li>Air Samples</li> </ol>	e labels and tags a t containers used : Cassettes / Tul	igree w for the bes Int	tests i act	ndicated?  Canisters Pressur	YES	NO	l N/A Final pH
<ol> <li>Did all bottle</li> <li>Were correct</li> <li>Air Samples</li> </ol>	e labels and tags a t containers used : Cassettes / Tul	for the	tests i	ndicated? Canisters Pressur	YES ized Tedla	NO r® Bags Inflated	
<ol> <li>Did all bottle</li> <li>Were correct</li> <li>Air Samples</li> <li>Explain any discrep</li> </ol>	e labels and tags at containers used ancies:	for the	tests i	ndicated? Canisters Pressur	YES ized Tedla	NO r® Bags Inflated	
Did all bottle     Were correct     Air Samples     Explain any discrep	e labels and tags at containers used ancies:  Reagent	for the	tests i	ndicated? Canisters Pressur	YES ized Tedla	NO r® Bags Inflated	
<ol> <li>Did all bottle</li> <li>Were correct</li> <li>Air Samples</li> <li>Explain any discrep</li> <li>pH</li> <li>≥12</li> </ol>	e labels and tags at containers used to Cassettes / Tulancies:  Reagent NaOH	for the	tests i	ndicated? Canisters Pressur	YES ized Tedla	NO r® Bags Inflated	
2. Did all bottle 3. Were correct 4. Air Samples Explain any discrep  pH ≥12 ≤2 ≤2	Reagent NaOH HNO3 H <sub>2</sub> SO <sub>4</sub> for TCN & Phenol	yes	no NO	ndicated? Canisters Pressur Sample I.D.	YES ized Tedla  Reagent	NO ar® Bags Inflated  Vol. Added	
2. Did all bottle 3. Were correct 4. Air Samples Explain any discrep  pH  ≥12  ≤2	Reagent NaOH HNO3 H <sub>2</sub> SO <sub>4</sub> for TCN & Phenol	yes	no NO	ndicated? Canisters Pressur	YES ized Tedla	NO ar® Bags Inflated  Vol. Added	
2. Did all bottle 3. Were correct 4. Air Samples Explain any discrep  pH  ≥12  ≤2  ≤2  Residual Chlorine (+/-)  YES = All samples OK	Reagent NaOH HNO3 H <sub>2</sub> SO <sub>4</sub> for TCN & Phenol	YES Triples w	no NO	ndicated? Canisters Pressur Sample I.D.	YES ized Tedla  Reagent  PC OK to a	NO ar® Bags Inflated  Vol. Added	

272 Commerces Need	VOLUME/CONTAINER TYPE/ PRESERVATIVE	4°C 4°C 4°C 4°C 4°C 4°C 4°C H3CO	1	- Destir Plactic Plastic Glass Amber Plastic	Glass	1 gal 1/2 gal 1L 40 ml 250 ml 0.5 L	-1	NUMBER OF CONTAINERS	2			2					NOTES TO SAMPLER(S): (1): Complete the labels (Date, time, Initials) and cover the labels with clear tape. Tape the caps of the sample bottles to ensure that they do not become dislodged during shipment. Nest the samples in sufficient ice to maintain 0°C – 6°C. Results for samples received at temperatures exceeding 6°C will be qualified in the report.  Notes to Lab: Ambient cooler temperature: 6° 3°C. Dechlorinate the effluent sample if chlorine is detected.
Biological Sciences	SHIPPING INFORMATION	Carrier:		Airbill Number:	Date Shipped: 9-15-06	Hand Delivered: [[7/es		ANALYSIS		reproduction (EPA Method Touz.c) – Renewal 2	t Total Residual Chlorine	ng Dilution Water	ng Total Residual Chlorine				NOTES TO SAMPLER(S): (1): Com labels with clear tape. Tape the cap become dislodged during shipment 6°C. Results for samples received report.  Notes to Lab: Ambient cooler te sample if chlorine is detected.
	COMPANY'S PROJECT INFORMATION	1	Outfall Composite - RENEWAL SAMPLE	ı	Sampler Name(s): MARK WASNEWSKU NPDES Permit #: MA0003891	Ship these samples on Friday.		COLLECTION GRAB COMPOSITE MATRIX			11 00 Effluent	P.15M , Receiving	Receiving Receiving	2			DATE TIME Received by: (signature)  9-15-06  A-15-06  AISJON 1740 PR. L.D. (M.D.)  DATE TIME Received by: (signature)
	NOITAMACHI VINE GMOO				City/State/Zip: Pitisfield, MA 01201	Facsimile: Mark Wasnewsky	Contact Name:			125co 2057A	25kn C	Housatonic River 47554R					Relinquished by: (signature)  Mun (Lithername)  Relinquished by: (signature)  Vio  Printy Express  Relinquished by: (signature)  DA  Relinquished by: (signature)  DA

9/15/2006

## CHRONIC AQUATIC TOXICITY COMPOSITE 9C3

Month: SEP Week: 3 Fiscal Wk: 37

Weather: Chronic Composite Sample #3

	Gallons/Day	MI in Composite	Percent of Composite
001 004 007 64T 64G 09A 09B	746,870 0 0 298,860 108,890 0 207,422	8,225.19 - 3,291.31 1,199.19 - 2,284.31	54.83% 0.00% 0.00% 21.94% 7.99% 0.00% 15.23%
	1,362,042	15000	100.00%

Chain-of-Custody Form Number: <u>OBG 091506</u>

Analysis: <u>C. 70 X 3</u>

Lecation: 1100 Am Date: <u>9-15-06</u>

Sample Label Serial Number A 7560C

Mark O Sagrenday
Signed

-15-0

Date