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

Transmitted via Overnight Courier

October 8, 2004

Mr. Dean Tagliaferro
U.S. Environmental Protection Agency
Region I – New England
10 Lyman Street, Suite 2
Pittsfield, MA 01201

Ms. Susan Steenstrup
Acting Section Chief, Special Projects
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 2004 (GECD900)

Dear Mr. Tagliaferro and Ms. Steenstrup:

Enclosed are copies of General Electric's (GE's) monthly progress report for September 2004 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 December 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.

Sincerely,

John F. Novotny / cts for

John F. Novotny, P.E.
Manager - Facilities and Brownfields Programs

Enclosures
V:\GE_Pittsfield_General\Reports\Monthly\2004\.09-04\cover ltr.doc

cc: Robert Cianciarulo, EPA (cover letter only)
Tim Conway, EPA (cover letter only)
James DiLorenzo, EPA
Rose Howell, EPA (CD-ROM of report)
Holly Inglis, EPA
William Lovely, EPA (Items 7, 8, 9, 10, 11, 12, 16/17, 22, 23, and 25 only)
Susan Svirsky, EPA (Items 7, 15, and 20 only)
K.C. Mitkevicius, USACE (CD-ROM of report)
Thomas Angus, MDEP (cover letter only)
Robert Bell, 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
Dawn Jamros, Weston (hard copy of report, CD-ROM of report, CD-ROM of data)
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 (5 copies)
GE Internal Repository (2 copies)

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

SEPTEMBER 2004

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 has prepared this monthly report, 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 2004

a. Activities Undertaken/Completed

- Attended Pittsfield Citizens Coordinating Council (CCC) meeting (September 8, 2004).
- Continued GE-EPA electronic data exchanges for the Housatonic River Watershed and Areas Outside the River.*
- Continued meetings with EPA, MDEP, and the Pittsfield Economic Development Authority (PEDA) to discuss a revised NPDES permit.

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, 2004, are provided in Attachment B to this report.
- A report titled *Toxicity Evaluation of Wastewaters Discharged from the General Electric Plant; Pittsfield, Massachusetts (Samples Collected in September 2004)* was prepared for GE by SGS Environmental Services, Inc. (SGS). A copy of that report is provided in Attachment C.
- A report titled *Chronic Effects of the Process Wastewaters Discharged from the General Electric Plant; Pittsfield, Massachusetts (Samples Collected in September 2004)* was prepared for GE by SGS. 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)

- Attend public, CCC, and PEDA meetings as appropriate.
- Continue NPDES sampling and monitoring activities.
- Continue discussions of a revised NPDES permit.

e. General Progress/Unresolved Issues/Potential Schedule Impacts

Issues relating to a revised NPDES permit are under discussion.

f. Proposed/Approved Work Plan Modifications

None

ITEM 1
PLANT AREA
20s, 30s, 40s COMPLEXES
(GECD120)
SEPTEMBER 2004

a. Activities Undertaken/Completed

- Continued discussions with EPA, MDEP, and PEDA regarding land transfer issues for the 20s and 30s Complexes.
- Continued discussions with holders of encumbrances at 20s and 30s Complexes regarding subordination agreements for Grants of Environmental Restrictions and Easements (EREs).*
- Continued pre-demolition activities at Buildings 42, 43/43-A, and 44.
- Continued oil monitoring in Building 43 elevator shaft; no recoverable quantities were encountered (see Item 21.a).
- Completed Building 28B demolition activities and transported demolition debris to Hill 78 On-Plant Consolidation Area (OPCA).
- Conducted miscellaneous PCB wipe sampling, as identified in Table 1-1.
- Conducted ambient air sampling for particulate matter.

b. Sampling/Test Results Received

See attached tables.

c. Work Plans/Reports/Documents Submitted

- Submitted draft Soil Data Compilation Report for 30s Complex (September 14, 2004).*
- Submitted topographic survey maps for 20s and 30s Complexes (September 16, 2004).*
- Submitted letter to MDEP noting that approval is not required for division of lands at 20s and 30s Complexes and Woodlawn Avenue (September 21, 2004).
- Submitted draft plans of restricted areas to be attached to EREs for 20s and 30s Complexes (September 29, 2004).*

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

- Continue pre-demolition activities (including asbestos abatement) at Buildings 42, 43/43-A, and 44.

ITEM 1
(cont'd)
PLANT AREA
20s, 30s, 40s COMPLEXES
(GECD120)
SEPTEMBER 2004

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

- Submit final Soil Data Compilation Report for 30s Complex.*
- Meet with Community Development Board to discuss Approval Not Required (ANR) Land Subdivision Plans for 20s and 30s Complexes (scheduled for October 5, 2004).
- Conduct unofficial pre-certification inspection of land in 20s and 30s Complexes (scheduled for October 13, 2004).*
- Submit final drafts of EREs for 20s and 30s Complexes and related documents (e.g., survey plans, subordination agreements, title commitments) to Agencies (on or before October 15, 2004).*
- Submit draft Completion Reports for 20s and 30s Complexes (on or before October 15, 2004).*
- Complete transfer of 20s and 30s Complexes to PEDA following receipt of all necessary Agency approvals.

e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

f. Proposed/Approved Work Plan Modifications

None

TABLE 1-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

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

Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	Date Received
Miller Vac Wipe Sampling	MILLER-VAC-W1	9/3/04	Wipe	SGS	PCB	9/8/04
Miller Vac Wipe Sampling	MILLER-VAC-W2	9/3/04	Wipe	SGS	PCB	9/8/04
Miller Vac Wipe Sampling	MILLER-VAC-W3	9/3/04	Wipe	SGS	PCB	9/8/04
Miller Vac Wipe Sampling	MILLER-VAC-W4	9/3/04	Wipe	SGS	PCB	9/8/04
Miller Vac Wipe Sampling	MILLER-VAC-W5	9/3/04	Wipe	SGS	PCB	9/8/04
Miller Vac Wipe Sampling	MILLER-VAC-W6	9/3/04	Wipe	SGS	PCB	9/8/04
Miller Vac Wipe Sampling	MILLER-VAC-W7	9/3/04	Wipe	SGS	PCB	9/8/04
Ambient Air Particulate Matter Sampling	West of Guard Shack	9/13/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	Background Location	9/13/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	West of Guard Shack	9/14/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	Background Location	9/14/04	Air	Berkshire Environmental	Particulate Matter	9/20/04

TABLE 1-2
PCB DATA RECEIVED DURING SEPTEMBER 2004

MILLER VAC WIPE SAMPLING
20s, 30s, 40s COMPLEX
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in µg/100cm^2)

Sample ID	Date Collected	Aroclor-1016, -1221, -1232, -1242, -1248	Aroclor-1254	Aroclor-1260	Total PCBs
MILLER-VAC-W1	9/3/2004	ND(1.0)	0.55 J	ND(1.0)	0.55 J
MILLER-VAC-W2	9/3/2004	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
MILLER-VAC-W3	9/3/2004	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
MILLER-VAC-W4	9/3/2004	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
MILLER-VAC-W5	9/3/2004	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
MILLER-VAC-W6	9/3/2004	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
MILLER-VAC-W7	9/3/2004	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Notes:

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

Data Qualifiers:

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

TABLE 1-3
AMBIENT AIR PARTICULATE MATTER DATA RECEIVED DURING SEPTEMBER 2004

PARTICULATE AMBIENT AIR CONCENTRATIONS
20s, 30s, 40s COMPLEX
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Date	Sampler Location	Average Site Concentration (mg/m^3)	Background Site Concentration (mg/m^3)	Average Period (Hours:Min)	Predominant Wind Direction
09/13/04	West of Guard Shack	0.034	0.029*	9:45	N
09/14/04	West of Guard Shack	0.048	0.006*	9:45	SW
Notification Level		0.120			

Notes:

* Measured with DR-2000. All others measured with pDR-1000.

Background monitoring location inside GE Gate 31 on the corner of Woodlawn Avenue and Tyler Street.

ITEM 2
PLANT AREA
EAST STREET AREA 2-SOUTH
(GECD150)
SEPTEMBER 2004

a. Activities Undertaken/Completed

- Continued pre-demolition activities at the 60s Complex.
- Performed sludge sampling at Building 64T, Liquid Phase Carbon Adsorption (LPCA) sampling at Building 64G, ambient air monitoring for PCBs, and other miscellaneous sampling, as identified in Table 2-1.
- Tankered and transported 14,500 gallons of water from Building 61 to Building 64G for treatment.
- Continued discussions regarding ERE and subordination agreements for CRA.*
- Continued survey activities associated with finalizing ERE for CRA.*
- Continued development of interim letter report on additional data needs at East Street Area 2-South.*

b. Sampling/Test Results Received

See attached tables.

c. Work Plans/Reports/Documents Submitted

Submitted letter (written follow-up) to verbal notifications of pre-demolition sampling results at 60s Complex (September 7, 2004).

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

- Continue to conduct routine process sampling at Buildings 64G and/or 64T.
- Continue discussions regarding ERE and subordination agreements for CRA.*
- Continue pre-demolition and initiate demolition activities at the 60s Complex.
- Submit interim letter report on additional data needs at East Street Area 2-South (due on or before October 26, 2004).*

ITEM 2
(cont'd)
PLANT AREA
EAST STREET AREA 2-SOUTH
(GECD150)
SEPTEMBER 2004

e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

f. Proposed/Approved Work Plan Modifications

Received response from EPA (dated September 23, 2004) to GE's September 7, 2004 notification letter regarding equipment containing PCBs.

TABLE 2-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

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

Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	Date Received
60's Complex Asbestos Abatement Shower Water Drum Sampling	60-COMP-WATER-1	9/14/04	Water	SGS	PCB	9/20/04
Building 64G LPCA Monitoring	I4-64G-01	9/7/04	Water	SGS	VOC	9/13/04
Building 64G LPCA Monitoring	I4-64G-02	9/7/04	Water	SGS	SVOC	9/14/04
Building 64G LPCA Monitoring	I4-64G-03	9/7/04	Water	SGS	PCB	9/13/04
Building 64G LPCA Monitoring	I4-64G-04	9/7/04	Water	SGS	Oil & Grease	9/13/04
Building 64G LPCA Monitoring	I4-64G-05	9/7/04	Water	SGS	VOC	9/13/04
Building 64G LPCA Monitoring	I4-64G-06	9/7/04	Water	SGS	SVOC	9/14/04
Building 64G LPCA Monitoring	I4-64G-07	9/7/04	Water	SGS	PCB	9/13/04
Building 64G LPCA Monitoring	I4-64G-08	9/7/04	Water	SGS	Oil & Grease	9/13/04
Building 64G LPCA Monitoring	I4-64G-09	9/7/04	Water	SGS	VOC	9/13/04
Building 64G LPCA Monitoring	I4-64G-10	9/7/04	Water	SGS	SVOC	9/14/04
Building 64G LPCA Monitoring	I4-64G-11	9/7/04	Water	SGS	PCB	9/13/04
Building 64G LPCA Monitoring	I4-64G-12	9/7/04	Water	SGS	Oil & Grease	9/13/04
Building 64G LPCA Monitoring	I4-64G-13	9/7/04	Water	SGS	VOC	9/13/04
Building 64G LPCA Monitoring	I4-64G-14	9/7/04	Water	SGS	SVOC	9/14/04
Building 64G LPCA Monitoring	I4-64G-15	9/7/04	Water	SGS	PCB	9/13/04
Building 64G LPCA Monitoring	I4-64G-16	9/7/04	Water	SGS	Oil & Grease	9/13/04
Building 64T Sludge Sampling	I4-64T-01	9/5/04	Sludge	SGS	PCB	9/13/04
PCB Ambient Air Sampling	Northeast of 60s Complex	9/1 -9/2/04	Air	Berkshire Environmental	PCB	9/20/04
PCB Ambient Air Sampling	Northwest of 60s Complex	9/1 -9/2/04	Air	Berkshire Environmental	PCB	9/20/04
PCB Ambient Air Sampling	Northwest of 60s Complex colocated	9/1 -9/2/04	Air	Berkshire Environmental	PCB	9/20/04
PCB Ambient Air Sampling	Southwest of 60s Complex	9/1 -9/2/04	Air	Berkshire Environmental	PCB	9/20/04
PCB Ambient Air Sampling	Southeast of 60s Complex	9/1 -9/2/04	Air	Berkshire Environmental	PCB	9/20/04
PCB Ambient Air Sampling	Background Inside GE Gate 31	9/1 -9/2/04	Air	Berkshire Environmental	PCB	9/20/04
PCB Ambient Air Sampling	Northeast of 60s Complex	9/8 -9/9/04	Air	Berkshire Environmental	PCB	9/20/04
PCB Ambient Air Sampling	Northwest of 60s Complex	9/8 -9/9/04	Air	Berkshire Environmental	PCB	9/20/04
PCB Ambient Air Sampling	Northwest of 60s Complex colocated	9/8 -9/9/04	Air	Berkshire Environmental	PCB	9/20/04
PCB Ambient Air Sampling	Southwest of 60s Complex	9/8 -9/9/04	Air	Berkshire Environmental	PCB	9/20/04
PCB Ambient Air Sampling	Southeast of 60s Complex	9/8 -9/9/04	Air	Berkshire Environmental	PCB	9/20/04
PCB Ambient Air Sampling	Background Inside GE Gate 31	9/8 -9/9/04	Air	Berkshire Environmental	PCB	9/20/04

TABLE 2-2
PCB DATA RECEIVED DURING SEPTEMBER 2004

BUILDING 64T SLUDGE SAMPLING
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	Aroclor-1254	Aroclor-1260	Total PCBs
I4-64T-01	9/5/2004	ND(5.2)	88	67	155

Notes:

1. Sample was collected by General Electric Company and submitted to SGS Environmental Services, Inc. for analysis of PCBs.
2. ND - Analyte was not detected. The number in parentheses is the associated detection limit.

TABLE 2-3
DATA RECEIVED DURING SEPTEMBER 2004

BUILDING 64G LPCA MONITORING
EAST STREET AREA 2 - SOUTH
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	I4-64G-01 09/07/04	I4-64G-02 09/07/04	I4-64G-03 09/07/04	I4-64G-04 09/07/04	I4-64G-05 09/07/04	I4-64G-06 09/07/04	I4-64G-07 09/07/04	I4-64G-08 09/07/04
Volatile Organics								
1,1,1-Trichloroethane	ND(0.010)	NA	NA	NA	0.0028 J	NA	NA	NA
Benzene	0.039	NA	NA	NA	ND(0.0050)	NA	NA	NA
Chlorobenzene	0.16	NA	NA	NA	ND(0.0050)	NA	NA	NA
Ethylbenzene	0.029	NA	NA	NA	ND(0.0050)	NA	NA	NA
Vinyl Chloride	0.0050 J	NA	NA	NA	ND(0.0050)	NA	NA	NA
PCBs-Unfiltered								
None Detected	NA	NA	--	NA	NA	NA	--	NA
Semivolatile Organics								
1,3-Dichlorobenzene	NA	0.0037 J	NA	NA	NA	ND(0.010)	NA	NA
1,4-Dichlorobenzene	NA	0.0075 J	NA	NA	NA	ND(0.010)	NA	NA
Acenaphthene	NA	0.036	NA	NA	NA	ND(0.010)	NA	NA
Fluorene	NA	0.0053 J	NA	NA	NA	ND(0.010)	NA	NA
Naphthalene	NA	0.019	NA	NA	NA	ND(0.010)	NA	NA
Conventionals								
Oil & Grease	NA	NA	NA	8.3	NA	NA	NA	10

TABLE 2-3
DATA RECEIVED DURING SEPTEMBER 2004

BUILDING 64G LPCA MONITORING
EAST STREET AREA 2 - SOUTH
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	I4-64G-09 09/07/04	I4-64G-10 09/07/04	I4-64G-11 09/07/04	I4-64G-12 09/07/04	I4-64G-13 09/07/04	I4-64G-14 09/07/04	I4-64G-15 09/07/04	I4-64G-16 09/07/04
Volatile Organics								
1,1,1-Trichloroethane	0.0026 J	NA	NA	NA	ND(0.0050)	NA	NA	NA
Benzene	ND(0.0050)	NA	NA	NA	ND(0.0050)	NA	NA	NA
Chlorobenzene	ND(0.0050)	NA	NA	NA	ND(0.0050)	NA	NA	NA
Ethylbenzene	ND(0.0050)	NA	NA	NA	ND(0.0050)	NA	NA	NA
Vinyl Chloride	ND(0.0050)	NA	NA	NA	ND(0.0050)	NA	NA	NA
PCBs-Unfiltered								
None Detected	NA	NA	--	NA	NA	NA	--	NA
Semivolatile Organics								
1,3-Dichlorobenzene	NA	ND(0.010)	NA	NA	NA	ND(0.010)	NA	NA
1,4-Dichlorobenzene	NA	ND(0.010)	NA	NA	NA	ND(0.010)	NA	NA
Acenaphthene	NA	ND(0.010)	NA	NA	NA	ND(0.010)	NA	NA
Fluorene	NA	ND(0.010)	NA	NA	NA	ND(0.010)	NA	NA
Naphthalene	NA	ND(0.010)	NA	NA	NA	ND(0.010)	NA	NA
Conventionals								
Oil & Grease	NA	NA	NA	3.1 B	NA	NA	NA	ND(5.0)

Notes:
1. Samples were collected by General Electric Company and were submitted to SGS Environmental Services, Inc. for analysis of volatiles, PCBs, semivolatiles, and oil & grease.
2. NA - Not Analyzed.
3. ND - Analyte was not detected. The number in parentheses is the associated detection limit.
4. Only those constituents detected in one or more samples are summarized.
5. -- 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).

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

TABLE 2-4
PCB DATA RECEIVED DURING SEPTEMBER 2004

60'S COMPLEX ASBESTOS ABATEMENT SHOWER WATER DRUM SAMPLING
EAST STREET AREA 2 - SOUTH
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
60-COMP-WATER-1	9/14/2004	ND(0.000065)	0.00024	0.00044	0.00068

Notes:
1. Sample was collected by Blasland, Bouck & Lee, Inc., and submitted to SGS Environmental Services, Inc. for analysis of PCBs.
2. ND - Analyte was not detected. The number in parentheses is the associated detection limit.

TABLE 2-5
AIR SAMPLE DATA RECEIVED DURING SEPTEMBER 2004

PCB AMBIENT AIR CONCENTRATIONS
EAST STREET AREA 2 - SOUTH
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Date	Northeast of 60s Complex (µg/m^3)	Northwest of 60s Complex (µg/m^3)	Northwest of 60s Complex colocated (µg/m^3)	Southwest of 60s Complex (µg/m^3)	Southeast of 60s Complex (µg/m^3)	Background Inside GE Gate 31 (µg/m^3)
09/01 - 09/02/04	0.0040	0.0028	0.0035	0.0030	0.0091	0.0014
09/08 - 09/09/04	0.0068	0.0053	0.0043	0.0032	0.0053	NA[1]
Notification Level	0.05	0.05	0.05	0.05	0.05	0.05

Note:
[1] Sample did not meet validity requirements and was not analyzed. Sampler did not run for the required 24-hour period due to a motor problem.

ITEM 3
PLANT AREA
EAST STREET AREA 2-NORTH
(GECD140)
SEPTEMBER 2004

a. Activities Undertaken/Completed

- Initiated topographic survey in support of future RD/RA activities.
- Conducted miscellaneous sampling, as identified in Table 3-1.

b. Sampling/Test Results Received

See attached tables.

c. Work Plans/Reports/Documents Submitted

None

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

- Awaiting EPA approval of the Pre-Design Investigation Report submitted on June 17, 2004.
- Continue topographic survey in support of future RD/RA activities.

e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

f. Proposed/Approved Work Plan Modifications

None

TABLE 3-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

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

Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	Date Received
Building 12 Compressor Water Drum	12-F1317-WATER-	9/14/04	Water	SGS	PCB	9/20/04
Building 19 Liquid Chiller System Sampling	19-1-CS-1	9/20/04	Water	SGS	Glycol	
Building 19 Liquid Heating System Sampling	19-1-HS-1	8/25/04	Liquid	SGS	PCB, VOC, Total Metals, Glycol Constituents	9/2/04

TABLE 3-2
DATA RECEIVED DURING SEPTEMBER 2004

BUILDING 19 LIQUID HEATING SYSTEM SAMPLING
EAST STREET AREA 2 - NORTH
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	19-1-HS-1 08/25/04
Volatile Organics	
2-Butanone	0.020
Acetone	0.016
PCBs-Unfiltered	
None Detected	--
Inorganics-Unfiltered	
Barium	0.0770
Chromium	0.00560
Lead	0.190
Selenium	0.230
Silver	0.00390 B
Conventionals	
Ethylene Glycol	35000
Tri-ethylene glycol	28000

Notes:

1. Sample was collected by Blasland, Bouck & Lee, Inc., and submitted to SGS Environmental Services, Inc. for analysis of PCBs, volatiles, metals, and glycol constituents.
2. Only detected constituents are summarized.
3. -- Indicates that all constituents for the parameter group were not detected.

Data Qualifiers:

Inorganics

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

TABLE 3-3
PCB DATA RECEIVED DURING SEPTEMBER 2004

BUILDING 12 COMPRESSOR WATER DRUM SAMPLING
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
12-F1317-WATER-1	9/14/2004	ND(0.000065)	0.0011	0.00014	0.00124

Notes:

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

ITEM 4
PLANT AREA
EAST STREET AREA 1-NORTH
(GECD130)
SEPTEMBER 2004

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

a. Activities Undertaken/Completed

Continued survey activities associated with finalizing ERE for GE-owned properties.

b. Sampling/Test Results Received

None

c. Work Plans/Reports/Documents Submitted

None

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

- Submit ERE and subordination agreements for GE properties.
- Send notice to holders of encumbrances on Parcel K11-1-15 that a Conditional Solution was implemented at the portion of that property within East Street Area 1-North.
- Conduct pre-certification inspection of this RAA with EPA and MDEP.

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 2004

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

a. Activities Undertaken/Completed

- Transferred soil and sediment from 1½ Mile Reach of the Housatonic River, demolition debris from Building 28B, and debris from pre-demolition activities conducted at Buildings 61 and 66 to the OPCAs.

- Conducted ambient air monitoring for particulates and PCBs at the OPCAs.

- Continued transfer of leachate from Building 71 OPCA to Building 64G for treatment. The total amount transferred in September 2004 was 230,000 gallons (see Table 5-4).

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 transfer of building demolition debris from ongoing demolition projects and excavated material from 1½ Mile Reach removal activities to the OPCAs.

e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

f. Proposed/Approved Work Plan Modifications

None

TABLE 5-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

HILL 78/BUILDING 71 ON PLANT CONSOLIDATION AREAS
GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	Date Received
Ambient Air Particulate Matter Sampling	North of OPCAs	8/31/04	Air	Berkshire Environmental	Particulate Matter	9/9/04
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	8/31/04	Air	Berkshire Environmental	Particulate Matter	9/9/04
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	8/31/04	Air	Berkshire Environmental	Particulate Matter	9/9/04
Ambient Air Particulate Matter Sampling	Southwest of OPCAs	8/31/04	Air	Berkshire Environmental	Particulate Matter	9/9/04
Ambient Air Particulate Matter Sampling	West of OPCAs	8/31/04	Air	Berkshire Environmental	Particulate Matter	9/9/04
Ambient Air Particulate Matter Sampling	Background Location	8/31/04	Air	Berkshire Environmental	Particulate Matter	9/9/04
Ambient Air Particulate Matter Sampling	North of OPCAs	9/13/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/13/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/13/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	Southwest of OPCAs	9/13/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	West of OPCAs	9/13/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	Background Location	9/13/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	North of OPCAs	9/14/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/14/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/14/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	Southwest of OPCAs	9/14/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	West of OPCAs	9/14/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	Background Location	9/14/04	Air	Berkshire Environmental	Particulate Matter	9/20/04
Ambient Air Particulate Matter Sampling	North of OPCAs	9/24/04	Air	Berkshire Environmental	Particulate Matter	9/28/04
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/24/04	Air	Berkshire Environmental	Particulate Matter	9/28/04
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/24/04	Air	Berkshire Environmental	Particulate Matter	9/28/04
Ambient Air Particulate Matter Sampling	Southwest of OPCAs	9/24/04	Air	Berkshire Environmental	Particulate Matter	9/28/04
Ambient Air Particulate Matter Sampling	West of OPCAs	9/24/04	Air	Berkshire Environmental	Particulate Matter	9/28/04
Ambient Air Particulate Matter Sampling	Background Location	9/24/04	Air	Berkshire Environmental	Particulate Matter	9/28/04
Ambient Air Particulate Matter Sampling	North of OPCAs	9/29/04	Air	Berkshire Environmental	Particulate Matter	10/5/04
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/29/04	Air	Berkshire Environmental	Particulate Matter	10/5/04
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/29/04	Air	Berkshire Environmental	Particulate Matter	10/5/04
Ambient Air Particulate Matter Sampling	Southwest of OPCAs	9/29/04	Air	Berkshire Environmental	Particulate Matter	10/5/04
Ambient Air Particulate Matter Sampling	West of OPCAs	9/29/04	Air	Berkshire Environmental	Particulate Matter	10/5/04
Ambient Air Particulate Matter Sampling	Background Location	9/29/04	Air	Berkshire Environmental	Particulate Matter	10/5/04
Ambient Air Particulate Matter Sampling	North of OPCAs	9/30/04	Air	Berkshire Environmental	Particulate Matter	10/5/04
Ambient Air Particulate Matter Sampling	Pittsfield Generating Co.	9/30/04	Air	Berkshire Environmental	Particulate Matter	10/5/04
Ambient Air Particulate Matter Sampling	Southeast of OPCAs	9/30/04	Air	Berkshire Environmental	Particulate Matter	10/5/04
Ambient Air Particulate Matter Sampling	Southwest of OPCAs	9/30/04	Air	Berkshire Environmental	Particulate Matter	10/5/04
Ambient Air Particulate Matter Sampling	West of OPCAs	9/30/04	Air	Berkshire Environmental	Particulate Matter	10/5/04
Ambient Air Particulate Matter Sampling	Background Location	9/30/04	Air	Berkshire Environmental	Particulate Matter	10/5/04
PCB Ambient Air Sampling	Southwest of OPCAs	9/13 -9/14/04	Air	Berkshire Environmental	PCB	9/22/04
PCB Ambient Air Sampling	Southwest of OPCAs colocated	9/13 -9/14/04	Air	Berkshire Environmental	PCB	9/22/04
PCB Ambient Air Sampling	West of OPCAs	9/13 -9/14/04	Air	Berkshire Environmental	PCB	9/22/04
PCB Ambient Air Sampling	North of OPCAs	9/13 -9/14/04	Air	Berkshire Environmental	PCB	9/22/04
PCB Ambient Air Sampling	Southeast of OPCAs	9/13 -9/14/04	Air	Berkshire Environmental	PCB	9/22/04

TABLE 5-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

HILL 78/BUILDING 71 ON PLANT CONSOLIDATION AREAS
GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	Date Received
PCB Ambient Air Sampling	Pittsfield Generating (PGE)	9/13 -9/14/04	Air	Berkshire Environmental	PCB	9/22/04
PCB Ambient Air Sampling	Background Inside GE Gate 31	9/13 -9/14/04	Air	Berkshire Environmental	PCB	9/22/04
PCB Ambient Air Sampling	Southwest of OPCAs	9/14 -9/15/05	Air	Berkshire Environmental	PCB	9/22/04
PCB Ambient Air Sampling	Southwest of OPCAs colocated	9/14 -9/15/05	Air	Berkshire Environmental	PCB	9/22/04
PCB Ambient Air Sampling	West of OPCAs	9/14 -9/15/05	Air	Berkshire Environmental	PCB	9/22/04
PCB Ambient Air Sampling	North of OPCAs	9/14 -9/15/05	Air	Berkshire Environmental	PCB	9/22/04
PCB Ambient Air Sampling	Southeast of OPCAs	9/14 -9/15/05	Air	Berkshire Environmental	PCB	9/22/04
PCB Ambient Air Sampling	Pittsfield Generating (PGE)	9/14 -9/15/05	Air	Berkshire Environmental	PCB	9/22/04
PCB Ambient Air Sampling	Background Inside GE Gate 31	9/14 -9/15/05	Air	Berkshire Environmental	PCB	9/22/04

TABLE 5-2
AMBIENT AIR PARTICULATE MATTER DATA RECEIVED DURING SEPTEMBER 2004

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

Date	Sampler Location	Average Site Concentration (mg/m^3)	Background Site Concentration (mg/m^3)	Average Period (Hours:Min)	Predominant Wind Direction
08/16/04 - 08/20/04[1]	North of OPCAs	NA	NA	NA	NA
	Pittsfield Generating Co.				
	Southeast of OPCAs				
	Southwest of OPCAs				
	West of OPCAs				
08/23/04 - 08/27/04[1]	North of OPCAs	NA	NA	NA	NA
	Pittsfield Generating Co.				
	Southeast of OPCAs				
	Southwest of OPCAs				
	West of OPCAs				
08/30/04[1]	North of OPCAs	NA	NA	NA	NA
	Pittsfield Generating Co.				
	Southeast of OPCAs				
	Southwest of OPCAs				
	West of OPCAs				
08/31/04	North of OPCAs	0.002	0.005*	5:00[6]	NA
	Pittsfield Generating Co.	0.004*		5:00[6]	
	Southeast of OPCAs	0.003		5:00[6]	
	Southwest of OPCAs	0.004*		2:00[6,7]	
	West of OPCAs	0.005		3:45[2]	
09/01/04 - 09/03/04[1]	North of OPCAs	NA	NA	NA	NA
	Pittsfield Generating Co.				
	Southeast of OPCAs				
	Southwest of OPCAs				
	West of OPCAs				
09/06/04 - 09/10/04[1]	North of OPCAs	NA	NA	NA	NA
	Pittsfield Generating Co.				
	Southeast of OPCAs				
	Southwest of OPCAs				
	West of OPCAs				
09/13/04	North of OPCAs	0.022	0.029*	9:45	N
	Pittsfield Generating Co.	0.029*		9:30	
	Southeast of OPCAs	0.031		7:45[2]	
	Southwest of OPCAs	0.021*		10:00	
	West of OPCAs	0.015		10:00	
09/14/04	North of OPCAs	0.008	0.006*	9:45	SW
	Pittsfield Generating Co.	0.008*		9:45	
	Southeast of OPCAs	0.010		9:45	
	Southwest of OPCAs	0.013*[3]		7:45[3]	
	West of OPCAs	0.002		9:45	

TABLE 5-2
AMBIENT AIR PARTICULATE MATTER DATA RECEIVED DURING SEPTEMBER 2004

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

Date	Sampler Location	Average Site Concentration (mg/m^3)	Background Site Concentration (mg/m^3)	Average Period (Hours:Min)	Predominant Wind Direction
09/15/04 - 09/17/04[1]	North of OPCAs	NA	NA	NA	NA
	Pittsfield Generating Co.				
	Southeast of OPCAs				
	Southwest of OPCAs				
	West of OPCAs				
09/20/04 - 09/23/04[1]	North of OPCAs	NA	NA	NA	NA
	Pittsfield Generating Co.				
	Southeast of OPCAs				
	Southwest of OPCAs				
	West of OPCAs				
09/24/04	North of OPCAs	0.006	0.011*	9:45	Calm
	Pittsfield Generating Co.	0.007*		9:45	
	Southeast of OPCAs	0.009		9:45	
	Southwest of OPCAs	0.002*		6:00[4]	
	West of OPCAs	0.002		9:45	
09/27/04[1]	North of OPCAs	NA	NA	NA	NA
	Pittsfield Generating Co.				
	Southeast of OPCAs				
	Southwest of OPCAs				
	West of OPCAs				
09/28/04[5]	North of OPCAs	NA	NA	NA	NA
	Pittsfield Generating Co.				
	Southeast of OPCAs				
	Southwest of OPCAs				
	West of OPCAs				
09/29/04	North of OPCAs	0.003	0.012*	8:45[6]	ENE, NE
	Pittsfield Generating Co.	0.005*		8:30[6]	
	Southeast of OPCAs	0.000		8:30[6]	
	Southwest of OPCAs	0.007*		7:00[2]	
	West of OPCAs	0.003		8:30[6]	
09/30/04	North of OPCAs	0.016	0.021*	10:00	Calm
	Pittsfield Generating Co.	0.017*		10:00	
	Southeast of OPCAs	0.002		10:00	
	Southwest of OPCAs	0.020*		10:15	
	West of OPCAs	0.029		10:00	
Notification Level		0.120			

Notes:
NA - Not Available

* Measured with DR-2000. All others measured with pDR-1000.

Background monitoring location inside GE Gate 31 on the corner of Woodlawn Avenue and Tyler Street.

[1] Sampling was not performed due to lack of site activity.

[2] Sampling period was shortened due to instrument malfunction (dead battery).

[3] Data were modified due to false high readings in the morning.

[4] Sampling period was shortened due to instrument malfunction.

[5] Sampling was not performed due to precipitation/threat of precipitation.

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

[7] Sampling period was shortened due to switching of monitors.

TABLE 5-3
AIR SAMPLE DATA RECEIVED DURING SEPTEMBER 2004

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

Date	Southwest of OPCAs (µg/m^3)	Southwest of OPCAs colocated (µg/m^3)	West of OPCAs (µg/m^3)	North of OPCAs (µg/m^3)	Southeast of OPCAs (µg/m^3)	Pittsfield Generating (PGE) (µg/m^3)	Background Inside GE Gate 31 (µg/m^3)
09/13 - 09/14/04	0.0023	0.0025	0.0009	0.0006	0.0010	0.0033	0.0019
09/14 - 09/15/04	ND	0.0017	0.0020	ND	0.0006	0.0015	0.0031
Notification Level	0.05	0.05	0.05	0.05	0.05	0.05	0.05

Note:
ND - Non Detect (<0.0003)

TABLE 5-4
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 2004

Month / Year	Total Volume of Leachate Transferred (Gallons)
September 2003	94,000
October 2003	84,000
November 2003	86,500
December 2003	102,500
January 2004	35,000
February 2004	30,000
March 2004	98,000
April 2004	107,000
May 2004	164,500
June 2004	147,500
July 2004	171,000
August 2004	214,000
September 2004	230,000

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 2004

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

a. Activities Undertaken/Completed

Initiated survey of pre-design investigation sampling locations (September 21, 2004).

b. Sampling/Test Results Received

None

c. Work Plans/Reports/Documents Submitted

None

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

Continue survey of pre-design investigation sampling locations and other preparations in advance of pre-design investigation.

e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

f. Proposed/Approved Work Plan Modifications

Received EPA approval of Addendum to Pre-Design Investigation Work Plan (September 8, 2004).

ITEM 7
PLANT AREA
UNKAMET BROOK AREA
(GECD170)
SEPTEMBER 2004

a. Activities Undertaken/Completed

- Continued pre-design investigation soil sampling.*
- Conducted other miscellaneous sampling, as identified in Table 7-1.

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 pre-design investigation soil sampling.*
- Initiate additional sampling proposed in the Interim Pre-Design Investigation Report (dated February 18, 2004).*

e. General Progress/Unresolved Issues/Potential Schedule Impacts

Additional sampling proposed in the Interim Pre-Design Investigation Report within the wetland area has been delayed due to the presence of standing water.

f. Proposed/Approved Work Plan Modifications

Received EPA conditional approval of the February 18, 2004 Interim Pre-Design Investigation Report (September 7, 2004).

TABLE 7-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

UNKAMET BROOK AREA
GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Depth (feet)	Matrix	Laboratory	Analyses	Date Received
OP-3 Firewater Tank Major Excavation Removal	OP3-BORING-1	9/24/04	6-8	Soil	SGS	VOC	9/30/04
OP-3 Firewater Tank Major Excavation Removal	OP3-BORING-2	9/24/04	6-8	Soil	SGS	VOC	9/30/04
OP-3 Firewater Tank Major Excavation Removal	OP3-BORING-3	9/24/04	7-8	Soil	SGS	VOC	9/30/04
OP-3 Firewater Tank Major Excavation Removal	OP3-COMPOSITE-1	9/24/04	0-8	Soil	SGS	TCLP	9/30/04
Pre-Design Soil Investigation Sampling	RAA10-DUP-100 (RAA10-E-VV20)	9/21/04	6-15	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-DUP-101 (RAA10-E-LL12)	9/23/04	6-15	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-DUP-102 (RAA10-E-X12)	9/30/04	6-15	Soil	SGS	PCB, SVOC, Inorganics, PCDD/PCDF	
Pre-Design Soil Investigation Sampling	RAA10-DUP-98 (RAA10-E-FF14)	9/8/04	3-6	Soil	SGS	PCB, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-DUP-99 (RAA10-E-FF14)	9/8/04	4-6	Soil	SGS	VOC	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-DD22	9/7/04	1-3	Soil	SGS	PCB	9/20/04
Pre-Design Soil Investigation Sampling	RAA10-E-DD22	9/7/04	3-6	Soil	SGS	PCB	9/20/04
Pre-Design Soil Investigation Sampling	RAA10-E-DD22	9/7/04	6-15	Soil	SGS	PCB	9/20/04
Pre-Design Soil Investigation Sampling	RAA10-E-DD22	9/7/04	0-1	Soil	SGS	PCB, VOC, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	9/20/04
Pre-Design Soil Investigation Sampling	RAA10-E-DD24	9/7/04	0-1	Soil	SGS	PCB	9/20/04
Pre-Design Soil Investigation Sampling	RAA10-E-DD24	9/7/04	1-3	Soil	SGS	PCB	9/20/04
Pre-Design Soil Investigation Sampling	RAA10-E-DD24	9/7/04	3-6	Soil	SGS	PCB	9/20/04
Pre-Design Soil Investigation Sampling	RAA10-E-DD24	9/7/04	6-15	Soil	SGS	PCB	9/20/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF14	9/8/04	6-15	Soil	SGS	PCB, SVOC, Inorganics	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF14	9/8/04	3-6	Soil	SGS	PCB, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF14	9/8/04	0-1	Soil	SGS	PCB, VOC, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF14	9/8/04	1-3	Soil	SGS	PCB, VOC, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF14	9/8/04	4-6	Soil	SGS	VOC	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF14	9/8/04	8-10	Soil	SGS	VOC	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF16	9/8/04	1-3	Soil	SGS	PCB	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF16	9/8/04	3-6	Soil	SGS	PCB	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF16	9/8/04	6-15	Soil	SGS	PCB	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF16	9/8/04	0-1	Soil	SGS	PCB, VOC, SVOC, Inorganics	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF18	9/8/04	1-3	Soil	SGS	PCB	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF18	9/8/04	3-6	Soil	SGS	PCB, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF18	9/8/04	6-15	Soil	SGS	PCB, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF18	9/8/04	0-1	Soil	SGS	PCB, VOC, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF18	9/8/04	4-6	Soil	SGS	VOC	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF18	9/8/04	8-10	Soil	SGS	VOC	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF20	9/7/04	1-3	Soil	SGS	PCB	9/20/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF20	9/7/04	3-6	Soil	SGS	PCB	9/20/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF20	9/7/04	6-15	Soil	SGS	PCB	9/20/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF20	9/7/04	0-1	Soil	SGS	PCB, VOC, SVOC, Inorganics	9/20/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF22	9/8/04	1-3	Soil	SGS	PCB	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF22	9/8/04	3-6	Soil	SGS	PCB	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF22	9/8/04	6-15	Soil	SGS	PCB, SVOC, Inorganics	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF22	9/8/04	0-1	Soil	SGS	PCB, VOC, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF22	9/8/04	8-10	Soil	SGS	VOC	9/23/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF24	9/9/04	6-15	Soil	SGS	PCB	9/28/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF24	9/9/04	3-6	Soil	SGS	PCB, SVOC, Inorganics	9/28/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF24	9/9/04	1-3	Soil	SGS	PCB, VOC, SVOC, Inorganics	9/28/04
Pre-Design Soil Investigation Sampling	RAA10-E-FF24	9/9/04	4-6	Soil	SGS	VOC	9/28/04

TABLE 7-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

UNKAMET BROOK AREA
GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Depth (feet)	Matrix	Laboratory	Analyses	Date Received
Pre-Design Soil Investigation Sampling	RAA10-E-HH14	9/9/04	0-1	Soil	SGS	PCB	9/28/04
Pre-Design Soil Investigation Sampling	RAA10-E-HH14	9/9/04	1-3	Soil	SGS	PCB	9/28/04
Pre-Design Soil Investigation Sampling	RAA10-E-HH14	9/9/04	3-6	Soil	SGS	PCB	9/28/04
Pre-Design Soil Investigation Sampling	RAA10-E-HH14	9/9/04	6-15	Soil	SGS	PCB	9/28/04
Pre-Design Soil Investigation Sampling	RAA10-E-HH16	9/9/04	1-3	Soil	SGS	PCB	9/28/04
Pre-Design Soil Investigation Sampling	RAA10-E-HH16	9/9/04	3-6	Soil	SGS	PCB, SVOC, Inorganics	9/28/04
Pre-Design Soil Investigation Sampling	RAA10-E-HH16	9/9/04	6-15	Soil	SGS	PCB, SVOC, Inorganics	9/28/04
Pre-Design Soil Investigation Sampling	RAA10-E-HH16	9/9/04	0-1	Soil	SGS	PCB, VOC, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	9/28/04
Pre-Design Soil Investigation Sampling	RAA10-E-HH16	9/9/04	4-6	Soil	SGS	VOC	9/28/04
Pre-Design Soil Investigation Sampling	RAA10-E-HH16	9/9/04	6-8	Soil	SGS	VOC	9/28/04
Pre-Design Soil Investigation Sampling	RAA10-E-LL12	9/23/04	0-1	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-LL12	9/23/04	3-6	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-LL12	9/23/04	6-15	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-LL12	9/23/04	1-3	Soil	SGS	PCB, VOC, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	
Pre-Design Soil Investigation Sampling	RAA10-E-NN12	9/23/04	0-1	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-NN12	9/23/04	6-15	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-NN12	9/23/04	3-6	Soil	SGS	PCB, SVOC, Inorganics	
Pre-Design Soil Investigation Sampling	RAA10-E-NN12	9/23/04	1-3	Soil	SGS	PCB, VOC, SVOC, Inorganics	
Pre-Design Soil Investigation Sampling	RAA10-E-NN12	9/23/04	3-4	Soil	SGS	VOC	
Pre-Design Soil Investigation Sampling	RAA10-E-PP16	9/23/04	1-3	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-PP16	9/23/04	3-6	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-PP16	9/23/04	6-15	Soil	SGS	PCB, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	
Pre-Design Soil Investigation Sampling	RAA10-E-PP16	9/23/04	0-1	Soil	SGS	PCB, VOC, SVOC, Inorganics	
Pre-Design Soil Investigation Sampling	RAA10-E-PP16	9/23/04	6-8	Soil	SGS	VOC	
Pre-Design Soil Investigation Sampling	RAA10-E-RR16	9/23/04	6-15	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-RR16	9/23/04	3-6	Soil	SGS	PCB, SVOC, Inorganics	
Pre-Design Soil Investigation Sampling	RAA10-E-RR16	9/23/04	1-3	Soil	SGS	PCB, VOC, SVOC, Inorganics	
Pre-Design Soil Investigation Sampling	RAA10-E-RR16	9/23/04	0-1	Soil	SGS	PCB, VOC, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	
Pre-Design Soil Investigation Sampling	RAA10-E-RR16	9/23/04	4-6	Soil	SGS	VOC	
Pre-Design Soil Investigation Sampling	RAA10-E-TT15	9/23/04	0-1	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-TT17	9/23/04	0-1	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-TT19	9/23/04	0-1	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-UU16	9/23/04	0-1	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-UU17	9/23/04	0-1	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-UU18	9/23/04	0-1	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-UU19	9/23/04	0-1	Soil	SGS	PCB, VOC, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	
Pre-Design Soil Investigation Sampling	RAA10-E-VV18	9/21/04	0-1	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-VV18	9/21/04	1-3	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-VV18	9/21/04	3-6	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-VV18	9/21/04	6-8	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-VV20	9/21/04	0-1	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-VV20	9/21/04	1-3	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-VV20	9/21/04	6-15	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-VV20	9/21/04	3-6	Soil	SGS	PCB, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	
Pre-Design Soil Investigation Sampling	RAA10-E-VV20	9/21/04	4-6	Soil	SGS	VOC	
Pre-Design Soil Investigation Sampling	RAA10-E-X10	9/30/04	1-3	Soil	SGS	PCB	

TABLE 7-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

UNKAMET BROOK AREA
GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Depth (feet)	Matrix	Laboratory	Analyses	Date Received
Pre-Design Soil Investigation Sampling	RAA10-E-X10	9/30/04	3-6	Soil	SGS	PCB, SVOC, Inorganics, PCDD/PCDF	
Pre-Design Soil Investigation Sampling	RAA10-E-X10	9/30/04	6-15	Soil	SGS	PCB, SVOC, Inorganics, PCDD/PCDF	
Pre-Design Soil Investigation Sampling	RAA10-E-X10	9/30/04	0-1	Soil	SGS	PCB, VOC, SVOC, Inorganics, PCDD/PCDF	
Pre-Design Soil Investigation Sampling	RAA10-E-X10	9/30/04	10-12	Soil	SGS	VOC	
Pre-Design Soil Investigation Sampling	RAA10-E-X10	9/30/04	4-6	Soil	SGS	VOC	
Pre-Design Soil Investigation Sampling	RAA10-E-X12	9/30/04	3-6	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-X12	9/30/04	6-15	Soil	SGS	PCB, SVOC, Inorganics, PCDD/PCDF	
Pre-Design Soil Investigation Sampling	RAA10-E-X12	9/30/04	0-1	Soil	SGS	PCB, VOC, SVOC, Inorganics, PCDD/PCDF	
Pre-Design Soil Investigation Sampling	RAA10-E-X12	9/30/04	1-3	Soil	SGS	PCB, VOC, SVOC, Inorganics, PCDD/PCDF	
Pre-Design Soil Investigation Sampling	RAA10-E-X12	9/30/04	8-10	Soil	SGS	VOC	
Pre-Design Soil Investigation Sampling	RAA10-E-XX20	9/22/04	1-3	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-XX20	9/22/04	3-6	Soil	SGS	PCB	
Pre-Design Soil Investigation Sampling	RAA10-E-XX20	9/22/04	6-12	Soil	SGS	PCB, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	
Pre-Design Soil Investigation Sampling	RAA10-E-XX20	9/22/04	0-1	Soil	SGS	PCB, VOC, SVOC, Inorganics, PCDD/PCDF, Pest, Herb	
Pre-Design Soil Investigation Sampling	RAA10-E-XX20	9/22/04	10-12	Soil	SGS	VOC	

Note:

1. Field duplicate sample locations are presented in parenthesis.

TABLE 7-2
PCB DATA RECEIVED DURING SEPTEMBER 2004

PRE-DESIGN SOIL INVESTIGATION 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, -1248	Aroclor-1242	Aroclor-1254	Aroclor-1260	Total PCBs
RAA10-E-DD22	0-1	9/7/2004	ND(0.046)	ND(0.046)	ND(0.046)	0.020 J	0.020 J
	1-3	9/7/2004	ND(0.043)	ND(0.043)	ND(0.043)	ND(0.043)	ND(0.043)
	3-6	9/7/2004	ND(0.048)	ND(0.048)	ND(0.048)	ND(0.048)	ND(0.048)
	6-15	9/7/2004	ND(0.042)	ND(0.042)	ND(0.042)	ND(0.042)	ND(0.042)
RAA10-E-DD24	0-1	9/7/2004	ND(0.053)	ND(0.053)	0.058	0.043 J	0.101
	1-3	9/7/2004	ND(0.049)	ND(0.049)	ND(0.049)	ND(0.049)	ND(0.049)
	3-6	9/7/2004	ND(0.043)	ND(0.043)	ND(0.043)	ND(0.043)	ND(0.043)
	6-15	9/7/2004	ND(0.040)	ND(0.040)	0.075	ND(0.040)	0.075
RAA10-E-FF14	0-1	9/8/2004	ND(0.049)	ND(0.049)	0.15	ND(0.049)	0.15
	1-3	9/8/2004	ND(0.047)	ND(0.047)	ND(0.047)	ND(0.047)	ND(0.047)
	3-6	9/8/2004	ND(0.056) [ND(0.055)]	ND(0.056) [ND(0.055)]	ND(0.056) [ND(0.055)]	ND(0.056) [ND(0.055)]	ND(0.056) [ND(0.055)]
	6-15	9/8/2004	ND(0.042)	ND(0.042)	ND(0.042)	ND(0.042)	ND(0.042)
RAA10-E-FF16	0-1	9/8/2004	ND(0.048)	ND(0.048)	0.040 J	0.14	0.18
	1-3	9/8/2004	ND(0.044)	ND(0.044)	ND(0.044)	ND(0.044)	ND(0.044)
	3-6	9/8/2004	ND(0.039)	ND(0.039)	ND(0.039)	ND(0.039)	ND(0.039)
	6-15	9/8/2004	ND(0.039)	0.16	0.052	0.021 J	0.233
RAA10-E-FF18	0-1	9/8/2004	ND(0.045)	ND(0.045)	ND(0.045)	ND(0.045)	ND(0.045)
	1-3	9/8/2004	ND(0.046)	ND(0.046)	ND(0.046)	ND(0.046)	ND(0.046)
	3-6	9/8/2004	ND(0.039)	ND(0.039)	ND(0.039)	ND(0.039)	ND(0.039)
	6-15	9/8/2004	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)
RAA10-E-FF20	0-1	9/7/2004	ND(0.046)	ND(0.046)	ND(0.046)	0.022 J	0.022 J
	1-3	9/7/2004	ND(0.043)	ND(0.043)	ND(0.043)	ND(0.043)	ND(0.043)
	3-6	9/7/2004	ND(0.047)	ND(0.047)	ND(0.047)	ND(0.047)	ND(0.047)
	6-15	9/7/2004	ND(0.043)	ND(0.043)	ND(0.043)	ND(0.043)	ND(0.043)
RAA10-E-FF22	0-1	9/8/2004	ND(0.046)	ND(0.046)	ND(0.046)	ND(0.046)	ND(0.046)
	1-3	9/8/2004	ND(0.046)	ND(0.046)	ND(0.046)	ND(0.046)	ND(0.046)
	3-6	9/8/2004	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)
	6-15	9/8/2004	ND(0.041)	ND(0.041)	ND(0.041)	ND(0.041)	ND(0.041)
RAA10-E-FF24	1-3	9/9/2004	ND(0.044)	ND(0.044)	ND(0.044)	ND(0.044)	ND(0.044)
	3-6	9/9/2004	ND(0.043)	ND(0.043)	ND(0.043)	ND(0.043)	ND(0.043)
	6-15	9/9/2004	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)
RAA10-E-HH14	0-1	9/9/2004	ND(0.052)	ND(0.052)	0.026 J	0.10	0.126
	1-3	9/9/2004	ND(0.043)	ND(0.043)	ND(0.043)	ND(0.043)	ND(0.043)
	3-6	9/9/2004	ND(0.056)	ND(0.056)	ND(0.056)	ND(0.056)	ND(0.056)
	6-15	9/9/2004	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)
RAA10-E-HH16	0-1	9/9/2004	ND(0.054)	ND(0.054)	0.044 J	0.10	0.144
	1-3	9/9/2004	ND(0.047)	ND(0.047)	ND(0.047)	ND(0.047)	ND(0.047)
	3-6	9/9/2004	ND(0.044)	ND(0.044)	ND(0.044)	ND(0.044)	ND(0.044)
	6-15	9/9/2004	ND(0.039)	ND(0.039)	ND(0.039)	ND(0.039)	ND(0.039)

Notes:
1. Samples were collected by Blasland, Bouck & Lee, Inc., and submitted to SGS Environmental Services, Inc. for analysis of PCBs.
2. ND - Analyte was not detected. The number in parentheses is the associated detection limit.
3. Field duplicate sample results are presented in brackets.

Data Qualifiers:

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

TABLE 7-3
APPENDIX IX+3 DATA RECEIVED DURING SEPTEMBER 2004

PRE-DESIGN SOIL INVESTIGATION SAMPLING
UNKAMET BROOK AREA
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight parts per million, ppm)

Sample ID: / Sample Depth(Feet): / Parameter / Date Collected:	RAA10-E-DD22 0-1 09/07/04	RAA10-E-FF14 0-1 09/08/04	RAA10-E-FF14 1-3 09/08/04
Volatile Organics			
Acetone	ND(0.028)	ND(0.030)	ND(0.028)
Benzene	ND(0.0070)	ND(0.0074)	ND(0.0071)
Chlorobenzene	ND(0.0070)	ND(0.0074)	ND(0.0071)
Semivolatile Organics			
Butylbenzylphthalate	ND(0.56)	ND(0.69)	ND(0.80)
Di-n-Butylphthalate	ND(0.56)	0.14 J	ND(0.80)
Fluoranthene	ND(0.56)	ND(0.69)	ND(0.80)
Organochlorine Pesticides			
None Detected	--	--	--
Organophosphate Pesticides			
None Detected	--	--	--
Herbicides			
None Detected	--	--	--
Furans			
2,3,7,8-TCDF	0.0000051 Y	0.0000032 Y	ND(0.00000054)
TCDFs (total)	0.000039	0.000023	ND(0.00000053)
1,2,3,7,8-PeCDF	0.0000023 J	ND(0.0000017)	ND(0.00000019)
2,3,4,7,8-PeCDF	0.0000045 J	ND(0.0000022)	ND(0.00000029)
PeCDFs (total)	0.000050	0.0000093	ND(0.0000014)
1,2,3,4,7,8-HxCDF	0.0000044 J	ND(0.0000027)	ND(0.00000088)
1,2,3,6,7,8-HxCDF	0.0000022 J	ND(0.0000024)	ND(0.00000048)
1,2,3,7,8,9-HxCDF	0.00000090 J	ND(0.00000021)	ND(0.00000010)
2,3,4,6,7,8-HxCDF	0.0000032 J	ND(0.0000018)	ND(0.00000044)
HxCDFs (total)	0.000098	0.000015	ND(0.0000020)
1,2,3,4,6,7,8-HpCDF	0.00016	0.000011	ND(0.0000022)
1,2,3,4,7,8,9-HpCDF	0.0000015 J	ND(0.00000096)	ND(0.00000024)
HpCDFs (total)	0.00027	0.000018	ND(0.0000022)
OCDF	0.000084	ND(0.0000060)	ND(0.0000011)
Dioxins			
2,3,7,8-TCDD	ND(0.00000030) X	ND(0.00000013)	ND(0.00000012)
TCDDs (total)	ND(0.00000066)	ND(0.00000016)	ND(0.0000010)
1,2,3,7,8-PeCDD	ND(0.0000032) X	ND(0.00000046)	ND(0.00000029)
PeCDDs (total)	0.0000016 J	ND(0.00000047)	ND(0.00000029)
1,2,3,4,7,8-HxCDD	ND(0.00000071)	ND(0.00000025)	ND(0.00000010)
1,2,3,6,7,8-HxCDD	0.0000021 J	ND(0.00000029)	ND(0.000000068)
1,2,3,7,8,9-HxCDD	0.00000089 J	ND(0.00000026)	ND(0.00000015)
HxCDDs (total)	0.000014	ND(0.0000012)	ND(0.00000037)
1,2,3,4,6,7,8-HpCDD	0.000036	0.0000050 J	ND(0.0000015)
HpCDDs (total)	0.000061	0.000012	ND(0.0000025)
OCDD	0.00035	0.000098	0.000030
Total TEQs (WHO TEFs)	0.0000080	0.0000018	0.00000044
Inorganics			
Arsenic	4.30	5.00	2.70
Barium	76.0	94.0	140
Beryllium	0.660	0.790	0.800
Cadmium	0.440 B	0.220 B	0.280 B
Chromium	18.0	18.0	18.0
Cobalt	11.0	8.70	10.0
Copper	18.0	20.0	18.0
Cyanide	0.160	0.0920 B	0.0520 B
Lead	17.0	20.0	9.20
Mercury	0.160	0.0980 B	0.0460 B
Nickel	17.0	17.0	19.0
Selenium	ND(1.00)	1.10 B	ND(1.10)
Silver	ND(1.00)	ND(1.10)	ND(1.10)
Sulfide	ND(7.00)	14.0	11.0
Thallium	ND(1.40)	2.20	1.80
Tin	5.30 B	5.60 B	4.20 B
Vanadium	16.0	18.0	20.0
Zinc	76.0	77.0	83.0

TABLE 7-3
APPENDIX IX+3 DATA RECEIVED DURING SEPTEMBER 2004

PRE-DESIGN SOIL INVESTIGATION SAMPLING
UNKAMET BROOK AREA
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight parts per million, ppm)

Sample ID: / Sample Depth(Feet): / Parameter / Date Collected:	RAA10-E-FF14 3-6 09/08/04	RAA10-E-FF14 4-6 09/08/04	RAA10-E-FF14 6-15 09/08/04
Volatile Organics			
Acetone	NA	ND(0.037) [0.015 J]	NA
Benzene	NA	ND(0.0092) [0.012]	NA
Chlorobenzene	NA	ND(0.0092) [ND(0.0078)]	NA
Semivolatile Organics			
Butylbenzylphthalate	ND(0.78) [ND(0.55)]	NA	ND(0.46)
Di-n-Butylphthalate	ND(0.78) [ND(0.55)]	NA	ND(0.46)
Fluoranthene	ND(0.78) [ND(0.55)]	NA	ND(0.46)
Organochlorine Pesticides			
None Detected	--	NA	NA
Organophosphate Pesticides			
None Detected	--	NA	NA
Herbicides			
None Detected	--	NA	NA
Furans			
2,3,7,8-TCDF	ND(0.00000015) [ND(0.00000012)]	NA	NA
TCDFs (total)	ND(0.00000015) [ND(0.00000014)]	NA	NA
1,2,3,7,8-PeCDF	ND(0.00000012) [ND(0.00000013)]	NA	NA
2,3,4,7,8-PeCDF	ND(0.00000012) [ND(0.00000013)]	NA	NA
PeCDFs (total)	ND(0.00000012) [ND(0.00000013)]	NA	NA
1,2,3,4,7,8-HxCDF	ND(0.00000018) [ND(0.000000086)]	NA	NA
1,2,3,6,7,8-HxCDF	ND(0.000000077) [ND(0.000000037)]	NA	NA
1,2,3,7,8,9-HxCDF	ND(0.000000090) [ND(0.000000045)]	NA	NA
2,3,4,6,7,8-HxCDF	ND(0.00000018) [ND(0.000000040)]	NA	NA
HxCDFs (total)	ND(0.00000019) [ND(0.000000086)]	NA	NA
1,2,3,4,6,7,8-HpCDF	ND(0.00000034) [ND(0.00000017)]	NA	NA
1,2,3,4,7,8,9-HpCDF	ND(0.00000011) [ND(0.000000057)]	NA	NA
HpCDFs (total)	ND(0.00000034) [ND(0.00000017)]	NA	NA
OCDF	ND(0.00000071) [ND(0.00000019)]	NA	NA
Dioxins			
2,3,7,8-TCDD	ND(0.00000011) [ND(0.00000010)]	NA	NA
TCDDs (total)	ND(0.00000011) [ND(0.00000010)]	NA	NA
1,2,3,7,8-PeCDD	ND(0.00000025) [ND(0.00000018)]	NA	NA
PeCDDs (total)	ND(0.00000025) [ND(0.00000018)]	NA	NA
1,2,3,4,7,8-HxCDD	ND(0.00000013) [ND(0.000000069)]	NA	NA
1,2,3,6,7,8-HxCDD	ND(0.00000010) [ND(0.000000055)]	NA	NA
1,2,3,7,8,9-HxCDD	ND(0.00000014) [ND(0.000000094)]	NA	NA
HxCDDs (total)	ND(0.00000015) [ND(0.00000020)]	NA	NA
1,2,3,4,6,7,8-HpCDD	ND(0.00000044) [ND(0.00000029)]	NA	NA
HpCDDs (total)	ND(0.00000044) [ND(0.00000029)]	NA	NA
OCDD	ND(0.0000024) [ND(0.0000026)]	NA	NA
Total TEQs (WHO TEFs)	0.00000027 [0.00000021]	NA	NA
Inorganics			
Arsenic	2.60 [2.60]	NA	3.50
Barium	110 [74.0]	NA	16.0 B
Beryllium	0.520 [0.500]	NA	0.180 B
Cadmium	0.170 B [0.260 B]	NA	0.110 B
Chromium	14.0 [13.0]	NA	6.00
Cobalt	8.10 [9.50]	NA	7.50
Copper	18.0 [16.0]	NA	9.90
Cyanide	0.0670 B [0.0880 B]	NA	0.0310 B
Lead	8.00 [7.30]	NA	3.80
Mercury	ND(0.170) [ND(0.170)]	NA	ND(0.130)
Nickel	16.0 [16.0]	NA	12.0
Selenium	1.50 [1.20 B]	NA	ND(1.00)
Silver	ND(1.30) [ND(1.20)]	NA	ND(1.00)
Sulfide	11.0 [11.0]	NA	28.0
Thallium	ND(1.70) [1.40 B]	NA	1.20 B
Tin	4.90 B [5.10 B]	NA	4.20 B
Vanadium	15.0 [16.0]	NA	6.30
Zinc	61.0 [65.0]	NA	33.0

TABLE 7-3
APPENDIX IX+3 DATA RECEIVED DURING SEPTEMBER 2004

PRE-DESIGN SOIL INVESTIGATION SAMPLING
UNKAMET BROOK AREA
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight parts per million, ppm)

Sample ID: / Sample Depth(Feet): / Parameter / Date Collected:	RAA10-E-FF14 8-10 09/08/04	RAA10-E-FF16 0-1 09/08/04	RAA10-E-FF18 0-1 09/08/04	RAA10-E-FF18 3-6 09/08/04	RAA10-E-FF18 4-6 09/08/04
Volatile Organics					
Acetone	ND(0.025)	ND(0.029)	ND(0.027)	NA	ND(0.023)
Benzene	0.021	ND(0.0073)	ND(0.0068)	NA	ND(0.0059)
Chlorobenzene	0.14	0.015	ND(0.0068)	NA	ND(0.0059)
Semivolatile Organics					
Butylbenzylphthalate	NA	ND(0.58)	ND(0.68)	ND(0.39)	NA
Di-n-Butylphthalate	NA	ND(0.58)	ND(0.68)	ND(0.39)	NA
Fluoranthene	NA	ND(0.58)	ND(0.68)	ND(0.39)	NA
Organochlorine Pesticides					
None Detected	NA	NA	--	--	NA
Organophosphate Pesticides					
None Detected	NA	NA	--	--	NA
Herbicides					
None Detected	NA	NA	--	--	NA
Furans					
2,3,7,8-TCDF	NA	NA	0.0000017 Y	ND(0.000000091)	NA
TCDFs (total)	NA	NA	0.0000045	ND(0.000000091)	NA
1,2,3,7,8-PeCDF	NA	NA	ND(0.00000052)	ND(0.000000080)	NA
2,3,4,7,8-PeCDF	NA	NA	ND(0.00000070)	ND(0.000000080)	NA
PeCDFs (total)	NA	NA	ND(0.0000025)	ND(0.000000082)	NA
1,2,3,4,7,8-HxCDF	NA	NA	ND(0.0000012)	ND(0.000000079)	NA
1,2,3,6,7,8-HxCDF	NA	NA	ND(0.00000043)	ND(0.000000025)	NA
1,2,3,7,8,9-HxCDF	NA	NA	ND(0.000000084)	ND(0.000000030)	NA
2,3,4,6,7,8-HxCDF	NA	NA	ND(0.00000065)	ND(0.000000027)	NA
HxCDFs (total)	NA	NA	0.0000037	ND(0.000000079)	NA
1,2,3,4,6,7,8-HpCDF	NA	NA	0.000011	ND(0.00000016)	NA
1,2,3,4,7,8,9-HpCDF	NA	NA	ND(0.00000031)	ND(0.000000059)	NA
HpCDFs (total)	NA	NA	0.000019	ND(0.00000016)	NA
OCDF	NA	NA	ND(0.0000061)	ND(0.00000018)	NA
Dioxins					
2,3,7,8-TCDD	NA	NA	ND(0.00000012)	ND(0.000000093)	NA
TCDDs (total)	NA	NA	ND(0.00000022)	ND(0.000000093)	NA
1,2,3,7,8-PeCDD	NA	NA	ND(0.00000029)	ND(0.00000015)	NA
PeCDDs (total)	NA	NA	ND(0.00000029)	ND(0.00000015)	NA
1,2,3,4,7,8-HxCDD	NA	NA	ND(0.00000017)	ND(0.000000079)	NA
1,2,3,6,7,8-HxCDD	NA	NA	ND(0.00000025)	ND(0.000000063)	NA
1,2,3,7,8,9-HxCDD	NA	NA	ND(0.00000014)	ND(0.000000067)	NA
HxCDDs (total)	NA	NA	ND(0.00000084)	ND(0.00000016)	NA
1,2,3,4,6,7,8-HpCDD	NA	NA	0.0000038 J	ND(0.00000011)	NA
HpCDDs (total)	NA	NA	0.0000038	ND(0.00000011)	NA
OCDD	NA	NA	0.000031	ND(0.00000079)	NA
Total TEQs (WHO TEFs)	NA	NA	0.00000086	0.00000017	NA
Inorganics					
Arsenic	NA	6.30	4.10	1.70	NA
Barium	NA	99.0	75.0	8.40 B	NA
Beryllium	NA	0.710	0.790	0.230 B	NA
Cadmium	NA	0.380 B	0.230 B	0.180 B	NA
Chromium	NA	22.0	17.0	4.80	NA
Cobalt	NA	11.0	12.0	5.20	NA
Copper	NA	20.0	18.0	8.80	NA
Cyanide	NA	0.240	0.140	ND(0.120)	NA
Lead	NA	26.0	12.0	3.50	NA
Mercury	NA	0.150	0.0480 B	ND(0.120)	NA
Nickel	NA	20.0	18.0	8.60	NA
Selenium	NA	1.20	1.10	ND(1.00)	NA
Silver	NA	ND(1.10)	ND(1.00)	ND(1.00)	NA
Sulfide	NA	7.00 B	6.50 B	ND(5.80)	NA
Thallium	NA	2.10	1.50	ND(1.20)	NA
Tin	NA	5.60 B	3.90 B	3.40 B	NA
Vanadium	NA	24.0	19.0	5.20	NA
Zinc	NA	96.0	77.0	27.0	NA

TABLE 7-3
APPENDIX IX+3 DATA RECEIVED DURING SEPTEMBER 2004

PRE-DESIGN SOIL INVESTIGATION SAMPLING
UNKAMET BROOK AREA
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight parts per million, ppm)

Sample ID: / Sample Depth(Feet): / Parameter / Date Collected:	RAA10-E-FF18 6-15 09/08/04	RAA10-E-FF18 8-10 09/08/04	RAA10-E-FF20 0-1 09/07/04	RAA10-E-FF22 0-1 09/08/04	RAA10-E-FF22 6-15 09/08/04
Volatile Organics					
Acetone	NA	ND(0.023)	ND(0.028)	ND(0.027)	NA
Benzene	NA	ND(0.0058)	ND(0.0070)	ND(0.0068)	NA
Chlorobenzene	NA	ND(0.0058)	ND(0.0070)	ND(0.0068)	NA
Semivolatile Organics					
Butylbenzylphthalate	ND(0.44)	NA	ND(0.51)	ND(0.64)	0.16 J
Di-n-Butylphthalate	ND(0.44)	NA	ND(0.51)	ND(0.64)	ND(0.41)
Fluoranthene	ND(0.44)	NA	ND(0.51)	ND(0.64)	ND(0.41)
Organochlorine Pesticides					
None Detected	--	NA	NA	--	NA
Organophosphate Pesticides					
None Detected	--	NA	NA	--	NA
Herbicides					
None Detected	--	NA	NA	--	NA
Furans					
2,3,7,8-TCDF	ND(0.000000077)	NA	NA	0.0000045 Y	NA
TCDFs (total)	ND(0.000000077)	NA	NA	0.000021	NA
1,2,3,7,8-PeCDF	ND(0.000000069)	NA	NA	ND(0.0000014)	NA
2,3,4,7,8-PeCDF	ND(0.000000069)	NA	NA	ND(0.0000018)	NA
PeCDFs (total)	ND(0.000000080)	NA	NA	0.0000058	NA
1,2,3,4,7,8-HxCDF	ND(0.000000043)	NA	NA	ND(0.0000027)	NA
1,2,3,6,7,8-HxCDF	ND(0.000000024)	NA	NA	ND(0.00000099)	NA
1,2,3,7,8,9-HxCDF	ND(0.000000026)	NA	NA	ND(0.00000012)	NA
2,3,4,6,7,8-HxCDF	ND(0.000000023)	NA	NA	ND(0.0000010)	NA
HxCDFs (total)	ND(0.000000043)	NA	NA	0.000028	NA
1,2,3,4,6,7,8-HpCDF	ND(0.000000064)	NA	NA	0.000068	NA
1,2,3,4,7,8,9-HpCDF	ND(0.000000080)	NA	NA	ND(0.00000062)	NA
HpCDFs (total)	ND(0.000000080)	NA	NA	0.00011	NA
OCDF	ND(0.00000013)	NA	NA	0.000031	NA
Dioxins					
2,3,7,8-TCDD	ND(0.000000083)	NA	NA	ND(0.00000011)	NA
TCDDs (total)	ND(0.000000083)	NA	NA	ND(0.00000038)	NA
1,2,3,7,8-PeCDD	ND(0.00000015)	NA	NA	ND(0.00000027)	NA
PeCDDs (total)	ND(0.00000015)	NA	NA	ND(0.00000068)	NA
1,2,3,4,7,8-HxCDD	ND(0.00000011)	NA	NA	ND(0.00000023)	NA
1,2,3,6,7,8-HxCDD	ND(0.000000087)	NA	NA	ND(0.00000090)	NA
1,2,3,7,8,9-HxCDD	ND(0.000000090)	NA	NA	ND(0.00000041)	NA
HxCDDs (total)	ND(0.00000015)	NA	NA	ND(0.0000022)	NA
1,2,3,4,6,7,8-HpCDD	ND(0.000000082)	NA	NA	0.000014	NA
HpCDDs (total)	ND(0.00000015)	NA	NA	0.000025	NA
OCDD	ND(0.00000057)	NA	NA	0.00013	NA
Total TEQs (WHO TEFs)	0.00000016	NA	NA	0.0000023	NA
Inorganics					
Arsenic	1.20	NA	4.00	6.80	2.00
Barium	9.90 B	NA	72.0	100	13.0 B
Beryllium	0.160 B	NA	0.690	0.750	0.0710 B
Cadmium	0.170 B	NA	0.370 B	0.560	0.130 B
Chromium	4.10	NA	16.0	15.0	2.70
Cobalt	5.10	NA	10.0	14.0	4.60 B
Copper	8.90	NA	18.0	19.0	12.0
Cyanide	ND(0.240)	NA	0.140 B	0.190	ND(0.250)
Lead	2.70	NA	16.0	23.0	3.60
Mercury	ND(0.120)	NA	0.0630 B	0.140	ND(0.120)
Nickel	8.00	NA	15.0	18.0	7.70
Selenium	ND(1.00)	NA	0.760 B	1.40	ND(1.00)
Silver	0.130 B	NA	ND(1.00)	0.170 B	ND(1.00)
Sulfide	15.0	NA	11.0	6.60 B	5.90 B
Thallium	ND(1.20)	NA	ND(1.40)	1.60	ND(1.20)
Tin	3.30 B	NA	4.80 B	5.60 B	3.30 B
Vanadium	4.40 B	NA	17.0	21.0	2.90 B
Zinc	20.0	NA	71.0	73.0	20.0

TABLE 7-3
APPENDIX IX+3 DATA RECEIVED DURING SEPTEMBER 2004

PRE-DESIGN SOIL INVESTIGATION SAMPLING
UNKAMET BROOK AREA
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight parts per million, ppm)

Sample ID: / Sample Depth(Feet): / Parameter / Date Collected:	RAA10-E-FF22 8-10 09/08/04	RAA10-E-FF24 1-3 09/09/04	RAA10-E-FF24 3-6 09/09/04	RAA10-E-FF24 4-6 09/09/04	RAA10-E-HH16 0-1 09/09/04
Volatile Organics					
Acetone	ND(0.024)	ND(0.026)	NA	ND(0.026)	ND(0.032)
Benzene	ND(0.0060)	ND(0.0066)	NA	ND(0.0064)	ND(0.0080)
Chlorobenzene	ND(0.0060)	ND(0.0066)	NA	ND(0.0064)	ND(0.0080)
Semivolatile Organics					
Butylbenzylphthalate	NA	ND(0.44)	ND(0.43)	NA	ND(0.54)
Di-n-Butylphthalate	NA	ND(0.44)	ND(0.43)	NA	ND(0.54)
Fluoranthene	NA	ND(0.44)	ND(0.43)	NA	0.11 J
Organochlorine Pesticides					
None Detected	NA	NA	NA	NA	--
Organophosphate Pesticides					
None Detected	NA	NA	NA	NA	--
Herbicides					
None Detected	NA	NA	NA	NA	--
Furans					
2,3,7,8-TCDF	NA	NA	NA	NA	0.0000027 YJ
TCDFs (total)	NA	NA	NA	NA	0.000019
1,2,3,7,8-PeCDF	NA	NA	NA	NA	0.0000013 J
2,3,4,7,8-PeCDF	NA	NA	NA	NA	0.0000027 J
PeCDFs (total)	NA	NA	NA	NA	0.000038
1,2,3,4,7,8-HxCDF	NA	NA	NA	NA	0.0000023 J
1,2,3,6,7,8-HxCDF	NA	NA	NA	NA	0.0000018 J
1,2,3,7,8,9-HxCDF	NA	NA	NA	NA	ND(0.00000089)
2,3,4,6,7,8-HxCDF	NA	NA	NA	NA	0.0000028 J
HxCDFs (total)	NA	NA	NA	NA	0.000058
1,2,3,4,6,7,8-HpCDF	NA	NA	NA	NA	0.000066
1,2,3,4,7,8,9-HpCDF	NA	NA	NA	NA	ND(0.00000074)
HpCDFs (total)	NA	NA	NA	NA	0.00011
OCDF	NA	NA	NA	NA	0.000032
Dioxins					
2,3,7,8-TCDD	NA	NA	NA	NA	ND(0.00000039)
TCDDs (total)	NA	NA	NA	NA	ND(0.0000010)
1,2,3,7,8-PeCDD	NA	NA	NA	NA	ND(0.00000074)
PeCDDs (total)	NA	NA	NA	NA	0.0000012 J
1,2,3,4,7,8-HxCDD	NA	NA	NA	NA	ND(0.00000074)
1,2,3,6,7,8-HxCDD	NA	NA	NA	NA	ND(0.00000091) X
1,2,3,7,8,9-HxCDD	NA	NA	NA	NA	ND(0.00000074)
HxCDDs (total)	NA	NA	NA	NA	0.0000059 J
1,2,3,4,6,7,8-HpCDD	NA	NA	NA	NA	0.000015
HpCDDs (total)	NA	NA	NA	NA	0.000026
OCDD	NA	NA	NA	NA	0.00014
Total TEQs (WHO TEFs)	NA	NA	NA	NA	0.0000039
Inorganics					
Arsenic	NA	4.00	3.00	NA	6.00
Barium	NA	52.0	58.0	NA	100
Beryllium	NA	0.640	0.540	NA	0.860
Cadmium	NA	0.230 B	0.180 B	NA	0.330 B
Chromium	NA	12.0	12.0	NA	21.0
Cobalt	NA	13.0	11.0	NA	11.0
Copper	NA	15.0	14.0	NA	18.0
Cyanide	NA	0.0690 B	0.0270 B	NA	0.170
Lead	NA	7.00	7.20	NA	25.0
Mercury	NA	0.0210 B	0.0690 B	NA	0.180
Nickel	NA	18.0	17.0	NA	18.0
Selenium	NA	1.00	0.640 B	NA	0.860 B
Silver	NA	ND(1.00)	ND(1.00)	NA	ND(1.20)
Sulfide	NA	6.30 B	10.0	NA	13.0
Thallium	NA	1.20 B	ND(1.30)	NA	1.40 B
Tin	NA	3.50 B	3.80 B	NA	6.20 B
Vanadium	NA	16.0	14.0	NA	19.0
Zinc	NA	63.0	67.0	NA	91.0

TABLE 7-3
APPENDIX IX+3 DATA RECEIVED DURING SEPTEMBER 2004

PRE-DESIGN SOIL INVESTIGATION SAMPLING
UNKAMET BROOK AREA
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight parts per million, ppm)

Sample ID: / Sample Depth(Feet): / Parameter / Date Collected:	RAA10-E-HH16 3-6 09/09/04	RAA10-E-HH16 4-6 09/09/04	RAA10-E-HH16 6-8 09/09/04	RAA10-E-HH16 6-15 09/09/04
Volatile Organics				
Acetone	NA	ND(0.022)	ND(0.023)	NA
Benzene	NA	ND(0.0055)	ND(0.0057)	NA
Chlorobenzene	NA	ND(0.0055)	0.0066	NA
Semivolatile Organics				
Butylbenzylphthalate	ND(0.44)	NA	NA	ND(0.39)
Di-n-Butylphthalate	ND(0.44)	NA	NA	ND(0.39)
Fluoranthene	ND(0.44)	NA	NA	ND(0.39)
Organochlorine Pesticides				
None Detected	NA	NA	NA	NA
Organophosphate Pesticides				
None Detected	NA	NA	NA	NA
Herbicides				
None Detected	NA	NA	NA	NA
Furans				
2,3,7,8-TCDF	NA	NA	NA	NA
TCDFs (total)	NA	NA	NA	NA
1,2,3,7,8-PeCDF	NA	NA	NA	NA
2,3,4,7,8-PeCDF	NA	NA	NA	NA
PeCDFs (total)	NA	NA	NA	NA
1,2,3,4,7,8-HxCDF	NA	NA	NA	NA
1,2,3,6,7,8-HxCDF	NA	NA	NA	NA
1,2,3,7,8,9-HxCDF	NA	NA	NA	NA
2,3,4,6,7,8-HxCDF	NA	NA	NA	NA
HxCDFs (total)	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDF	NA	NA	NA	NA
1,2,3,4,7,8,9-HpCDF	NA	NA	NA	NA
HpCDFs (total)	NA	NA	NA	NA
OCDF	NA	NA	NA	NA
Dioxins				
2,3,7,8-TCDD	NA	NA	NA	NA
TCDDs (total)	NA	NA	NA	NA
1,2,3,7,8-PeCDD	NA	NA	NA	NA
PeCDDs (total)	NA	NA	NA	NA
1,2,3,4,7,8-HxCDD	NA	NA	NA	NA
1,2,3,6,7,8-HxCDD	NA	NA	NA	NA
1,2,3,7,8,9-HxCDD	NA	NA	NA	NA
HxCDDs (total)	NA	NA	NA	NA
1,2,3,4,6,7,8-HpCDD	NA	NA	NA	NA
HpCDDs (total)	NA	NA	NA	NA
OCDD	NA	NA	NA	NA
Total TEQs (WHO TEFs)	NA	NA	NA	NA
Inorganics				
Arsenic	1.90	NA	NA	1.70
Barium	34.0	NA	NA	9.30 B
Beryllium	0.300 B	NA	NA	0.160 B
Cadmium	0.180 B	NA	NA	0.140 B
Chromium	8.30	NA	NA	5.20
Cobalt	7.40	NA	NA	8.90
Copper	11.0	NA	NA	9.80
Cyanide	0.0150 B	NA	NA	ND(0.120)
Lead	5.10	NA	NA	4.00
Mercury	ND(0.130)	NA	NA	ND(0.120)
Nickel	12.0	NA	NA	9.90
Selenium	0.960 B	NA	NA	ND(1.00)
Silver	ND(1.00)	NA	NA	ND(1.00)
Sulfide	15.0	NA	NA	32.0
Thallium	ND(1.30)	NA	NA	ND(1.20)
Tin	4.30 B	NA	NA	3.30 B
Vanadium	7.80	NA	NA	5.30
Zinc	49.0	NA	NA	24.0

TABLE 7-3
APPENDIX IX+3 DATA RECEIVED DURING SEPTEMBER 2004

PRE-DESIGN SOIL INVESTIGATION SAMPLING
UNKAMET BROOK AREA
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight parts per million, ppm)

Notes:

1. Samples were collected by Blasland, Bouck & Lee, Inc., and were submitted to SGS Environmental Services, Inc. for analysis of Appendix IX+3 constituents.
2. NA - Not Analyzed.
3. ND - Analyte was not detected. The number in parentheses is the associated detection limit.
4. 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.
5. With the exception of dioxin/furans, only those constituents detected in one or more samples are summarized.
6. -- Indicates that all constituents for the parameter group were not detected.
7. Field duplicate sample results are presented in brackets.

Data Qualifiers:

Organics (volatiles, semivolatiles, pesticides, herbicides, dioxin/furans)

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

X - Estimated maximum possible concentration.

Y - 2,3,7,8-TCDF results have been confirmed on a DB-225 column.

Inorganics

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

TABLE 7-4
DATA RECEIVED DURING SEPTEMBER 2004

OP-3 FIREWATER TANK MAJOR EXCAVATION REMOVAL
UNKAMET BROOK AREA
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight parts per million, ppm)

Parameter	Sample ID: / Sample Depth(Feet): / Date Collected:	OP3-BORING-1 6-8 09/24/04	OP3-BORING-2 6-8 09/24/04	OP3-BORING-3 7-8 09/24/04
Volatile Organics				
Acetone		0.018 J	0.019 J	ND(0.029)

Notes:

1. Samples were collected by Blasland, Bouck & Lee, Inc., and submitted to SGS Environmental Services, Inc. for analysis of volatiles.
2. ND - Analyte was not detected. The number in parentheses is the associated detection limit.
3. Only detected constituents are summarized.

Data Qualifiers:

Organics (volatiles)

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

TABLE 7-5
TCLP DATA RECEIVED DURING SEPTEMBER 2004

OP-3 FIREWATER TANK MAJOR EXCAVATION REMOVAL
UNKAMET BROOK AREA
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Sample Depth(Feet): / Date Collected:	TCLP Regulatory Limits	OP3-COMPOSITE-1 0-8 9/24/2004
Volatile Organics		
1,1-Dichloroethene	0.7	ND(0.10)
1,2-Dichloroethane	0.5	ND(0.10)
2-Butanone	200	ND(0.20)
Benzene	0.5	ND(0.10)
Carbon Tetrachloride	0.5	ND(0.10)
Chlorobenzene	100	ND(0.10)
Chloroform	6	ND(0.10)
Tetrachloroethene	0.7	ND(0.10)
Trichloroethene	0.5	ND(0.10)
Vinyl Chloride	0.2	ND(0.10)
Semivolatile Organics		
1,4-Dichlorobenzene	7.5	ND(0.050)
2,4,5-Trichlorophenol	400	ND(0.050)
2,4,6-Trichlorophenol	2	ND(0.050)
2,4-Dinitrotoluene	0.13	ND(0.050)
Cresol	200	ND(0.050)
Hexachlorobenzene	0.13	ND(0.050)
Hexachlorobutadiene	0.5	ND(0.050)
Hexachloroethane	3	ND(0.050)
Nitrobenzene	2	ND(0.050)
Pentachlorophenol	100	ND(0.050)
Pyridine	5	ND(0.050)
Organochlorine Pesticides		
Endrin	0.02	ND(0.0015)
Gamma-BHC (Lindane)	0.4	ND(0.0025)
Heptachlor	0.008	ND(0.0020)
Heptachlor Epoxide	0.008	ND(0.0020)
Methoxychlor	10	ND(0.040)
Technical Chlordane	0.03	ND(0.012)
Toxaphene	0.5	ND(0.050)
Herbicides		
2,4,5-TP	1	ND(0.010)
2,4-D	10	ND(0.010)
Inorganics		
Arsenic	5	ND(0.100)
Barium	100	0.400
Cadmium	1	0.00120 B
Chromium	5	0.00170 B
Lead	5	0.00670 B
Mercury	0.2	ND(0.00200)
Selenium	1	ND(0.200)
Silver	5	0.00150 B

Notes:

1. Sample was collected by Blasland, Bouck & Lee, Inc., and submitted to SGS Environmental Services, Inc. for analysis of TCLP constituents.
2. ND - Analyte was not detected. The number in parentheses is the associated detection limit.

Data Qualifiers:

Inorganics

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

ITEM 8
FORMER OXBOW AREAS A & C
(GECD410)
SEPTEMBER 2004

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

a. Activities Undertaken/Completed

Initiated preparation of letter report on additional supplemental soil sampling.

b. Sampling/Test Results Received

None

c. Work Plans/Reports/Documents Submitted

None

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

Submit letter report on additional supplemental soil sampling (due on or before November 1, 2004).

e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

f. Proposed/Approved Work Plan Modifications

None

ITEM 9
LYMAN STREET AREA
(GECD430)
SEPTEMBER 2004

*** 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)

If additional sampling is required based on EPA's review of GE's Conceptual RD/RA Work Plan, submit proposal for such sampling.

e. General Progress/Unresolved Issues/Potential Schedule Impacts

GE and EPA are currently discussing issues relating to GE's Conceptual RD/RA Work Plan submitted on March 23, 2004.

f. Proposed/Approved Work Plan Modifications

None

ITEM 10
NEWELL STREET AREA I
(GECD440)
SEPTEMBER 2004

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

a. Activities Undertaken/Completed

- Completed restoration activities at Parcels J9-23-22, J9-23-23, and J9-23-24.
- Performed post-construction inspection at Parcels J9-23-16 through J9-23-18 and Parcels J9-23-22 through J9-23-24.
- Received signed access agreement for remediation from owner of Parcels J9-23-19 through J9-23-21 (dated September 24, 2004).

b. Sampling/Test Results Received

None

c. Work Plans/Reports/Documents Submitted

None

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

- Discuss draft EREs for GE-owned properties with EPA and MDEP and work on obtaining subordination agreements for easements at those properties.
- Initiate removal actions at Parcels J9-23-19 through J9-23-21.
- Upon receipt of EPA approval and MDEP acceptance of ERE for Parcel J9-23-24, record that ERE.

e. General Progress/Unresolved Issues/Potential Schedule Impacts

To date, the owner of Parcel J9-23-13 has not granted access for remediation.

f. Proposed/Approved Work Plan Modifications

None

ITEM 11
NEWELL STREET AREA II
(GECD450)
SEPTEMBER 2004

*** 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)

Awaiting EPA review of Conceptual RD/RD Work Plan (submitted on July 16, 2004).

e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

f. Proposed/Approved Work Plan Modifications

None

ITEM 12
FORMER OXBOW AREAS J & K
(GECD420)
SEPTEMBER 2004

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

a. Activities Undertaken/Completed

Completed additional supplemental sampling as proposed in Supplemental Pre-Design Investigation Report and Additional Sampling Proposal submitted on June 28, 2004, and as conditionally approved by EPA on August 26, 2004.

b. Sampling/Test Results Received

See attached tables.

c. Work Plans/Reports/Documents Submitted

None

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

Initiate preparation of letter report on additional supplemental sampling (due on or before November 26, 2004).

e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

f. Proposed/Approved Work Plan Modifications

None

TABLE 12-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

FORMER OXBOW AREAS J AND K
GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Depth (feet)	Matrix	Laboratory	Analyses	Date Received
Additional Supplemental Pre-Design Soil Investigation	RAA15-E7BSE	9/20/04	1-3	Soil	SGS	SVOC	9/27/04
Additional Supplemental Pre-Design Soil Investigation	RAA15-E7W	9/20/04	0-1	Soil	SGS	SVOC	9/27/04
Additional Supplemental Pre-Design Soil Investigation	RAA15-E7W	9/20/04	1-3	Soil	SGS	SVOC	9/27/04
Additional Supplemental Pre-Design Soil Investigation	RAA15-E8NEE	9/16/04	1-3	Soil	SGS	SVOC	9/24/04
Additional Supplemental Pre-Design Soil Investigation	RAA15-E8NENE	9/16/04	1-3	Soil	SGS	SVOC	9/24/04
Additional Supplemental Pre-Design Soil Investigation	RAA15-E8NWNE	9/16/04	1-3	Soil	SGS	SVOC	9/24/04
Additional Supplemental Pre-Design Soil Investigation	RAA15-E8NWNW	9/16/04	1-3	Soil	SGS	SVOC	9/24/04
Additional Supplemental Pre-Design Soil Investigation	RAA15-F7	9/16/04	0-1	Soil	SGS	SVOC	9/24/04
Additional Supplemental Pre-Design Soil Investigation	RAA15-F7	9/16/04	1-3	Soil	SGS	SVOC	9/24/04
Additional Supplemental Pre-Design Soil Investigation	RAA15-JKS-DUP-5 (RAA15-E7W)	9/20/04	1-3	Soil	SGS	SVOC	9/27/04

Note:
1. Field duplicate sample locations are presented in parenthesis.

TABLE 12-2
APPENDIX IX+3 DATA RECEIVED DURING SEPTEMBER 2004

ADDITIONAL SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING
FORMER OXBOW AREAS J AND K
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight parts per million, ppm)

Parameter / Sample ID: / Sample Depth(Feet): / Date Collected:	RAA15-E7BSE 1-3 09/20/04	RAA15-E7W 0-1 09/20/04	RAA15-E7W 1-3 09/20/04	RAA15-E8NEE 1-3 09/16/04	RAA15-E8NENE 1-3 09/16/04
Semivolatile Organics					
2-Picoline	ND(0.47)	ND(0.49)	ND(0.44) [ND(0.44)]	ND(0.35)	ND(0.38)
3&4-Methylphenol	ND(0.94)	ND(0.98)	ND(0.89) [ND(0.89)]	ND(0.71)	ND(0.76)
Acenaphthene	0.27 J	ND(0.49)	ND(0.44) [ND(0.44)]	ND(0.35)	ND(0.38)
Acenaphthylene	ND(0.47)	ND(0.49)	ND(0.44) [ND(0.44)]	ND(0.35)	ND(0.38)
Acetophenone	ND(0.47)	ND(0.49)	ND(0.44) [ND(0.44)]	ND(0.35)	ND(0.38)
Anthracene	0.57	ND(0.49)	ND(0.44) [ND(0.44)]	0.12 J	ND(0.38)
Benzo(a)anthracene	0.75	ND(0.49)	ND(0.44) [ND(0.44)]	0.19 J	ND(0.38)
Benzo(a)pyrene	0.33 J	ND(0.49)	ND(0.44) [ND(0.44)]	0.14 J	ND(0.38)
Benzo(b)fluoranthene	0.20 J	ND(0.49)	ND(0.44) [ND(0.44)]	0.10 J	ND(0.38)
Benzo(g,h,i)perylene	ND(0.47)	ND(0.49)	ND(0.44) [ND(0.44)]	0.098 J	ND(0.38)
Benzo(k)fluoranthene	0.50	ND(0.49)	ND(0.44) [ND(0.44)]	0.16 J	ND(0.38)
Chrysene	0.86	ND(0.49)	ND(0.44) [ND(0.44)]	0.25 J	0.085 J
Dibenzo(a,h)anthracene	ND(0.47)	ND(0.49)	ND(0.44) [ND(0.44)]	ND(0.35)	ND(0.38)
Dibenzofuran	0.14 J	ND(0.49)	ND(0.44) [ND(0.44)]	ND(0.35)	ND(0.38)
Fluoranthene	3.2	0.25 J	ND(0.44) [ND(0.44)]	0.54	0.16 J
Fluorene	0.26 J	ND(0.49)	ND(0.44) [ND(0.44)]	ND(0.35)	ND(0.38)
Indeno(1,2,3-cd)pyrene	ND(0.47)	ND(0.49)	ND(0.44) [ND(0.44)]	ND(0.35)	ND(0.38)
Naphthalene	0.12 J	ND(0.49)	ND(0.44) [ND(0.44)]	ND(0.35)	ND(0.38)
Phenanthrene	2.6	0.16 J	ND(0.44) [ND(0.44)]	0.34 J	0.078 J
Phenol	ND(0.47)	ND(0.49)	ND(0.44) [ND(0.44)]	ND(0.35)	ND(0.38)
Pyrene	2.4	0.20 J	ND(0.44) [ND(0.44)]	0.42	0.16 J

TABLE 12-2
APPENDIX IX+3 DATA RECEIVED DURING SEPTEMBER 2004

ADDITIONAL SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING
FORMER OXBOW AREAS J AND K
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in dry weight parts per million, ppm)

Parameter	Sample ID: / Sample Depth(Feet): / Date Collected:	RAA15-E8NWNE 1-3 09/16/04	RAA15-E8NWNW 1-3 09/16/04	RAA15-F7 0-1 09/16/04	RAA15-F7 1-3 09/16/04
Semivolatile Organics					
2-Picoline		ND(0.36)	0.076 J	ND(0.50)	ND(0.46)
3&4-Methylphenol		ND(0.72)	0.28 J	ND(1.0)	ND(0.92)
Acenaphthene		ND(0.36)	2.8	ND(0.50)	ND(0.46)
Acenaphthylene		ND(0.36)	4.0	0.13 J	ND(0.46)
Acetophenone		ND(0.36)	0.16 J	ND(0.50)	ND(0.46)
Anthracene		ND(0.36)	14	0.25 J	0.11 J
Benzo(a)anthracene		0.10 J	27	0.57	0.18 J
Benzo(a)pyrene		ND(0.36)	14	0.46 J	0.12 J
Benzo(b)fluoranthene		ND(0.36)	11	0.23 J	ND(0.46)
Benzo(g,h,i)perylene		ND(0.36)	4.5	0.20 J	ND(0.46)
Benzo(k)fluoranthene		0.092 J	16	0.65	0.13 J
Chrysene		0.13 J	29	0.90	0.26 J
Dibenzo(a,h)anthracene		ND(0.36)	1.7	ND(0.50)	ND(0.46)
Dibenzofuran		ND(0.36)	4.3	ND(0.50)	ND(0.46)
Fluoranthene		0.26 J	74	1.8	0.52
Fluorene		ND(0.36)	6.3	ND(0.50)	ND(0.46)
Indeno(1,2,3-cd)pyrene		ND(0.36)	4.6	0.20 J	ND(0.46)
Naphthalene		ND(0.36)	3.2	ND(0.50)	ND(0.46)
Phenanthrene		0.15 J	57	0.99	0.47
Phenol		ND(0.36)	0.24 J	ND(0.50)	ND(0.46)
Pyrene		0.22 J	59	1.5	0.48

Notes:
1. Samples were collected by Blasland, Bouck & Lee, Inc., and were submitted to SGS Environmental Services, Inc. for analysis of semivolatiles.
2. ND - Analyte was not detected. The number in parentheses is the associated detection limit.
3. Only those constituents detected in one or more samples are summarized.
4. Field duplicate sample results are presented in brackets.

Data Qualifiers:

Organics (semivolatiles)

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

ITEM 13
HOUSATONIC RIVER AREA
UPPER ½ MILE REACH
(GECD800)
SEPTEMBER 2004

*** 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)

- Conduct seepage meter monitoring when water levels allow.
- Submit Restored Bank Vegetation and Aquatic Habitat Structures Inspection Report for Fall 2004 by mid-November 2004.

e. General Progress/Unresolved Issues/Potential Schedule Impacts

- Seepage meter monitoring has not occurred due to increased water levels.
- Issues relating to TOC content in isolation layer remain to be resolved. EPA and GE have agreed that GE's report on those issues will be deferred until after the seepage meter data are available. The Final Completion Report for Upper ½ Mile Reach Removal Action will be submitted following resolution of those issues.

f. Proposed/Approved Work Plan Modifications

None

ITEM 14
HOUSATONIC RIVER AREA
1½-MILE REACH
(GECD820)
SEPTEMBER 2004

(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 23, 2004, 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 (see 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

None

TABLE 14-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

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

Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	Date Received
Monthly Water Column Sampling	Location-4	9/23/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	
Monthly Water Column Sampling	Location-4	8/25/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	9/17/04
Monthly Water Column Sampling	Location-6A	8/25/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	9/17/04
Monthly Water Column Sampling	Location-6A	9/23/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	

TABLE 14-2
SAMPLE DATA RECEIVED DURING SEPTEMBER 2004

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	8/25/2004	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	0.534	2.20	0.00080
LOCATION-6A	Pomeroy Ave. Bridge	8/25/2004	ND(0.0000220)	0.0000630 PE	0.0000710 AF	0.000190	0.000324	0.979	6.70	0.0014

Notes:

1. Samples were collected by Blasland, Bouck & Lee, Inc. 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 parentheses is the associated detection limit.
4. AF - Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
5. 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.

ITEM 15
HOUSATONIC RIVER AREA
REST OF THE RIVER
(GECD850)
SEPTEMBER 2004

a. Activities Undertaken/Completed

- On September 23, 2004, 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 all these locations on September 23, 2004 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 (see Table 15-1).

- On September 27, 2004, BBL (on GE's behalf) performed fish sampling in Morewood Lake as outlined in a scope of work approved by MDEP (in consultation with EPA) by letter dated September 9, 2004. Ten edible-size largemouth bass (>12 inches) and 10 edible-size bluegill (>6 inches) were collected using a boat electrofisher. Samples were submitted to Northeast Analytical for analysis of PCB Aroclors and percent lipids in skin-on, scales-off fillets.

- Fish sampling in the Housatonic River for young-of-year (YOY) largemouth bass, yellow perch, and bluegill/pumpkinseed was performed on September 29-30, 2004. In total, 47 samples were collected using a boat electrofisher and submitted to EnChem Labs, Inc. for analysis of PCB Aroclors and percent lipids in whole-body composite samples (minimum of five fish per sample).

b. Sampling/Test Results

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.

- Complete YOY fish sampling (37 samples remaining), currently scheduled to occur during the week of October 11, 2004.

ITEM 15
(cont'd)
HOUSATONIC RIVER AREA
REST OF THE RIVER
(GECD850)
SEPTEMBER 2004

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

- Proceed with work on gate stem repairs at Rising Pond Dam, as identified in the Structural Integrity Report submitted in July 2003 for that dam, and based on the October 2003 gate stem inspection.* Discuss with owner of Rising Pond.

- Conduct bi-annual structural integrity inspection of Woods Pond Dam (anticipated in November 2004).

- Conduct dam assessment training (anticipated in November 2004).

e. General Progress/Unresolved Issues/Potential Schedule Impacts

Ongoing issues relating to EPA's risk assessments.*

f. Proposed/Approved Work Plan Modifications

By letter dated September 8, 2004, MDEP (in consultation with EPA) approved a scope of work submitted by BBL (on GE's behalf) for fish sampling in Morewood Lake.

TABLE 15-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

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

Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	Date Received
Monthly Water Column Sampling	HR-D1 (Location-12)	9/23/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	
Monthly Water Column Sampling	HR-D1 (Location-12)	8/25/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	9/17/04
Monthly Water Column Sampling	Location-1	9/23/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	
Monthly Water Column Sampling	Location-1	8/25/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	9/17/04
Monthly Water Column Sampling	Location-10	8/25/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	9/17/04
Monthly Water Column Sampling	Location-10	9/23/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	
Monthly Water Column Sampling	Location-12	9/23/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	
Monthly Water Column Sampling	Location-12	8/25/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	9/17/04
Monthly Water Column Sampling	Location-13	9/23/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	
Monthly Water Column Sampling	Location-13	8/25/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	9/17/04
Monthly Water Column Sampling	Location-2	8/25/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	9/17/04
Monthly Water Column Sampling	Location-2	9/23/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	
Monthly Water Column Sampling	Location-7	8/25/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	9/17/04
Monthly Water Column Sampling	Location-7	9/23/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	
Monthly Water Column Sampling	Location-9	8/25/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	9/17/04
Monthly Water Column Sampling	Location-9	9/23/04	Water	NEA	PCB, TSS, POC, Chlorophyl-A	

Note:
1. Field duplicate sample locations are presented in parenthesis.

TABLE 15-2
SAMPLE DATA RECEIVED DURING SEPTEMBER 2004

MONTHLY WATER COLUMN SAMPLING
HOUSATONIC RIVER - REST OF RIVER
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-1	Hubbard Avenue Bridge	8/25/2004	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	0.453	2.40	0.00080
LOCATION-2	Newell Street Bridge	8/25/2004	ND(0.0000220)	ND(0.0000220)	0.0000230 AF	0.0000260	0.0000490	0.383	2.80	0.0013
LOCATION-7	Holmes Road Bridge	8/25/2004	ND(0.0000220)	ND(0.0000220)	0.0000220 AF	0.0000450	0.0000670	0.555	3.60	0.0017
LOCATION-9	New Lenox Road Bridge	8/25/2004	ND(0.0000220)	0.0000290 PE	0.0000480 AF	0.0000980	0.000175	0.548	3.70	0.0017
LOCATION-10	Headwaters of Woods Pond	8/25/2004	ND(0.0000220)	0.0000330 PE	0.0000550 AF	0.000100	0.000188	0.387	3.50	0.0021
LOCATION-12	Schweitzer Bridge	8/25/2004 8/25/2004	ND(0.0000220) [ND(0.0000220)]	0.0000340PE [0.0000400 PE]	0.0000480 AF [0.0000560 AF]	0.0000890 [0.000110]	0.000171 [0.000206]	0.653 [0.510]	2.50 [2.60]	0.0029 [0.0030]
LOCATION-13	Division Street Bridge	8/25/2004	ND(0.0000220)	ND(0.0000220)	ND(0.0000220)	0.0000480 AG	0.0000480	0.551	3.40	0.0014

Notes:

1. Samples were collected by Blasland, Bouck & Lee, Inc. 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 parentheses is the associated detection limit.
4. AF - Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
5. AG - Aroclor 1260 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
6. 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.
7. Field duplicate sample results are presented in brackets.

ITEMS 16 & 17
HOUSATONIC RIVER FLOODPLAIN
RESIDENTIAL AND NON-RESIDENTIAL PROPERTIES
ADJACENT TO 1½-MILE REACH
(GECD710 AND GECD720)
SEPTEMBER 2004

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

a. Activities Undertaken/Completed

- Discussed with EPA revisions to certain averaging/evaluation areas at the Phase 3 floodplain properties.

- Updated existing figures for the Phase 3 floodplain properties to include the results of supplemental PCB sampling and additional EPA analyses.

b. Sampling/Test Results Received

None

c. Work Plans/Reports/Documents Submitted

None

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

- Following further discussions with EPA, submit a revised Interim Pre-Design Investigation Report proposing additional sampling at Phase 3 properties.

- Awaiting EPA review of Pre-Design Investigation Work Plan Addendum for Phase 4 Group 4A Properties; then submit a Pre-Design Investigation Work Plan Addendum for Phase 4 Groups 4B and 4C properties.

e. General Progress/Unresolved Issues/Potential Schedule Impacts

- GE will discuss with EPA schedule for pre-certification inspection and submittal of Final Completion Report for Phase 1 and Phase 2 properties, and ERE for City-owned property in Phase 2.

- Issues related to timing for sampling at Phase 3 and Phase 4 properties are under discussion with EPA.

f. Proposed/Approved Work Plan Modifications

None

ITEM 18
HOUSATONIC RIVER FLOODPLAIN
CURRENT RESIDENTIAL PROPERTIES
DOWNSTREAM OF CONFLUENCE
(ACTUAL/POTENTIAL LAWNS)
(GECD730)
SEPTEMBER 2004

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)

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, it appears that this pre-design sampling will be deferred for some period of time.)*

f. Proposed/Approved Work Plan Modifications

None

ITEM 20
OTHER AREAS
SILVER LAKE AREA
(GECD600)
SEPTEMBER 2004

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

a. Activities Undertaken/Completed

Performed water level monitoring at Silver Lake staff gauge (see Item 21.a).

b. Sampling/Test Results Received

None

c. Work Plans/Reports/Documents Submitted

- Submitted revisions to GE's Pre-Design Investigation Report for Silver Lake Sediments (September 15, 2004).

- Submitted letter to EPA proposing supplemental pre-design investigations for sediments and outlining objectives of upcoming bench-scale pilot study for capping sediments (September 15, 2004).

- Submitted Interim Pre-Design Investigation Report for Soils at Properties Adjacent to Silver Lake (September 29, 2004).

d. Upcoming Scheduled Activities (next six weeks)

- Continue water-level monitoring at well pairs surrounding the lake.

- Initiate supplemental pre-design investigation activities for sediments within 30 days after EPA approval of GE's September 15, 2004 letter proposal.

- Submit Bench-Scale Pilot Study Work Plan for Silver Lake Sediments (due within 30 days of EPA's approval of GE's September 15, 2004 letter proposal).

e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

f. Proposed/Approved Work Plan Modifications

None

ITEM 21
GROUNDWATER MANAGEMENT AREAS
PLANT SITE 1 (GMA 1)
(GECD310)
SEPTEMBER 2004

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

a. Activities Undertaken/Completed

General

- Initiated semi-annual NAPL bailing round at all GMA 1 wells where NAPL was observed during the prior year.

East Street Area 1-North and South:

- Continued automated groundwater and NAPL pumping at North Side and South Side Caissons. A total of approximately 4.0 gallons of LNAPL was removed from the North Side Caisson, while recoverable quantities were not encountered at the South Side Caisson in September.

- Continued routine well monitoring and manual NAPL removal activities. Approximately 2.02 liters (0.53 gallon) of LNAPL were removed from wells in this area during September.

- Developed replacement well 139R.

- Installed new well GMA 1-18 at 1294 East Street to replace well ES1-14 for future monitoring activities.

East Street Area 2-South:

- Continued automated groundwater and LNAPL removal activities. A total of approximately 5,815,122 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 2,734 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. Removed approximately 67 gallons of DNAPL from pumping system RW-3(X).

- Continued routine well monitoring and manual NAPL removal activities. Approximately 7.50 liters (1.98 gallons) of LNAPL were recovered from the wells monitored during September.

- Treated/discharged 5,323,695 gallons of water through 64G Groundwater Treatment Facility.

- Placed weighted bailers in coal-tar DNAPL wells E2SC-3I and E2SC-17.

ITEM 21
(cont'd)
GROUNDWATER MANAGEMENT AREAS
PLANT SITE 1 (GMA 1)
(GECD310)
SEPTEMBER 2004

a. Activities Undertaken/Completed (cont'd)

East Street Area 2-North:

- Continued routine well monitoring and manual NAPL removal activities. Approximately 0.69 liter (0.18 gallon) of LNAPL and approximately 0.34 liter (0.09 gallon) of DNAPL were recovered from the wells monitored during September.

20s, 30s, and 40s Complexes:

- Continued routine well monitoring and manual NAPL removal activities. Approximately 0.06 liter (0.02 gallon) of LNAPL and no DNAPL were recovered from the wells monitored in September.

- Continued to monitor LNAPL within the hydraulic piston cylinder of Building 43 elevator shaft; no recoverable quantities were encountered.

Lyman Street Area:

- Continued automated groundwater and NAPL removal activities. Approximately 1 gallon of LNAPL was recovered from well RW-1R and approximately 20 gallons of LNAPL were recovered from well RW-3 in September.

- Continued routine well monitoring and manual NAPL removal activities and conducted semi-annual bailing round at all wells that contained NAPL in 2003. Approximately 1.12 liters (0.29 gallon) of LNAPL and approximately 3.34 liters (0.88 gallon) of DNAPL were removed from wells located in this area.

Newell Street Area II:

- Continued automated DNAPL recovery, with the collection of approximately 146 gallons of DNAPL from the automated collection systems.

- Continued routine well monitoring and manual NAPL removal activities. Approximately 0.82 liter (0.21 gallon) of LNAPL and approximately 1.99 liters (0.52 gallon) of DNAPL were removed from wells in this area.

Silver Lake:

- Continued routine monitoring of staff gauge in lake.

ITEM 21
(cont'd)
GROUNDWATER MANAGEMENT AREAS
PLANT SITE 1 (GMA 1)
(GECD310)
SEPTEMBER 2004

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 routine monitoring, including performance of fall 2004 semi-annual monitoring event.
- Conduct semi-annual riverbank inspection.
- Possibly install two soil borings downgradient of wells GMA1-15 and GMA1-16 upon EPA approval (see Item 21.f below).
- Submit a proposal for abandonment of Building 43 elevator shaft.
- Initiate fall 2004 interim groundwater quality sampling activities.

e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

f. Proposed/Approved Work Plan Modifications

- Received conditional approval letter from EPA (dated September 8, 2004) for GE's *Groundwater Quality Interim Report for Fall 2003*.
- GE's *NAPL Monitoring Report for Fall 2003* contained a number of proposed modifications to the NAPL monitoring/recovery program at this GMA. These included a proposal to install two soil borings downgradient of wells GMA1-15 and GMA1-16 within one month of EPA approval of that report. The soil boring results will be compared with other soil boring logs in the area and GE will propose at least two locations for NAPL monitoring well installations.

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

CONSENT DECREE MONTHLY STATUS REPORT
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
September 2004

Caisson	Month	Vol. LNAPL Collected (gallon)	Vol. Water Recovered (gallon)	Percent Downtime
Northside	September 2003	5.0	26,800	0.074 Power Outage
	October 2003	0.0	22,700	
	November 2003	0.0	37,300	
	December 2003	0.0	47,300	
	January 2004	2.5	23,700	0.40
	February 2004	0.0	16,300	
	March 2004	0.0	22,500	0.27 - Power Outage
	April 2004	1.0	29,100	
	May 2004	0.0	22,300	
	June 2004	4.3	28,500	
	July 2004	4.4	16,700	
	August 2004	2.0	16,300	
	September 2004	4.0	24,300	
Southside	September 2003	0.0	77,600	0.074 Power Outage
	October 2003	0.0	94,000	
	November 2003	0.0	85,100	
	December 2003	0.0	106,600	
	January 2004	2.5	72,500	0.40
	February 2004	0.0	5,400	
	March 2004	0.0	68,200	0.27 - Power Outage
	April 2004	1.0	74,600	
	May 2004	0.0	71,500	
	June 2004	0.0	75,300	
	July 2004	4.4	67,100	
	August 2004	0.0	67,300	
	September 2004	0.0	102,700	

TABLE 21-2
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 2004

Well Name	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	LNAPL Removed (liters)	September 2004 Removal (liters)
49	9/30/2004	4.97	4.95	0.02	0.012	0.012
105	9/30/2004	8.41	6.92	1.49	0.919	0.919
106	9/30/2004	8.36	6.95	1.41	0.870	0.870
131	9/30/2004	3.85	3.80	0.05	0.017	0.017
34	9/30/2004	5.29	5.28	0.01	0.006	0.006
35	9/30/2004	5.30	5.29	0.01	0.006	0.006
45	9/30/2004	5.31	5.30	0.01	0.006	0.006
72	9/30/2004	6.03	6.02	0.01	0.006	0.006
76	9/30/2004	6.76	6.47	0.29	0.179	0.179

Total Manual LNAPL Removal for September 2004: **2.021 liters**
0.533 gallons

Note:
1. ft BMP - feet Below Measuring Point.

TABLE 21-3
ROUTINE WELL MONITORING
EAST STREET AREA 1 - NORTH & SOUTH
GROUNDWATER MANAGEMENT AREA 1

CONSENT DECREE MONTHLY STATUS REPORT
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
September 2004

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 Street Area 1 - North									
49	999.90	9/30/2004	4.97	4.95	0.02	---	20.70	0.00	994.95
105	1,002.85	9/30/2004	8.41	6.92	1.49	---	17.46	0.00	995.83
106	1,004.06	9/30/2004	8.36	6.95	1.41	---	12.48	0.00	997.01
107	1,003.86	9/30/2004	7.08	---	0.00	---	17.69	0.00	996.78
131	1,001.18	9/30/2004	3.85	3.80	0.05	---	6.44	0.00	997.38
ES1-08	1,000.85	9/30/2004	4.67	---	0.00	---	13.54	0.00	996.18
North Cassion	997.84	9/1/2004	17.42	17.40	0.02	---	19.80	0.00	980.44
North Cassion	997.84	9/8/2004	18.29	18.25	0.04	---	19.80	0.00	979.59
North Cassion	997.84	9/16/2004	18.16	18.15	0.01	---	19.80	0.00	979.69
North Cassion	997.84	9/23/2004	18.40	18.36	0.04	---	19.80	0.00	979.48
North Cassion	997.84	9/29/2004	18.40	18.37	0.03	---	19.80	0.00	979.47
GMA 1 - East Street Area 1 - South									
34	999.90	9/30/2004	5.29	5.28	0.01	---	21.02	0.00	994.62
35	1,000.15	9/30/2004	5.30	5.29	0.01	---	9.62	0.00	994.86
45	1,000.10	9/30/2004	5.31	5.30	0.01	---	20.77	0.00	994.80
72	1,000.62	9/30/2004	6.03	6.02	0.01	---	22.01	0.00	994.60
76	1,000.45	9/30/2004	6.76	6.47	0.29	---	18.72	0.00	993.96
139R	NA	9/16/2004	11.12	---	0.00	---	14.69	0.00	NA
GMA1-18	NA	9/27/2004	8.27	---	0.00	---	12.42	0.00	NA
South Cassion	1,001.11	9/1/2004	13.73	13.71	0.02	---	15.00	0.00	987.40
South Cassion	1,001.11	9/8/2004	13.26	13.19	0.07	---	15.00	0.00	987.92
South Cassion	1,001.11	9/16/2004	14.53	14.49	0.04	---	15.00	0.00	986.62
South Cassion	1,001.11	9/23/2004	14.50	14.44	0.06	---	15.00	0.00	986.67
South Cassion	1,001.11	9/29/2004	14.35	14.31	0.04	---	15.00	0.00	986.80

Notes:

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 21-4
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 2004

Recovery System Location	Month	Oil Collected (gallon)	Water Recovered (gallon)	Percent Downtime
40R	September 2003	0		
	October 2003	0		
	November 2003	0		
	December 2003	0		
	January 2004	0		
	February 2004	0		0.3
	March 2004	0		0.27 - Power Outage
	April 2004	0		
	May 2004	0		
	June 2004	0		
	July 2004	0		
	August 2004	0		
	September 2004	0		
64R	September 2003	1,150	639,200	
	October 2003	975	717,300	
	November 2003	200	563,400	
	December 2003	625	290,500	
	January 2004	50	233,000	
	February 2004	250	1,015,000	0.3
	March 2004	325	897,300	0.94 - Power Outage
	April 2004	975	705,000	
	May 2004	125	629,500	
	June 2004	736	923,500	
	July 2004	380	693,900	
	August 2004	250	330,800	
	September 2004	350	675,600	
64S System	September 2003	0	443,631	
	October 2003	150	983,801	
	November 2003	1,198	1,041,476	
	December 2003	925	1,529,896	1.6 - Low Voltage
	January 2004	1,054	1,237,777	
	February 2004	224	651,804	3.88
	March 2004	1,271	802,349	1.88 - Power Outage
	April 2004	1,374	947,810	
	May 2004	1,045	1,062,518	
	June 2004	772	968,659	
	July 2004	154	349,705	
	August 2004	230	240,781	
	September 2004	994	681,275	
64V	September 2003	867	1,020,100	
	October 2003	1,071	1,482,600	
	November 2003	1,377	1,309,800	
	December 2003	2,261	1,719,700	6.7 - Replaced Pump
	January 2004	1,768	1,366,300	
	February 2004	408	1,091,800	0.3
	March 2004	1,173	1,370,200	0.27 - Power Outage

TABLE 21-4
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 2004

Recovery System Location	Month	Oil Collected (gallon)	Water Recovered (gallon)	Percent Downtime
64V (cont'd)	April 2004	1,598	1,212,000	
	May 2004	933	1,313,100	
	June 2004	879	1,444,400	
	July 2004	773	940,100	
	August 2004	772	875,900	
	September 2004	1,170	1,385,900	
64X	September 2003	15	403,200	
	October 2003	10	460,800	
	November 2003	10	403,200	
	December 2003	5	504,000	3.2 - Cleaned Flow Meter
	January 2004	10	676,800	
	February 2004	2	403,200	0.3
	March 2004	4	504,000	0.27 - Power Outage
	April 2004	0	388,800	
	May 2004	10	403,200	
	June 2004	5	518,400	
	July 2004	10	403,200	
	August 2004	31	388,800	
	September 2004	51	518,400	
RW-2(X)	September 2003	0	403,800	
	October 2003	0	498,300	
	November 2003	0	461,400	
	December 2003	0	917,800	
	January 2004	0	403,200	
	February 2004	0	580,000	0.3
	March 2004	0	644,300	0.27 - Power Outage
	April 2004	0	518,200	
	May 2004	0	427,200	
	June 2004	0	458,500	
	July 2004	0	1,029,700	
	August 2004	0	1,020,000	
	September 2004	0	1,138,800	0.93
RW-1(S) [1]	September 2003	50	811,790	
	October 2003	25	1,303,720	
	November 2003	52	1,155,983	
	December 2003	0	1,677,094	
	January 2004	96	1,196,628	
	February 2004	51	832,544	0.3
	March 2004	31	1,114,375	0.27 - Power Outage
	April 2004	76	1,012,477	
	May 2004	36	1,056,169	
	June 2004	419	1,108,600	
	July 2004	196	669,474	
	August 2004	158	709,815	
	September 2004	159	914,647	9.72

TABLE 21-4
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 2004

Recovery System Location	Month	Oil Collected (gallon)	Water Recovered (gallon)	Percent Downtime
RW-1(X)	September 2003	10	486,700	
	October 2003	0	690,100	
	November 2003	0	488,500	
	December 2003	0	575,100	3.2 - Cleaned Flow Meter
	January 2004	0	426,600	
	February 2004	0	382,600	0.3
	March 2004	1	502,100	0.27 - Power Outage
	April 2004	0	387,100	
	May 2004	0	397,200	
	June 2004	5	453,900	
	July 2004	0	363,900	
	August 2004	0	473,200	
	September 2004	10	500,500	
RW-3(X)	September 2003	55		
	October 2003	56		
	November 2003	55		
	December 2003	56		
	January 2004	70		
	February 2004	49		0.3
	March 2004	75		0.27 - Power Outage
	April 2004	79		
	May 2004	55		
	June 2004	169		
	July 2004	57		
	August 2004	47		
	September 2004	67		

Summary of Total Automated Removal		
LNAPL:	**2,734**	**Gallons**
DNAPL:	**67**	**Gallons**
Water:	**5,815,122**	**Gallons**

Note:
1. The flow meter at recovery well RW-1(S) was reset in March 2004.

TABLE 21-5
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 2004

Well Name	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	LNAPL Removed (liters)	September 2004 Removal (liters)
CC	9/23/2004	18.71	18.68	0.03	0.018	0.018
FF	9/23/2004	23.72	23.70	0.02	0.012	0.012
II	9/23/2004	26.21	26.15	0.06	0.025	0.025
U	9/23/2004	19.03	19.02	0.01	0.006	0.006
05-N	9/23/2004	24.24	24.20	0.04	0.025	0.025
11-N	9/23/2004	30.02	30.01	0.01	0.006	0.006
14-N	9/23/2004	24.25	23.31	0.94	0.580	0.580
17-N	9/23/2004	29.84	29.76	0.08	0.049	0.049
23-N	9/23/2004	30.32	30.30	0.02	0.012	0.012
24-N	9/23/2004	29.54	29.50	0.04	0.025	0.025
02	9/22/2004	16.58	16.50	0.08	0.049	0.049
05	9/22/2004	13.52	13.50	0.02	0.012	0.012
09R	9/22/2004	11.02	11.01	0.01	0.006	0.006
13	9/22/2004	15.44	15.03	0.41	0.253	0.253
14	9/22/2004	15.30	15.26	0.04	0.025	0.025
25R	9/22/2004	23.30	19.15	4.15	2.560	2.560
26RR	9/23/2004	21.61	21.03	0.58	0.358	0.358
29	9/22/2004	16.90	16.30	0.60	0.370	0.370
30	9/22/2004	10.90	10.85	0.05	0.031	0.031
47	9/22/2004	16.88	15.90	0.98	0.605	0.605
50	9/22/2004	10.13	9.27	0.86	0.531	0.531
55	9/22/2004	14.95	14.35	0.60	0.370	0.370
58	9/22/2004	10.60	10.59	0.01	0.006	0.006
95-04	9/22/2004	16.95	12.16	4.79	0.743	0.743
95-07	9/22/2004	23.04	17.50	5.54	0.860	0.860
GMA1-15	9/22/2004	13.20	12.55	0.65	0.401	0.401
GMA1-16	9/22/2004	11.09	11.01	0.08	0.049	0.049
GMA1-17W	9/22/2004	14.70	14.30	0.40	0.248	0.248
M-R	9/22/2004	18.83	18.83	0.00	0.018	0.018
P3	9/22/2004	4.82	4.81	0.01	0.006	0.006

Total LNAPL Removal 20's, 30's & 40's Complexes for September 2004: 0.061 liters
0.016 gallons

Total LNAPL Removal East Street Area 2 - North for September 2004: 0.697 liters
0.184 gallons

Total LNAPL Removal East Street Area 2 - South for September 2004: 7.501 liters
1.979 gallons

Total LNAPL Removal for September 2004: 8.259 liters
2.179 gallons

Note:
1. ft BMP - feet Below Measuring Point.

TABLE 21-6
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 2004

Well Name	Date	Depth to Water (ft BMP)	Depth to DNAPL (ft BMP)	DNAPL Thickness (feet)	DNAPL Removed (liters)	September 2004 Removal (liters)
05-N	9/23/2004	24.24	---	0.00	0.339	0.339

Total DNAPL Removal 20's, 30's & 40's Complexes for September 2004: 0.000 liters
0.000 gallons

Total DNAPL Removal East Street Area 2 - North for September 2004: 0.339 liters
0.089 gallons

Total DNAPL Removal East Street Area 2 - South for September 2004: 0.000 liters
0.000 gallons

Total DNAPL Removal for September 2004: 0.339 liters
0.089 gallons

Note:
1. ft BMP - feet Below Measuring Point.

TABLE 21-7
64G TREATMENT PLANT DISCHARGE DATA
GROUNDWATER MANAGEMENT AREA 1

CONSENT DECREE MONTHLY STATUS REPORT
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
September 2004

Date	Housatonic River Discharge (gallons)	Recharge Pond Discharge (gallons)	Total Discharge (gallons)
September 2003	4,336,220	294,016	4,630,236
October 2003	5,428,939	251,753	5,680,692
November 2003	5,599,600	108,107	5,707,707
December 2003	6,406,420	60,343	6,466,763
January 2004	6,158,960	132,862	6,291,822
February 2004	4,883,690	186,281	5,069,971
March 2004	5,462,280	112,985	5,575,265
April 2004	5,406,760	169,598	5,576,358
May 2004	5,678,620	236,862	5,915,482
June 2004	4,709,390	350,668	5,060,058
July 2004	4,585,370	316,805	4,902,175
August 2004	4,844,107	310,199	5,154,306
September 2004	5,075,190	248,505	5,323,695

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.

TABLE 21-8
ROUTINE WELL MONITORING
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 2004

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)
20's Complex									
CC	998.84	9/23/2004	18.71	18.68	0.03	---	27.20	0.00	980.16
FF	1,005.70	9/23/2004	23.72	23.70	0.02	---	32.73	0.00	982.00
II	1,007.26	9/23/2004	26.21	26.15	0.06	---	31.65	0.00	981.11
U	998.89	9/23/2004	19.03	19.02	0.01	---	26.50	0.00	979.87
Y	1,002.86	9/23/2004	22.70	---	0.00	---	28.45	0.00	980.16
40s Complex									
Bldg. 43 Elev.	NA	8/30/2004	27.72	27.71	0.01	---	61.69	0.00	NA
Bldg. 43 Elev.	NA	9/7/2004	27.36	27.35	0.01	---	61.69	0.00	NA
Bldg. 43 Elev.	NA	9/13/2004	26.89	26.88	0.01	---	61.69	0.00	NA
Bldg. 43 Elev.	NA	9/20/2004	27.51	27.50	0.01	---	61.69	0.00	NA
Bldg. 43 Elev.	NA	9/27/2004	27.64	27.63	0.01	---	61.69	0.00	NA
East Street Area 2 - North									
05-N	1,009.23	9/23/2004	24.24	24.20	0.04	---	27.50	0.00	985.03
11-N	1,010.85	9/23/2004	30.02	30.01	0.01	---	35.66	0.00	980.84
14-N	1,010.53	9/23/2004	24.25	23.31	0.94	---	30.35	0.00	987.15
16-N	1,010.65	9/23/2004	30.02	---	0.00	---	37.42	0.00	980.63
17-N	1,010.49	9/23/2004	29.84	29.76	0.08	---	38.83	0.00	980.72
23-N	1,011.13	9/23/2004	30.32	30.30	0.02	---	38.33	0.00	980.83
24-N	1,010.50	9/23/2004	29.54	29.50	0.04	---	35.92	0.00	981.00
95-12	1,010.20	9/23/2004	29.60	---	0.00	---	31.48	0.00	980.60
East Street Area 2 - South									
02	995.64	9/22/2004	16.58	16.50	0.08	---	23.38	0.00	979.13
05	996.10	9/22/2004	13.52	13.50	0.02	---	23.45	0.00	982.60
09R	986.88	9/22/2004	11.02	11.01	0.01	---	19.58	0.00	975.87
13	990.88	9/22/2004	15.44	15.03	0.41	---	22.54	0.00	975.82
14	991.61	9/22/2004	15.30	15.26	0.04	---	25.73	0.00	976.35
15R	989.23	9/22/2004	13.11	---	0.00	---	19.62	0.00	976.12
25R	998.31	9/22/2004	23.30	19.15	4.15	---	30.86	0.00	978.87
26RR	1,000.58	9/23/2004	21.61	21.03	0.58	---	28.60	0.00	979.51
28	991.86	9/22/2004	13.15	12.92	0.23	---	21.73	0.00	978.92
29	991.59	9/22/2004	16.90	16.30	0.60	---	22.06	0.00	975.25
30	989.34	9/22/2004	10.90	10.85	0.05	---	20.40	0.00	978.49
40R	991.60	9/1/2004	17.71	17.63	0.08	---	25.00	0.00	973.96
40R	991.60	9/8/2004	17.80	17.73	0.07	---	25.00	0.00	973.87
40R	991.60	9/16/2004	17.63	P	< 0.01	---	25.00	0.00	973.97
40R	991.60	9/23/2004	16.62	P	< 0.01	---	25.00	0.00	974.98
40R	991.60	9/29/2004	15.02	P	< 0.01	---	25.00	0.00	976.58
47	991.09	9/22/2004	16.88	15.90	0.98	---	23.08	0.00	975.12
48	992.39	9/22/2004	Unable to locate, possible candidate for replacement					0.00	NM
50	985.79	9/22/2004	10.13	9.27	0.86	---	23.45	0.00	976.46
55	989.45	9/22/2004	14.95	14.35	0.60	---	30.04	0.00	975.06
58	985.79	9/22/2004	10.60	10.59	0.01	---	24.48	0.00	975.20

TABLE 21-8
ROUTINE WELL MONITORING
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 2004

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)
64R	993.37	9/1/2004	17.43	17.39	0.04	---	19.00	0.00	975.98
64R	993.37	9/8/2004	16.81	16.73	0.08	---	19.00	0.00	976.63
64R	993.37	9/16/2004	17.33	17.27	0.06	---	19.00	0.00	976.10
64R	993.37	9/23/2004	16.68	16.40	0.28	---	19.00	0.00	976.95
64R	993.37	9/29/2004	16.70	16.55	0.15	---	19.00	0.00	976.81
64S	984.48	9/1/2004	12.63	---	0.00	---	28.70	0.00	971.85
64S	984.48	9/8/2004	12.88	---	0.00	---	28.70	0.00	971.60
64S	984.48	9/16/2004	12.40	---	0.00	---	28.70	0.00	972.08
64S	984.48	9/23/2004	11.20	---	0.00	---	28.70	0.00	973.28
64S	984.48	9/29/2004	11.30	---	0.00	---	28.70	0.00	973.18
64S-Caisson	NA	9/1/2004	9.50	9.46	0.04	---	14.55	0.00	NA
64S-Caisson	NA	9/8/2004	9.44	P	< 0.01	---	14.55	0.00	NA
64S-Caisson	NA	9/16/2004	9.58	P	< 0.01	---	14.55	0.00	NA
64S-Caisson	NA	9/23/2004	10.02	10.00	0.02	---	14.55	0.00	NA
64S-Caisson	NA	9/29/2004	9.95	9.94	0.01	---	14.55	0.00	NA
64V	987.29	9/1/2004	22.04	21.45	0.59	P	29.60	< 0.01	965.80
64V	987.29	9/8/2004	21.96	21.29	0.67	P	29.60	< 0.01	965.95
64V	987.29	9/16/2004	22.08	21.50	0.58	---	29.60	0.00	965.75
64V	987.29	9/23/2004	21.90	21.48	0.42	---	29.60	0.00	965.78
64V	987.29	9/29/2004	22.00	21.60	0.40	P	29.60	< 0.01	965.66
64X(N)	984.83	9/1/2004	12.04	11.88	0.16	---	15.85	0.00	972.94
64X(N)	984.83	9/8/2004	12.60	12.44	0.16	---	15.85	0.00	972.38
64X(N)	984.83	9/16/2004	11.75	11.67	0.08	---	15.85	0.00	973.15
64X(N)	984.83	9/23/2004	9.40	9.29	0.11	---	15.85	0.00	975.53
64X(N)	984.83	9/29/2004	10.26	10.13	0.13	---	15.85	0.00	974.69
64X(S)	981.56	9/1/2004	15.02	14.97	0.05	---	23.82	0.00	966.59
64X(S)	981.56	9/8/2004	15.15	P	< 0.01	---	23.82	0.00	966.41
64X(S)	981.56	9/16/2004	14.50	P	< 0.01	---	23.82	0.00	967.06
64X(S)	981.56	9/23/2004	11.87	11.86	0.01	---	23.82	0.00	969.70
64X(S)	981.56	9/29/2004	12.76	12.75	0.01	---	23.82	0.00	968.81
64X(W)	984.87	9/1/2004	18.25	18.23	0.02	---	24.35	0.00	966.64
64X(W)	984.87	9/8/2004	16.38	16.35	0.03	---	24.35	0.00	968.52
64X(W)	984.87	9/16/2004	17.76	17.70	0.06	---	24.35	0.00	967.17
64X(W)	984.87	9/23/2004	15.10	15.04	0.06	---	24.35	0.00	969.83
64X(W)	984.87	9/29/2004	15.97	15.94	0.03	---	24.35	0.00	968.93
95-04	988.70	9/22/2004	16.95	12.16	4.79	---	21.71	0.00	976.20
95-05	989.45	9/22/2004	13.36	---	0.00	---	20.08	0.00	976.09
95-07	994.91	9/22/2004	23.04	17.50	5.54	---	29.53	0.00	977.02
E2SC-03I	982.12	9/22/2004	6.98	---	0.00	39.3	45.45	6.15	975.14
E2SC-17	985.38	9/22/2004	9.62	---	0.00	48.1	48.30	0.20	975.76
GMA1-15	988.59	9/22/2004	13.20	12.55	0.65	---	17.83	0.00	975.99
GMA1-16	986.82	9/22/2004	11.09	11.01	0.08	---	20.01	0.00	975.80
GMA1-17W	992.63	9/22/2004	14.70	14.30	0.40	---	23.36	0.00	978.30

TABLE 21-8
ROUTINE WELL MONITORING
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 2004

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)
HR-C-RW-1	NA	9/22/2004	3.60	---	0.00	22.64	22.70	0.06	NA
HR-G2-RW-1	976.88	9/24/2004	3.35	---	0.00	---	18.70	0.00	974.38
M-R	998.19	9/22/2004	18.83	18.83	0.00	---	29.24	0.00	979.36
P3	989.25	9/22/2004	4.82	4.81	0.01	---	13.09	0.00	984.44
RW-1(S)	987.23	9/1/2004	17.75	17.63	0.12	---	28.60	0.00	969.59
RW-1(S)	987.23	9/8/2004	18.13	17.88	0.25	---	28.60	0.00	969.33
RW-1(S)	987.23	9/16/2004	18.21	18.00	0.21	P	28.60	< 0.01	969.22
RW-1(S)	987.23	9/23/2004	11.20	11.19	0.01	P	28.60	< 0.01	976.04
RW-1(S)	987.23	9/29/2004	18.10	18.09	0.01	---	28.60	0.00	969.14
RW-1(X)	982.68	9/1/2004	17.60	---	0.00	---	20.80	0.00	965.08
RW-1(X)	982.68	9/8/2004	17.88	---	0.00	---	20.80	0.00	964.80
RW-1(X)	982.68	9/16/2004	17.29	P	< 0.01	---	20.80	0.00	965.39
RW-1(X)	982.68	9/23/2004	15.80	---	0.00	---	20.80	0.00	966.88
RW-1(X)	982.68	9/29/2004	15.30	---	0.00	---	20.80	0.00	967.38
RW-2(X)	985.96	9/1/2004	14.70	---	0.00	---	15.30	0.00	971.26
RW-2(X)	985.96	9/8/2004	15.08	---	0.00	---	15.30	0.00	970.88
RW-2(X)	985.96	9/16/2004	14.33	---	0.00	---	15.30	0.00	971.63
RW-2(X)	985.96	9/23/2004	10.68	---	0.00	---	15.30	0.00	975.28
RW-2(X)	985.96	9/29/2004	11.69	---	0.00	---	15.30	0.00	974.27
RW-3(X)	980.28	9/1/2004	8.60	---	0.00	42.15	44.40	2.25	971.68
RW-3(X)	980.28	9/8/2004	9.80	---	0.00	42.05	44.40	2.35	970.48
RW-3(X)	980.28	9/16/2004	8.25	---	0.00	41.75	44.40	2.65	972.03
RW-3(X)	980.28	9/23/2004	5.78	---	0.00	---	44.40	0.00	974.50
RW-3(X)	980.28	9/29/2004	8.30	---	0.00	41.80	44.40	2.60	971.98
Housatonic River									
SG-HR-1	990.73	9/3/2004	19.32	See Note 8 regarding depth to water					971.41
SG-HR-1	990.73	9/10/2004	16.40	See Note 8 regarding depth to water					974.33
SG-HR-1	990.73	9/17/2004	18.98	See Note 8 regarding depth to water					971.75
SG-HR-1	990.73	9/23/2004	13.60	See Note 8 regarding depth to water					977.13
SG-HR-1	990.73	9/30/2004	16.84	See Note 8 regarding depth to water					973.89

Notes:

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. 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. No measurements were obtained at this time due to the operation of the auto skimmer.
8. 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 refers to the vertical distance from the surveyed reference point to the water surface.

TABLE 21-9
ACTIVE RECOVERY SYSTEMS MONTHLY SUMMARY
LYMAN STREET AREA
GROUNDWATER MANAGEMENT AREA 1

CONSENT DECREE MONTHLY STATUS REPORT
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
September 2004

Month / Year	Volume Water Pumped (gallon)	RW-1 DNAPL Recovered (gallon)	RW-1R LNAPL Recovered (gallon)	RW-3 LNAPL Recovered (gallon)
September 2002	165,634	--	4	10
October 2002	271,056	--	--	15
November 2002	264,950	--	--	5
December 2002	316,482	--	2	23
January 2003	272,679	--	--	20
February 2003	228,093	--	--	20
March 2003	287,152	--	--	20
April 2003	518,782	--	--	10
May 2003	281,349	--	--	10
June 2003	266,987	--	--	10
July 2003	244,776	--	--	10
August 2003	290,984	--	--	10
September 2003	309,162	--	--	20
October 2003	485,653	--	--	20
November 2003	363,979	--	--	10
December 2003	490,517	--	--	--
January 2004	299,584	--	--	--
February 2004	305,485	--	--	--
March 2004	409,514	--	--	--
April 2004	344,707	--	--	1
May 2004	307,361	--	--	--
June 2004	410,230	--	--	--
July 2004	328,363	--	--	--
August 2004	310,473	--	--	--
September 2004	499,209	--	1	20

Notes:
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 approximately 1.4% downtime (12 hours) during September 2004.

TABLE 21-10
MEASUREMENT AND REMOVAL OF RECOVERABLE LNAPL
LYMAN STREET AREA
GROUNDWATER MANAGEMENT AREA 1

CONSENT DECREE MONTHLY STATUS REPORT
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
September 2004

Well Name	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	LNAPL Removed (liters)	September 2004 Removal (liters)
LS-04	9/27/2004	10.26	10.25	0.01	0.006	0.006
LS-13	9/28/2004	19.31	19.11	0.20	0.123	0.123
LS-21	9/27/2004	9.86	8.95	0.91	0.561	0.561
LS-23	9/27/2004	10.60	10.17	0.43	0.265	0.265
LSSC-06	9/28/2004	9.39	9.13	0.26	0.160	0.160

Total Manual LNAPL Removal for September 2004: 1.115 liters
0.294 gallons

Note:
1. ft BMP - feet Below Measuring Point.

TABLE 21-11
MEASUREMENT AND REMOVAL OF RECOVERABLE DNAPL
LYMAN STREET AREA
GROUNDWATER MANAGEMENT AREA 1

CONSENT DECREE MONTHLY STATUS REPORT
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
September 2004

Well Name	Date	Depth to Water (ft BMP)	Depth to DNAPL (ft BMP)	DNAPL Thickness (feet)	DNAPL Removed (liters)	September 2004 Removal (liters)
LS-04	9/27/2004	10.26	17.46	0.67	0.041	0.041
LS-30	9/28/2004	12.38	20.90	1.30	0.814	0.814
LS-31	9/28/2004	12.12	22.70	0.62	0.382	0.382
LS-34	9/28/2004	11.05	27.95	0.59	0.364	0.364
LS-35	9/27/2004	13.32	---	0.00	0.456	0.456
LS-38	9/28/2004	13.04	25.00	0.05	0.031	0.031
LSSC-07	9/3/2004	9.78	24.90	0.18	0.110	1.005
	9/10/2004	7.85	24.85	0.23	0.537	
	9/17/2004	9.53	24.85	0.23	0.265	
	9/23/2004	6.21	24.65	0.43	0.093	
LSSC-08I	9/3/2004	11.29	23.37	0.02	0.012	0.037
	9/17/2004	10.95	23.35	0.04	0.025	
LSSC-16I	9/28/2004	6.25	28.50	0.04	0.025	0.025
LSSC-34I	9/28/2004	10.56	28.20	0.30	0.185	0.185

Total Manual DNAPL Removal for September 2004: 3.340 liters
0.881 gallons

Note:
1. ft BMP - feet Below Measuring Point.

TABLE 21-12
ROUTINE WELL MONITORING
LYMAN STREET AREA
GROUNDWATER MANAGEMENT AREA 1

CONSENT DECREE MONTHLY STATUS REPORT
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
September 2004

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)
LS-02	983.32	9/27/2004	9.09	---	0.00	---	17.38	0.00	974.23
LS-04	984.51	9/27/2004	10.26	10.25	0.01	17.46	18.13	0.67	974.26
LS-12	985.49	9/28/2004	10.64	---	0.00	---	26.50	0.00	974.85
LS-13	984.65	9/28/2004	19.31	19.11	0.20	---	24.11	0.00	965.53
LS-21	983.42	9/27/2004	9.86	8.95	0.91	---	12.46	0.00	974.41
LS-23	984.38	9/27/2004	10.60	10.17	0.43	---	15.29	0.00	974.18
LS-30	986.44	9/28/2004	12.38	---	0.00	20.90	22.20	1.30	974.06
LS-31	987.09	9/28/2004	12.12	---	0.00	22.70	23.32	0.62	974.97
LS-34	985.79	9/28/2004	11.05	---	0.00	27.95	28.54	0.59	974.74
LS-35	986.80	9/27/2004	13.32	12.58	0.74	---	21.63	0.00	974.17
LS-38	986.95	9/28/2004	13.04	---	0.00	25.00	25.05	0.05	973.91
LSSC-06	984.91	9/28/2004	9.39	9.13	0.26	---	19.38	0.00	975.76
LSSC-07	982.48	9/3/2004	9.78	---	0.00	24.90	25.08	0.18	972.70
LSSC-07	982.48	9/10/2004	7.85	---	0.00	24.85	25.08	0.23	974.63
LSSC-07	982.48	9/17/2004	9.53	---	0.00	24.85	25.08	0.23	972.95
LSSC-07	982.48	9/23/2004	6.21	---	0.00	24.65	25.08	0.43	976.27
LSSC-07	982.48	9/28/2004	7.88	---	0.00	24.93	25.08	0.15	974.60
LSSC-08I	983.13	9/3/2004	11.29	---	0.00	23.37	23.39	0.02	971.84
LSSC-08I	983.13	9/10/2004	8.70	---	0.00	---	23.39	0.00	974.43
LSSC-08I	983.13	9/17/2004	10.95	---	0.00	23.35	23.39	0.04	972.18
LSSC-08I	983.13	9/23/2004	6.50	---	0.00	---	23.39	0.00	976.63
LSSC-08I	983.13	9/28/2004	9.05	---	0.00	---	23.39	0.00	974.08
LSSC-16I	980.88	9/28/2004	6.25	---	0.00	28.50	28.54	0.04	974.63
LSSC-34I	984.74	9/28/2004	10.56	---	0.00	28.20	28.50	0.30	974.18
RW-1	984.88	9/1/2004	11.83	---	0.00	P	21.00	< 0.01	973.05
RW-1	984.88	9/8/2004	12.38	P	< 0.01	20.75	21.00	0.25	972.50
RW-1	984.88	9/16/2004	11.78	---	0.00	20.67	21.00	0.33	973.10
RW-1	984.88	9/23/2004	9.98	---	0.00	P	21.00	< 0.01	974.90
RW-1	984.88	9/29/2004	10.20	---	0.00	P	21.00	< 0.01	974.68
RW-1 (R)	985.07	9/1/2004	15.69	---	0.00	19.40	20.42	1.02	969.38
RW-1 (R)	985.07	9/8/2004	15.69	P	< 0.01	P	20.42	< 0.01	969.38
RW-1 (R)	985.07	9/16/2004	15.71	---	0.00	P	20.42	< 0.01	969.36
RW-1 (R)	985.07	9/23/2004	13.99	13.98	0.01	---	20.42	0.00	971.09
RW-1 (R)	985.07	9/29/2004	14.60	---	0.00	P	20.42	< 0.01	970.47
RW-2	987.82	9/1/2004	15.77	---	0.00	---	21.75	0.00	972.05
RW-2	987.82	9/8/2004	10.71	---	0.00	---	21.75	0.00	977.11
RW-2	987.82	9/16/2004	17.79	---	0.00	---	21.75	0.00	970.03
RW-2	987.82	9/23/2004	12.71	---	0.00	---	21.75	0.00	975.11
RW-2	987.82	9/29/2004	12.50	---	0.00	---	21.75	0.00	975.32
RW-3	984.08	9/1/2004	17.04	16.54	0.50	---	21.57	0.00	967.51
RW-3	984.08	9/8/2004	17.12	16.72	0.40	---	21.57	0.00	967.33
RW-3	984.08	9/16/2004	16.96	16.42	0.54	---	21.57	0.00	967.62
RW-3	984.08	9/23/2004	16.92	16.60	0.32	---	21.57	0.00	967.46
RW-3	984.08	9/29/2004	16.74	16.68	0.06	---	21.57	0.00	967.40

TABLE 21-12
ROUTINE WELL MONITORING
LYMAN STREET AREA
GROUNDWATER MANAGEMENT AREA 1

CONSENT DECREE MONTHLY STATUS REPORT
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
September 2004

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 (Lyman Street Bridge)									
BM-2A	986.32	9/3/2004	14.95	See Note 4 regarding depth to water					971.37
BM-2A	986.32	9/10/2004	12.15	See Note 4 regarding depth to water					974.17
BM-2A	986.32	9/17/2004	14.53	See Note 4 regarding depth to water					971.79
BM-2A	986.32	9/23/2004	9.05	See Note 4 regarding depth to water					977.27
BM-2A	986.32	9/30/2004	12.70	See Note 4 regarding depth to water					973.62

Notes:

1. ft BMP - feet Below Measuring Point.
2. --- indicates LNAPL or DNAPL was not present in a measurable quantity.
3. P indicates that LNAPL is present at a thickness that is < 0.01 feet, the corresponding thickness is recorded as such.
4. 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 21-13
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 2004

Recovery System	Date	Total Gallons Recovered
System 1	September 2003	26.0
	October 2003	56.0
	November 2003	27.0
	December 2003	47.0
	January 2004	24.0
	February 2004	25.5
	March 2004	25.3
	April 2004	26.4
	May 2004	16.0
	June 2004	16.5
	July 2004	14.3
	August 2004	14.6
	September 2004	16.5
System 2	September 2003	390.0
	October 2003	227.0
	November 2003	146.0
	December 2003	182.0
	January 2004	128.0
	February 2004	139.0
	March 2004	112.0
	April 2004	320.0
	May 2004	138.8
	June 2004	97.2
	July 2004	16.2
	August 2004	226.0
	September 2004	129.6
Total Automated DNAPL Removal for September 2004:		**146.1 Gallons**

Notes:
1. System 1 wells are NS-15, NS-30, and NS-32.
2. System 2 wells are N2SC-01I, N2SC-03I, and N2SC-14.
3. There was no downtime during the month of September 2004.

TABLE 21-14
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 2004

Well Name	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	LNAPL Removed (liters)	September 2004 Removal (liters)
NS-10	9/29/2004	7.88	7.55	0.33	0.816	0.816

Total LNAPL Removal for September 2004: 0.816 liters
0.215 gallons

Note:

1. ft BMP - feet Below Measuring Point.

TABLE 21-15
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 2004

Well Name	Date	Depth to Water (ft BMP)	Depth to DNAPL (ft BMP)	DNAPL Thickness (feet)	DNAPL Removed (liters)	September 2004 Removal (liters)
MW-1D	9/29/2004	11.70	39.20	0.32	0.197	0.197
MW-1S	9/29/2004	11.10	24.85	0.42	0.259	0.259
N2SC-02	9/29/2004	10.45	40.35	0.07	0.043	0.043
N2SC-07	9/29/2004	9.81	38.08	0.08	0.049	0.049
N2SC-08	9/29/2004	10.13	40.37	2.21	0.129	0.129
N2SC-09I	9/29/2004	11.85	43.38	0.16	0.099	0.099
N2SC-13I	9/29/2004	8.90	40.6	0.42	1.038	1.038
N2SC-16	9/29/2004	10.24	41.83	0.07	0.173	0.173

Total DNAPL Removal for September 2004: 1.987 liters
0.524 gallons

Note:
1. ft BMP - feet Below Measuring Point.

TABLE 21-16
ROUTINE WELL MONITORING
NEWELL STREET AREA II
GROUNDWATER MANAGEMENT AREA 1

CONSENT DECREE MONTHLY STATUS REPORT
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
September 2004

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)
MW-1D	987.20	9/29/2004	11.70	---	0.00	39.20	39.52	0.32	975.50
MW-1S	986.60	9/29/2004	11.10	---	0.00	24.85	25.27	0.42	975.50
N2SC-02	985.56	9/29/2004	10.45	---	0.00	40.35	40.42	0.07	975.11
N2SC-07	984.61	9/29/2004	9.81	---	0.00	38.08	38.16	0.08	974.80
N2SC-08	986.07	9/29/2004	10.13	---	0.00	40.37	42.58	2.21	975.94
N2SC-09I	987.77	9/29/2004	11.85	---	0.00	43.38	43.54	0.16	975.92
N2SC-13I	984.75	9/29/2004	8.90	---	0.00	40.6	41.02	0.42	975.85
N2SC-16	985.62	9/29/2004	10.24	---	0.00	41.83	41.90	0.07	975.38
NS-10	984.59	9/29/2004	7.88	7.55	0.33	---	19.20	0.00	977.02

Notes:

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

TABLE 21-17
ROUTINE WELL MONITORING
SILVER LAKE AREA
GROUNDWATER MANAGEMENT AREA 1

CONSENT DECREE MONTHLY STATUS REPORT
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
September 2004

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)
Staff Gauge within Silver Lake									
Silver Lake Gauge	NA	9/3/2004	0.50	See Note 3 regarding depth to water					NA
Silver Lake Gauge	NA	9/10/2004	1.12	See Note 3 regarding depth to water					NA
Silver Lake Gauge	NA	9/17/2004	0.50	See Note 3 regarding depth to water					NA
Silver Lake Gauge	NA	9/23/2004	1.30	See Note 3 regarding depth to water					NA
Silver Lake Gauge	NA	9/30/2004	0.88	See Note 3 regarding depth to water					NA

Notes:

1. ft BMP - feet Below Measuring Point.
2. NA indicates information not available.
3. A new Silver Lake Gauge has been installed and will be surveyed to obtain a new horizontal datum. "Depth to Water" values provided refer to feet above the datum, rather than feet below the measuring point.

ITEM 22
GROUNDWATER MANAGEMENT AREAS
FORMER OXBOWS J & K (GMA 2)
(GECD320)
SEPTEMBER 2004

*** 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)

Initiate semi-annual groundwater elevation monitoring for fall 2004.

e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

f. Proposed/Approved Work Plan Modifications

None

ITEM 23
GROUNDWATER MANAGEMENT AREAS
PLANT SITE 2 (GMA 3)
(GECD330)
SEPTEMBER 2004

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

a. Activities Undertaken/Completed

- Conducted monthly monitoring and NAPL bailing round in the vicinity of Buildings 51 and 59. Approximately 25.01 liters (6.60 gallons) of LNAPL were removed by the automatic skimmer located in well 51-21 and an additional 11.23 liters (2.96 gallons) of LNAPL were manually removed from the wells in this area.

- Developed replacement monitoring wells 6B-R, 82B-R, 95B-R, 111A-R, and 114B-R and existing wells 109A and 109B.

- Conducted well purge water sampling, as identified in Table 23-1.

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 ongoing groundwater and NAPL monitoring and recovery activities, including performance of fall 2004 semi-annual monitoring event.

- Decommission wells 54B, 89D, and 95C and install replacement monitoring well 54B-R (see Item 23.e below).

- Install replacement well 89D-R or new well 109D (see Item 23.f below).

- Initiate fall 2004 baseline sampling and analysis round.

e. General Progress/Unresolved Issues/Potential Schedule Impacts

The decommissioning of wells 54B, 89D, and 95C and installation of replacement wells 54B-R and 89D-R have been delayed due to the presence of standing water at these locations. EPA has approved a revised location for well 54B-R and this well will be installed shortly.

ITEM 23
(cont'd)
GROUNDWATER MANAGEMENT AREAS
PLANT SITE 2 (GMA 3)
(GECD330)
SEPTEMBER 2004

f. Proposed/Approved Work Plan Modifications

GE and EPA are discussing the potential replacement of the inaccessible 89 well cluster with the nearby 109 well cluster. If implemented, a new well (109D) would be installed in place of well 89D-R.

TABLE 23-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

GROUNDWATER MANAGEMENT AREA 3
GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	Date Received
Purge Water Drum Sampling	GMA3-B0674-WATER-1	9/14/04	Water	SGS	PCB, SVOC, RCRA Metals (8)	9/22/04
Purge Water Drum Sampling	GMA3-B0688-WATER-1	9/14/04	Water	SGS	PCB, VOC, SVOC, RCRA Metals (8)	9/22/04

TABLE 23-2
DATA RECEIVED DURING SEPTEMBER 2004

PURGE WATER DRUM SAMPLING
GROUNDWATER MANAGEMENT AREA 3
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	GMA3-B0674-WATER-1 09/14/04	GMA3-B0688-WATER-1 09/14/04
Volatile Organics		
None Detected	NA	--
PCBs-Unfiltered		
Aroclor-1254	0.00015	0.000042 J
Total PCBs	0.00015	0.000042 J
Semivolatile Organics		
None Detected	--	--
Inorganics-Unfiltered		
Arsenic	ND(0.00500)	0.0130
Barium	0.0300	0.160
Cadmium	ND(0.00100)	0.00140
Chromium	0.00230 B	0.0260
Lead	ND(0.00500)	0.0140
Mercury	ND(0.000200)	0.000370
Silver	0.00180 B	0.00260 B

Notes:

1. Samples were collected by Blasland, Bouck & Lee, Inc., and submitted to SGS Environmental Services, Inc. for analysis of PCBs, volatiles, semivolatiles, and metals.
2. NA - Not Analyzed.
3. ND - Analyte was not detected. The number in parentheses is the associated detection limit.
4. Only those constituents detected in one or more samples are summarized.
5. -- Indicates that all constituents for the parameter group were not detected.

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.

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

CONSENT DECREE MONTHLY STATUS REPORT
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
September 2004

Well Name	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	LNAPL Removed (liters)	September 2004 Removal (liters)
51-05	9/24/2004	10.29	9.80	0.49	0.302	0.302
51-08	9/3/2004	12.34	10.88	1.46	0.894	3.744
	9/10/2004	12.40	10.95	1.45	0.894	
	9/17/2004	12.10	11.02	1.08	0.666	
	9/24/2004	11.85	10.45	1.40	0.864	
	9/30/2004	11.05	10.36	0.69	0.426	
51-15	9/24/2004	10.03	9.78	0.25	0.154	0.154
51-16R	9/24/2004	9.75	9.74	0.01	0.006	0.006
51-17	9/24/2004	10.75	9.50	1.25	0.771	0.771
51-19	9/24/2004	10.55	9.80	0.75	0.463	0.463
51-21	9/1/2004	15.48	P	< 0.01	4.548	25.014
	9/8/2004	15.54	P	< 0.01	5.685	
	9/16/2004	15.56	P	< 0.01	5.685	
	9/23/2004	14.87	P	< 0.01	4.548	
	9/29/2004	14.79	P	< 0.01	4.548	
59-03R	9/24/2004	11.90	10.98	0.92	0.568	0.568
59-07	9/24/2004	11.26	11.25	0.01	0.006	0.006
GMA3-10	9/3/2004	11.87	11.25	0.62	0.382	1.584
	9/10/2004	11.98	11.33	0.65	0.401	
	9/17/2004	11.75	11.31	0.44	0.271	
	9/24/2004	11.25	10.88	0.37	0.228	
	9/30/2004	11.24	10.75	0.49	0.302	
GMA3-12	9/3/2004	12.00	11.62	0.38	0.939	3.509
	9/10/2004	12.07	11.70	0.37	0.914	
	9/17/2004	11.97	11.70	0.27	0.667	
	9/24/2004	11.45	11.20	0.25	0.618	
	9/30/2004	11.25	11.10	0.15	0.371	
UB-PZ-3	9/24/2004	11.95	11.60	0.35	0.122	0.122

Total Automated LNAPL Removal at well 51-21 for September 2004: 25.014 liters
6.60 Gallons

Total Manual LNAPL Removal at all other wells for September 2004: 11.229 liters
2.96 Gallons

Total LNAPL Removed for September 2004: 36.243 liters
9.56 Gallons

Notes:

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 23-4
ROUTINE WELL MONITORING
GROUNDWATER MANAGEMENT AREA 3

CONSENT DECREE MONTHLY STATUS REPORT
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
September 2004

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)
006B-R	NA	9/16/2004	6.99	---	0.00	---	14.95	0.00	NA
51-05	996.44	9/24/2004	10.29	9.80	0.49	---	12.53	0.00	986.61
51-08	997.08	9/3/2004	12.34	10.88	1.46	---	14.66	0.00	986.10
51-08	997.08	9/10/2004	12.40	10.95	1.45	---	14.66	0.00	986.03
51-08	997.08	9/17/2004	12.10	11.02	1.08	---	14.66	0.00	985.98
51-08	997.08	9/24/2004	11.85	10.45	1.40	---	14.66	0.00	986.53
51-08	997.08	9/30/2004	11.05	10.36	0.69	---	14.66	0.00	986.67
51-15	996.43	9/24/2004	10.03	9.78	0.25	---	14.50	0.00	986.63
51-16R	996.39	9/24/2004	9.75	9.74	0.01	---	14.56	0.00	986.65
51-17	996.43	9/24/2004	10.75	9.50	1.25	---	14.50	0.00	986.84
51-19	996.43	9/24/2004	10.55	9.80	0.75	---	14.06	0.00	986.58
51-21	1,001.49	9/1/2004	15.48	P	< 0.01	---	NM	0.00	986.01
51-21	1,001.49	9/8/2004	15.54	P	< 0.01	---	NM	0.00	985.95
51-21	1,001.49	9/16/2004	15.56	P	< 0.01	---	NM	0.00	985.93
51-21	1,001.49	9/23/2004	14.87	P	< 0.01	---	NM	0.00	986.62
51-21	1,001.49	9/29/2004	14.79	P	< 0.01	---	NM	0.00	986.70
59-03R	997.64	9/24/2004	11.90	10.98	0.92	---	17.04	0.00	986.60
59-07	997.96	9/24/2004	11.26	11.25	0.01	---	23.54	0.00	986.71
095B-R	NA	9/17/2004	5.76	---	0.00	---	14.62	0.00	NA
109A	990.03	9/15/2004	7.10	---	0.00	---	52.96	0.00	982.93
109B	989.06	9/15/2004	5.95	---	0.00	---	11.60	0.00	983.11
111A-R	NA	9/16/2004	13.49	---	0.00	---	52.03	0.00	NA
114B-R	NA	9/17/2004	5.91	---	0.00	---	15.90	0.00	NA
GMA3-4	994.60	9/16/2004	7.23	---	0.00	---	13.38	0.00	987.37
GMA3-10	997.54	9/3/2004	11.87	11.25	0.62	---	18.02	0.00	986.25
GMA3-10	997.54	9/10/2004	11.98	11.33	0.65	---	18.02	0.00	986.16
GMA3-10	997.54	9/17/2004	11.75	11.31	0.44	---	18.02	0.00	986.20
GMA3-10	997.54	9/24/2004	11.25	10.88	0.37	---	18.02	0.00	986.63
GMA3-10	997.54	9/30/2004	11.24	10.75	0.49	---	18.02	0.00	986.76
GMA3-12	997.84	9/3/2004	12.00	11.62	0.38	---	21.24	0.00	986.19
GMA3-12	997.84	9/10/2004	12.07	11.70	0.37	---	21.24	0.00	986.11
GMA3-12	997.84	9/17/2004	11.97	11.70	0.27	---	21.24	0.00	986.12
GMA3-12	997.84	9/24/2004	11.45	11.20	0.25	---	21.24	0.00	986.62
GMA3-12	997.84	9/30/2004	11.25	11.10	0.15	---	21.24	0.00	986.73
UB-PZ-3	998.15	9/24/2004	11.95	11.60	0.35	---	13.35	0.00	986.53

Notes:

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 2004

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

a. Activities Undertaken/Completed

- Initiated semi-annual groundwater elevation monitoring and OPCA-related groundwater quality sampling and analysis for fall 2004.

- Conducted well purge water sampling, as identified in Table 24-1.

b. Sampling/Test Results Received

See attached tables.

c. Work Plans/Reports/Documents Submitted

None

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

Complete semi-annual groundwater elevation monitoring and OPCA-related groundwater quality sampling and analysis for fall 2004.

e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

f. Proposed/Approved Work Plan Modifications

None

TABLE 24-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

GROUNDWATER MANAGEMENT AREA 4
GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	Date Received
Purge Water Drum Sampling	GMA4-B0689-WATER-1	9/14/04	Water	SGS	PCB, SVOC, RCRA Metals (8)	9/22/04

TABLE 24-2
DATA RECEIVED DURING SEPTEMBER 2004

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:	GMA4-B0689-WATER-1 09/14/04
PCBs-Unfiltered	
Aroclor-1254	0.00023
Total PCBs	0.00023
Semivolatile Organics	
None Detected	--
Inorganics-Unfiltered	
Barium	0.00840
Chromium	0.00360 B
Silver	0.00170 B

Notes:

1. Sample was collected by Blasland, Bouck & Lee, Inc., and submitted to SGS Environmental Services, Inc. for analysis of PCBs, semivolatiles, and metals.
2. Only detected constituents are summarized.
3. -- Indicates that all constituents for the parameter group were not detected.

Data Qualifiers:

Inorganics

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

TABLE 24-3
ROUTINE WELL MONITORING
GROUNDWATER MANAGEMENT AREA 4

CONSENT DECREE MONTHLY STATUS REPORT
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
September 2004

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)
Commercial Street Area (South of GMA 4)									
GMA4-5	993.34	9/27/2004	10.90	---	0.00	---	18.18	0.00	982.44
GMA4-5	993.34	9/28/2004	10.89	---	0.00	---	18.18	0.00	982.45
MW-1	984.34	9/27/2004	7.96	---	0.00	---	14.76	0.00	976.38
MW-2	983.12	9/27/2004	7.36	---	0.00	---	13.76	0.00	975.76
MW-3	986.73	9/27/2004	9.88	---	0.00	---	15.00	0.00	976.85
MW-3	986.73	9/28/2004	9.98	---	0.00	---	15.00	0.00	976.75
MW-4	985.73	9/27/2004	9.08	---	0.00	---	14.30	0.00	976.65
MW-5	983.53	9/27/2004	8.83	---	0.00	---	17.53	0.00	974.70
MW-6	987.65	9/27/2004	8.86	---	0.00	---	17.63	0.00	978.79
MW-6	987.65	9/28/2004	8.86	---	0.00	---	17.63	0.00	978.79
MW-7	984.73	9/27/2004	2.65	---	0.00	---	14.68	0.00	982.08
MW-8	984.94	9/27/2004	5.98	---	0.00	---	14.66	0.00	978.96
MW-10	988.87	9/27/2004	8.09	---	0.00	---	17.67	0.00	980.78

Notes:

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)
SEPTEMBER 2004

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

a. Activities Undertaken/Completed

Conducted well purge water sampling, as identified in Table 25-1.

b. Sampling/Test Results Received

See attached tables.

c. Work Plans/Reports/Documents Submitted

None

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

Initiate semi-annual groundwater elevation monitoring for fall 2004.

e. General Progress/Unresolved Issues/Potential Schedule Impacts

No issues

f. Proposed/Approved Work Plan Modifications

None

TABLE 25-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

GROUNDWATER MANAGEMENT AREA 5
GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	Date Received
Purge Water Drum Sampling	GMA5-F0478-WATER-1	9/14/04	Water	SGS	PCB, SVOC, RCRA Metals (8)	9/22/04

TABLE 25-2
DATA RECEIVED DURING SEPTEMBER 2004

PURGE WATER DRUM SAMPLING
GROUNDWATER MANAGEMENT AREA 5
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	GMA5-F0478-WATER-1 09/14/04
PCBs-Unfiltered	
Aroclor-1254	0.00018
Total PCBs	0.00018
Semivolatile Organics	
None Detected	--
Inorganics-Unfiltered	
Arsenic	0.00640
Barium	0.00770
Cadmium	0.000830 B
Chromium	0.00480 B
Silver	0.00210 B

Notes:

1. Sample was collected by Blasland, Bouck & Lee, Inc., and submitted to SGS Environmental Services, Inc. for analysis of PCBs, semivolatiles, and metals.
2. Only detected constituents are summarized.
3. -- Indicates that all constituents for the parameter group were not detected.

Data Qualifiers:

Inorganics

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

Attachment A

NPDES Sampling Records and Results
September 2004

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

TABLE A-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

NPDES PERMIT MONITORING
GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	Date Received
NPDES Sampling	001-A5951	9/13/04	Water	SGS	Oil & Grease	9/22/04
NPDES Sampling	001-A5953	9/13/04	Water	SGS	PCB	9/22/04
NPDES Sampling	001-A5954	9/13/04	Water	SGS	TSS	9/22/04
NPDES Sampling	004-A5931	9/6/04	Water	SGS	Oil & Grease	9/14/04
NPDES Sampling	005-A5921/A5924	8/30/04	Water	SGS	PCB	9/7/04
NPDES Sampling	005-A5939/A5940	9/7/04	Water	SGS	BOD	9/14/04
NPDES Sampling	005-A5939/A5940	9/7/04	Water	SGS	PCB, TSS	9/14/04
NPDES Sampling	005-A5957/A5960	9/13/04	Water	SGS	PCB	9/22/04
NPDES Sampling	005-A5981/A5982	9/21/04	Water	SGS	PCB	9/29/04
NPDES Sampling	005-A5990/A5991	9/28/04	Water	SGS	PCB	
NPDES Sampling	09A-A5917	8/26/04	Water	SGS	TSS, BOD	9/2/04
NPDES Sampling	09A-A5974	9/19/04	Water	SGS	TSS	9/29/04
NPDES Sampling	09B-A5925	8/30/04	Water	SGS	TSS, BOD	9/7/04
NPDES Sampling	09B-A5930	9/5/04	Water	SGS	TSS	9/14/04
NPDES Sampling	09B-A5941	9/7/04	Water	SGS	BOD	9/14/04
NPDES Sampling	09B-A5950	9/12/04	Water	SGS	TSS	9/22/04
NPDES Sampling	09B-A5961	9/13/04	Water	SGS	BOD	9/22/04
NPDES Sampling	09B-A5975	9/19/04	Water	SGS	TSS	9/29/04
NPDES Sampling	09B-A5983	9/21/04	Water	SGS	BOD	9/29/04
NPDES Sampling	09B-A5988	9/27/04	Water	SGS	TSS, BOD	
NPDES Sampling	09C-A5926	8/28/04	Water	SGS	Oil & Grease	9/7/04
NPDES Sampling	09C-A5928	8/30/04	Water	SGS	Oil & Grease	9/14/04
NPDES Sampling	09C-A5942	9/8/04	Water	SGS	Oil & Grease	9/22/04
NPDES Sampling	09C-A5967	9/16/04	Water	SGS	Oil & Grease	9/27/04
NPDES Sampling	09C-A5994	9/28/04	Water	SGS	Oil & Grease	
NPDES Sampling	64G-A5922	8/30/04	Water	SGS	Oil & Grease	9/7/04
NPDES Sampling	64G-A5935	9/6/04	Water	SGS	Oil & Grease	9/14/04
NPDES Sampling	64G-A5958	9/13/04	Water	SGS	Oil & Grease	9/22/04
NPDES Sampling	64G-A5978	9/20/04	Water	SGS	Oil & Grease	9/29/04
NPDES Sampling	64G-A5986	9/27/04	Water	SGS	Oil & Grease	
NPDES Sampling	64T-A5919	8/30/04	Water	SGS	Oil & Grease	9/7/04
NPDES Sampling	64T-A5933	9/6/04	Water	SGS	Oil & Grease	9/14/04
NPDES Sampling	64T-A5955	9/13/04	Water	SGS	Oil & Grease	9/22/04
NPDES Sampling	64T-A5976	9/20/04	Water	SGS	Oil & Grease	9/29/04
NPDES Sampling	64T-A5984	9/27/04	Water	SGS	Oil & Grease	

TABLE A-1
DATA RECEIVED AND/OR SAMPLES COLLECTED DURING SEPTEMBER 2004

NPDES PERMIT MONITORING
GENERAL ELECTRIC COMPANY - PITTSFIELD MASSACHUSETTS

Project Name	Field Sample ID	Sample Date	Matrix	Laboratory	Analyses	Date Received
NPDES Sampling	A5944R	9/13/04	Water	SGS	Acute Toxicity Test	9/24/04
NPDES Sampling	A5944R	9/13/04	Water	SGS	Chronic Toxicity Test	9/29/04
NPDES Sampling	A5944RCN	9/13/04	Water	SGS	CN	9/22/04
NPDES Sampling	A5944RTM	9/13/04	Water	SGS	Metals (10)	9/22/04
NPDES Sampling	A5945C	9/13/04	Water	SGS	Acute Toxicity Test	9/24/04
NPDES Sampling	A5945C	9/13/04	Water	SGS	Chronic Toxicity Test	9/29/04
NPDES Sampling	A5945CCN	9/13/04	Water	SGS	CN	9/22/04
NPDES Sampling	A5945CDM	9/13/04	Water	SGS	Filtered Metals (8)	9/22/04
NPDES Sampling	A5945CTM	9/13/04	Water	SGS	Metals (10)	9/22/04
NPDES Sampling	A5946R	9/15/04	Water	SGS	Chronic Toxicity Test	9/29/04
NPDES Sampling	A5946RCN	9/15/04	Water	SGS	CN	9/22/04
NPDES Sampling	A5946RTM	9/15/04	Water	SGS	Metals (10)	9/22/04
NPDES Sampling	A5947C	9/15/04	Water	SGS	Chronic Toxicity Test	9/29/04
NPDES Sampling	A5947CCN	9/15/04	Water	SGS	CN	9/22/04
NPDES Sampling	A5947CDM	9/15/04	Water	SGS	Filtered Metals (8)	9/22/04
NPDES Sampling	A5947CTM	9/15/04	Water	SGS	Metals (10)	9/22/04
NPDES Sampling	A5948R	9/17/04	Water	SGS	Chronic Toxicity Test	9/29/04
NPDES Sampling	A5948RCN	9/17/04	Water	SGS	CN	9/27/04
NPDES Sampling	A5948RTM	9/17/04	Water	SGS	Metals (10)	9/27/04
NPDES Sampling	A5949C	9/17/04	Water	SGS	Chronic Toxicity Test	9/29/04
NPDES Sampling	A5949CCN	9/17/04	Water	SGS	CN	9/27/04
NPDES Sampling	A5949CDM	9/17/04	Water	SGS	Filtered Metals (8)	9/27/04
NPDES Sampling	A5949CTM	9/17/04	Water	SGS	Metals (10)	9/27/04
NPDES Sampling	OCT04WK1	9/28/04	Water	SGS	Cu, Pb, Zn	
NPDES Sampling	SEP04WK1	8/30/04	Water	SGS	Cu, Pb, Zn	9/7/04
NPDES Sampling	SEP04WK2	9/7/04	Water	SGS	Cu, Pb, Zn	9/14/04
NPDES Sampling	SEP04WK4	9/21/04	Water	SGS	Cu, Pb, Zn	9/29/04

TABLE A-2
DATA RECEIVED DURING SEPTEMBER 2004

NPDES PERMIT MONITORING SAMPLING
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	001-A5951 09/13/04	001-A5953 09/13/04	001-A5954 09/13/04	004-A5931 09/06/04	005-A5921/A5924 08/30/04	005-A5939/A5940 09/07/04	005-A5957/A5960 09/13/04
PCBs-Unfiltered							
Aroclor-1254	NA	0.00017	NA	NA	0.000033 J	ND(0.000065)	0.000019 J
Aroclor-1260	NA	0.000031 J	NA	NA	ND(0.000065)	ND(0.000065)	ND(0.000065)
Total PCBs	NA	0.000201	NA	NA	0.000033 J	ND(0.000065)	0.000019 J
Inorganics-Unfiltered							
Aluminum	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA
Cyanide	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA
Magnesium	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 Demand (5-day)	NA	NA	NA	NA	NA	ND(2.0)	NA
Oil & Grease	ND(5.0)	NA	NA	ND(5.0)	NA	NA	NA
Total Suspended Solids	NA	NA	5.00	NA	NA	ND(5.00)	NA

TABLE A-2
DATA RECEIVED DURING SEPTEMBER 2004

NPDES PERMIT MONITORING SAMPLING
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	005-A5981/A5982 09/21/04	09A-A5917 08/26/04	09A-A5974 09/19/04	09B-A5925 08/30/04	09B-A5930 09/05/04	09B-A5941 09/07/04	09B-A5950 09/12/04	09B-A5961 09/13/04
PCBs-Unfiltered								
Aroclor-1254	0.000022 J	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	ND(0.000065)	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.000022 J	NA	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 Demand (5-day)	NA	1.9 B	NA	ND(2.0)	NA	1.9 B	NA	ND(2.0)
Oil & Grease	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	NA	7.00	6.00	9.00	5.00	NA	7.00	NA

TABLE A-2
DATA RECEIVED DURING SEPTEMBER 2004

NPDES PERMIT MONITORING SAMPLING
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	09B-A5975 09/19/04	09B-A5983 09/21/04	09C-A5926 08/28/04	09C-A5928 08/30/04	09C-A5942 09/08/04	09C-A5967 09/16/04	64G-A5922 08/30/04	64G-A5935 09/06/04	64G-A5958 09/13/04
PCBs-Unfiltered									
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Unfiltered									
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Filtered									
Aluminum	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conventionals									
Biological Oxygen Demand (5-day)	NA	1.7 B	NA	NA	NA	NA	NA	NA	NA
Oil & Grease	NA	NA	ND(5.0)	ND(5.0)	ND(5.0)	2.1 B	ND(5.0)	ND(5.0)	ND(5.0)
Total Suspended Solids	ND(5.00)	NA	NA	NA	NA	NA	NA	NA	NA

TABLE A-2
DATA RECEIVED DURING SEPTEMBER 2004

NPDES PERMIT MONITORING SAMPLING
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	64G-A5978 09/20/04	64T-A5919 08/30/04	64T-A5933 09/06/04	64T-A5955 09/13/04	64T-A5976 09/20/04	A5944RCN 09/13/04	A5944RTM 09/13/04	A5945CCN 09/13/04
PCBs-Unfiltered								
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Unfiltered								
Aluminum	NA	NA	NA	NA	NA	NA	ND(0.100)	NA
Cadmium	NA	NA	NA	NA	NA	NA	0.000760 B	NA
Calcium	NA	NA	NA	NA	NA	NA	18.0	NA
Chromium	NA	NA	NA	NA	NA	NA	0.00420 B	NA
Copper	NA	NA	NA	NA	NA	NA	0.00310 B	NA
Cyanide	NA	NA	NA	NA	NA	0.00180 B	NA	0.0630
Lead	NA	NA	NA	NA	NA	NA	ND(0.00500)	NA
Magnesium	NA	NA	NA	NA	NA	NA	5.90	NA
Nickel	NA	NA	NA	NA	NA	NA	0.00200 B	NA
Silver	NA	NA	NA	NA	NA	NA	0.00180 B	NA
Zinc	NA	NA	NA	NA	NA	NA	0.00590 B	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 Demand (5-day)	NA	NA	NA	NA	NA	NA	NA	NA
Oil & Grease	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	NA	NA	NA
Total Suspended Solids	NA	NA	NA	NA	NA	NA	NA	NA

TABLE A-2
DATA RECEIVED DURING SEPTEMBER 2004

NPDES PERMIT MONITORING SAMPLING
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	A5945CDM 09/13/04	A5945CTM 09/13/04	A5946RCN 09/15/04	A5946RTM 09/15/04	A5947CCN 09/15/04	A5947CDM 09/15/04	A5947CTM 09/15/04	A5948RCN 09/17/04
PCBs-Unfiltered								
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Unfiltered								
Aluminum	NA	ND(0.100)	NA	0.0750 B	NA	NA	ND(0.100)	NA
Cadmium	NA	0.000730 B	NA	ND(0.00100)	NA	NA	0.000840 B	NA
Calcium	NA	78.0	NA	21.0	NA	NA	76.0	NA
Chromium	NA	0.00170 B	NA	ND(0.00500)	NA	NA	0.00250 B	NA
Copper	NA	0.00470 B	NA	ND(0.00500)	NA	NA	0.00520	NA
Cyanide	NA	NA	0.00300 B	NA	0.0410	NA	NA	0.00350 B
Lead	NA	ND(0.00500)	NA	ND(0.00500)	NA	NA	ND(0.00500)	NA
Magnesium	NA	31.0	NA	7.30	NA	NA	31.0	NA
Nickel	NA	0.00180 B	NA	ND(0.00500)	NA	NA	0.00260 B	NA
Silver	NA	0.00190 B	NA	ND(0.00500)	NA	NA	0.00240 B	NA
Zinc	NA	0.00830 B	NA	0.00760 B	NA	NA	0.0110 B	NA
Inorganics-Filtered								
Aluminum	ND(0.100)	NA	NA	NA	NA	ND(0.100)	NA	NA
Cadmium	0.00110	NA	NA	NA	NA	ND(0.00100)	NA	NA
Chromium	0.00500	NA	NA	NA	NA	0.00280 B	NA	NA
Copper	0.00520	NA	NA	NA	NA	0.00330 B	NA	NA
Lead	ND(0.00500)	NA	NA	NA	NA	ND(0.00500)	NA	NA
Nickel	0.00340 B	NA	NA	NA	NA	0.00240 B	NA	NA
Silver	0.00130 B	NA	NA	NA	NA	0.00140 B	NA	NA
Zinc	0.0110 B	NA	NA	NA	NA	0.0140 B	NA	NA
Conventionals								
Biological Oxygen Demand (5-day)	NA	NA	NA	NA	NA	NA	NA	NA
Oil & Grease	NA	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	NA	NA	NA	NA	NA	NA	NA	NA

TABLE A-2
DATA RECEIVED DURING SEPTEMBER 2004

NPDES PERMIT MONITORING SAMPLING
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	A5948RTM 09/17/04	A5949CCN 09/17/04	A5949CDM 09/17/04	A5949CTM 09/17/04	SEP04WK1 08/30/04	SEP04WK2 09/07/04	SEP04WK4 09/21/04
PCBs-Unfiltered							
Aroclor-1254	NA	NA	NA	NA	NA	NA	NA
Aroclor-1260	NA	NA	NA	NA	NA	NA	NA
Total PCBs	NA	NA	NA	NA	NA	NA	NA
Inorganics-Unfiltered							
Aluminum	ND(0.100)	NA	NA	ND(0.100)	NA	NA	NA
Cadmium	ND(0.00100)	NA	NA	ND(0.00100)	NA	NA	NA
Calcium	20.0	NA	NA	67.0	NA	NA	NA
Chromium	ND(0.00500)	NA	NA	ND(0.00500)	NA	NA	NA
Copper	0.00270 B	NA	NA	0.00540	0.00740	0.00300 B	0.00360 B
Cyanide	NA	0.0580	NA	NA	NA	NA	NA
Lead	ND(0.00500)	NA	NA	ND(0.00500)	ND(0.00500)	ND(0.00500)	ND(0.00500)
Magnesium	6.70	NA	NA	27.0	NA	NA	NA
Nickel	ND(0.00500)	NA	NA	0.00220 B	NA	NA	NA
Silver	ND(0.00500)	NA	NA	ND(0.00500)	NA	NA	NA
Zinc	0.00570 B	NA	NA	0.00790 B	0.0110 B	0.00450 B	0.0200 B
Inorganics-Filtered							
Aluminum	NA	NA	ND(0.100)	NA	NA	NA	NA
Cadmium	NA	NA	ND(0.00100)	NA	NA	NA	NA
Chromium	NA	NA	ND(0.00500)	NA	NA	NA	NA
Copper	NA	NA	0.00360 B	NA	NA	NA	NA
Lead	NA	NA	ND(0.00500)	NA	NA	NA	NA
Nickel	NA	NA	ND(0.00500)	NA	NA	NA	NA
Silver	NA	NA	ND(0.00500)	NA	NA	NA	NA
Zinc	NA	NA	0.0180 B	NA	NA	NA	NA
Conventionals							
Biological Oxygen Demand (5-day)	NA	NA	NA	NA	NA	NA	NA
Oil & Grease	NA	NA	NA	NA	NA	NA	NA
Total Suspended Solids	NA	NA	NA	NA	NA	NA	NA

Notes:

1. Samples were collected by General Electric Company, and were submitted to SGS Environmental 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 parentheses is the associated detection limit.
4. With the exception of inorganics, only those constituents detected in one or more sample are summarized.

Data Qualifiers:

Organics

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

Inorganics and Conventional Parameters

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

Attachment B

NPDES Discharge Monitoring Reports
August 2004

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

PERMITTEE NAME/ADDRESS (Include Facility Name/ Location if Different)
NAME GENERAL ELECTRIC CORPORATION
ADDRESS ATTN: JEFFREY G. RUEBESAM
100 WOODLAWN AVENUE
PITTSFIELD MA 01201
FACILITY GENERAL ELECTRIC COMPANY
LOCATION PITTSFIELD MA 01201
ATTN: MICHAEL T CARROLL, EHS&F

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved.
OMB No. 2040-0004

MA0003891 — PERMIT NUMBER
001 1 — DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	04	08	01	TO	04	08	31

MAJOR
(SUBR W)
F - FINAL
DISCHARGE TO SILVER LAKE

*** NO DISCHARGE | | ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
PH	SAMPLE MEASUREMENT	******	******		6.8	******	7.9	(12) SU	0	01/07	GR
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	6.0 MINIMUM	******	9.0 MAXIMUM	SU		WEEKLY	RANG-G
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	1.9	1.9	(26) LBS/DY	******	******	******		0	01/30	CP
00530 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	138 MO AVG	628 DAILY MX	LBS/DY	******	******	******	**** ****		ONCE/ MONTH	COMPOS
OIL & GREASE	SAMPLE MEASUREMENT	******	0	(26) LBS/DY	******	******	0	(19) MG/L	0	01/30	GR
00556 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	319 DAILY MX	LBS/DY	******	******	15 DAILY MX	MG/L		ONCE/ MONTH	GRAB
POLYCHLORINATED BIPHENYLS (PCBS)	SAMPLE MEASUREMENT	******	0.0003	(26) LBS/DY	******	******	******		0	01/30	GR
39516 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	REPORT DAILY MX	LBS/DY	******	******	******	**** ****		ONCE/ MONTH	GRAB
FLOW, IN CONDUIT OR THRU TREATMENT PLANT	SAMPLE MEASUREMENT	0.114	0.629	(03) MGD	******	******	******		0	99/99	RC
50050 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	1.10 MO AVG	2.55 DAILY MX	MGD	******	******	******	**** ****		CONTINUOUS	RCORDR
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Michael T. Carroll
Mgr. Pittsfield Remediation Prog.
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 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.

M. T. Carroll
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 413 | NUMBER 494-3500

DATE: YEAR 2004 | MO 9 | DAY 21

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
SAMPLE AT THE DISCHARGE FROM OIL/WATER SEPERATOR.

Form Approved.
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS *(Include Facility Name/ Location if Different)*
NAME GENERAL ELECTRIC CORPORATION
ADDRESS ATTN: JEFFREY G. RUEBESAM
100 WOODLAWN AVENUE
PITTSFIELD MA 01201
FACILITY GENERAL ELECTRIC COMPANY
LOCATION PITTSFIELD MA 01201
ATTN: MICHAEL T CARROLL, EHS&F

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

MA0003891	004 1
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	04	08	01	TO	04	08	31

MAJOR
(SUBR W)
F - FINAL
DISCHARGE TO SILVER LAKE

*** NO DISCHARGE | | ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
PH	SAMPLE MEASUREMENT	******	******		7.1	******	8.2	(12) SU	0	01/07	GR
00400 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	**** ****	6.0 MINIMUM	******	9.0 MAXIMUM	SU		WEEKLY	RANG-G
OIL & GREASE	SAMPLE MEASUREMENT	******	0	(26) LBS/DY	******	******	0	(19) MG/L	0	01/30	GR
00556 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	261 DAILY MX	LBS/DY	******	******	15 DAILY MX	MG/L		ONCE/ MONTH	GRAB
POLYCHLORINATED BIPHENYLS (PCBS)	SAMPLE MEASUREMENT	******	NODI [9]	(26) LBS/DY	******	******	******				
39516 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	REPORT DAILY MX	LBS/DY	******	******	******	**** ****		QTRLY	GRAB
FLOW, IN CONDUIT OR THRU TREATMENT PLANT	SAMPLE MEASUREMENT	0.007	0.032	(03) MGD	******	******	******		0	99/99	RC
50050 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	0.38 MO AVG	2.09 DAILY MX	MGD	******	******	******	**** ****		ONCE/ MONTH	RCORDR
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		TELEPHONE	DATE		
Michael T. Carroll Mgr. Pittsfield Remediation Prog.	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.	M. T. Carroll	413 494-3500	2004	9 21
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE / NUMBER	YEAR	MO DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*
SAMPLE IN PLANT MANHOLE STATION ON 004.

PERMITTEE NAME/ADDRESS *(Include Facility Name/ Location (If Different)*
NAME GENERAL ELECTRIC CORPORATION
ADDRESS ATTN: JEFFREY G. RUEBESAM
100 WOODLAWN AVENUE
PITTSFIELD MA 01201
FACILITY GENERAL ELECTRIC COMPANY
LOCATION PITTSFIELD MA 01201
ATTN: MICHAEL T CARROLL, EHS&F

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

Form Approved.
OMB No. 2040-0004

MA0003891	005 1
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	04	08	01	TO	04	08	31

MAJOR
(SUBR W)
F - FINAL
WATERS TO HOUSATONIC RIVER

*** NO DISCHARGE [ ] ***

NOTE: Read Instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
BOD, 5-DAY (20 DEG. C) 00310 T 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	0	0	(26) LBS/DY	******	******	******		0	01/30	CP
	PERMIT REQUIREMENT	90 MO AVG	135 DAILY MX	LBS/DY	******	******	******	**** ****		ONCE/ MONTH	COMPOS
SOLIDS, TOTAL SUSPENDED 00530 T 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	0	0	(26) LBS/DY	******	******	******		0	01/30	CP
	PERMIT REQUIREMENT	188 MO AVG	270 DAILY MX	LBS/DY	******	******	******	**** ****		ONCE/ MONTH	COMPOS
OIL & GREASE 00556 T 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	******	2.0	(26) LBS/DY	******	******	0.4	(19) MG/L	0	01/07	GR
	PERMIT REQUIREMENT	******	135 DAILY MX	LBS/DY	******	******	15 DAILY MX	MG/L		WEEKLY	GRAB
POLYCHLORINATED BIPHENYLS (PCBS) 39516 T 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	0.0001	0.0003	(26) LBS/DY	******	******	******		0	01/07	CP
	PERMIT REQUIREMENT	0.01 MO AVG	0.03 DAILY MX	LBS/DY	******	******	******	**** ****		WEEKLY	COMPOS
FLOW, IN CONDUIT OR THRU TREATMENT PLANT 50050 T 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	0.212	0.408	(03) MGD	******	******	******		0	99/99	RC
	PERMIT REQUIREMENT	2.09 MO AVG	2.09 DAILY MX	MGD	******	******	******	**** ****		CONTIN UOUS	RECORDR
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		TELEPHONE	DATE		
Michael T. Carroll Mgr. Pittsfield Remediation Prog.	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.	M.T. Carroll	413 494-3500	2004	9	21
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE / NUMBER	YEAR	MO	DAY

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.

Form Approved.
OMB No. 2040-0004

PERMITTEE NAME/ADDRESS *(Include Facility Name/ Location (If Different)*
NAME GENERAL ELECTRIC CORPORATION
ADDRESS ATTN: JEFFREY G. RUEBESAM
100 WOODLAWN AVENUE
PITTSFIELD MA 01201
FACILITY GENERAL ELECTRIC COMPANY
LOCATION PITTSFIELD MA 01201
ATTN: MICHAEL T CARROLL, EHS&F

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

MA0003891	064 G
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	04	08	01	TO	04	08	31

MAJOR
(SUBR W)
F - FINAL
GROUNDWATER TREATMENT (005)

*** NO DISCHARGE | | ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
PH	SAMPLE MEASUREMENT	******	******		7.2	******	7.4	(12) SU	0	99/99	RCDR
00400 T 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	****** **** ****		6.0 MINIMUM	******	9.0 MAXIMUM	SU		WEEKLY	RANG-G
BASE NEUTRALS & ACID (METHOD 625), TOTAL	SAMPLE MEASUREMENT	******	******		******	NODI [9]	NODI [9]	(19)			
76030 T 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	****** **** ****		******	REPORT MO AVG	REPORT DAILY MX	MG/L		QTRLY	GRAB
VOLATILE COMPOUNDS, (GC/MS)	SAMPLE MEASUREMENT	******	******		******	NODI [9]	NODI [9]	(19)			
78732 T 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	****** **** ****		******	REPORT MO AVG	REPORT DAILY MX	MG/L		QTRLY	GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Michael T. Carroll
Mgr. Pittsfield Remediation Prog.
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 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.

M. T. Carroll
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
AREA CODE	NUMBER	YEAR	MO	DAY
413	494-3500	2004	9	21

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*
SEE COMMENTS FOR 0051. SEE PAGE 8 + 9 OF PERMIT.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME GENERAL ELECTRIC CORPORATION

ADDRESS ATTN: JEFFREY G. RUEBESAM
100 WOODLAWN AVENUE
PITTSFIELD MA 01201

FACILITY GENERAL ELECTRIC COMPANY

LOCATION PITTSFIELD MA 01201

ATTN: MICHAEL T CARROLL, EHS&F

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved.
OMB No. 2040-0004

PERMIT NUMBER	DISCHARGE NUMBER
MA0003891	064 T

MAJOR
(SUBR W)
F - FINAL
WASTEWATER TREATMENT (005)

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	04	08	01	TO	04	08	31

*** NO DISCHARGE |__| ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
PH	SAMPLE MEASUREMENT	******	******		7.1	******	8.2	(12) SU	0	99/99	RCDR
00400 T 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	**** ****	6.0 MINIMUM	******	9.0 MAXIMUM	SU		WEEKLY	RANG-C
DIBENZOFURAN	SAMPLE MEASUREMENT	******	******		******	NODI [6]	NODI [6]	(22)			
81302 T 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	**** ****	******	REPORT MO AVG	REPORT DAILY MX	PPT		ONCE/ MONTH	COMPOS
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Michael T. Carroll
Mgr. Pittsfield Remediation Prog.

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 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.

M. T. Carroll

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE AREA CODE	NUMBER	DATE YEAR	MO	DAY
413	494-3500	2004	9	21

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

SEE COMMENTS FOR 0051. SEE PAGE 8 + 9 OF PERMIT.

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*
NAME GENERAL ELECTRIC CORPORATION
ADDRESS ATTN: JEFFREY G. RUEBESAM
100 WOODLAWN AVENUE
PITTSFIELD MA 01201
FACILITY GENERAL ELECTRIC COMPANY
LOCATION PITTSFIELD MA 01201
ATTN: MICHAEL T CARROLL, EHS&F

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

Form Approved.
OMB No. 2040-0004

MA0003891 — PERMIT NUMBER
007 1 — DISCHARGE NUMBER

MONITORING PERIOD
FROM YEAR 04 MO 08 DAY 01 TO YEAR 04 MO 08 DAY 31

MAJOR
(SUBR W)
F - FINAL
DISCHARGE TO HOUSATONIC RIVER

*** NO DISCHARGE | | ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
TEMPERATURE, WATER DEG. FAHRENHEIT 00011 W 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	******	******		******	67	67	(15) DEG.F	0	01/30	GR
	PERMIT REQUIREMENT	******	******	**** ****	******	70 MO AVG	75 DAILY MX	DEG. F		ONCE/ MONTH	GRAB
PH 00400 W 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	******	******		6.8	******	7.6	(12) SU	0	01/07	GR
	PERMIT REQUIREMENT	******	******	**** ****	6.0 MINIMUM	******	9.0 MAXIMUM	SU		WEEKLY	RANG-G
POLYCHLORINATED BIPHENYLS (PCBS) 39516 W 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	******	******		******	NODI [9]	NODI [9]	(21)			
	PERMIT REQUIREMENT	******	******	**** ****	******	REPORT MO AVG	REPORT DAILY MX	PPB		QTRLY	GRAB
FLOW, IN CONDUIT OR THRU TREATMENT PLANT 50050 W 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	0.053	0.101	(03) MGD	******	******	******		0	26/30	CA
	PERMIT REQUIREMENT	REPORT MO AVG	REPORT DAILY MX	MGD	******	******	******	**** ****		ONCE/ MONTH	CALCTD
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Michael T. Carroll
Mgr. Pittsfield Remediation Prog.
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 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.

M. T. Carroll
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE AREA CODE 413 NUMBER 494-3500

DATE YEAR 2004 MO 9 DAY 21

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*
SAMPLE AT MANHOLE PRIOR TO CITY STORM DRAIN.

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*
NAME GENERAL ELECTRIC CORPORATION
ADDRESS ATTN: JEFFREY G. RUEBESAM
100 WOODLAWN AVENUE
PITTSFIELD MA 01201
FACILITY GENERAL ELECTRIC COMPANY
LOCATION PITTSFIELD MA 01201
ATTN: MICHAEL T CARROLL, EHS&F

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

Form Approved.
OMB No. 2040-0004

MA0003891	009 1
PERMIT NUMBER	DISCHARGE NUMBER

MAJOR
(SUBR W)
F - FINAL
PROCESSES TO UNKAMET BROOK

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	04	08	01	TO	04	08	31

*** NO DISCHARGE | | ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
BOD, 5-DAY (20 DEG. C) 00310 V 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	0.3	1.2	(26) LBS/DY	******	******	******		0	01/07	CP
	PERMIT REQUIREMENT	106 MO AVG	438 DAILY MX	LBS/DY	******	******	******	******		WEEKLY	COMPOS
PH 00400 V 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	******	******		6.9	******	7.4	(12) SU	0	01/07	GR
	PERMIT REQUIREMENT	******	******	******	6.0 MINIMUM	******	9.0 MAXIMUM	SU		WEEKLY	RANG-G
SOLIDS, TOTAL SUSPENDED 00530 V 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	0.7	2.5	(26) LBS/DY	******	******	******		0	01/07	CP
	PERMIT REQUIREMENT	213 MO AVG	876 DAILY MX	LBS/DY	******	******	******	******		WEEKLY	COMPOS
OIL & GREASE 00556 V 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	******	0	(26) LBS/DY	******	******	0	(19) MG/L	0	01/07	GR
	PERMIT REQUIREMENT	******	438 DAILY MX	LBS/DY	******	******	15 DAILY MX	MG/L		WEEKLY	GRAB
POLYCHLORINATED BIPHENYLS (PCBS) 39516 V 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	******	******		******	NODI [9]	NODI [9]	(19)			
	PERMIT REQUIREMENT	******	******	******	******	REPORT MO AVG	REPORT DAILY MX	MG/L		QTRLY	GRAB
FLOW, IN CONDUIT OR THRU TREATMENT PLANT 50050 V 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	0.021	0.295	(03) MGD	******	******	******		0	99/99	RC
	PERMIT REQUIREMENT	REPORT MO AVG	REPORT DAILY MX	MGD	******	******	******	******		CONTIN UOUS	RECORDR
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		TELEPHONE	DATE		
Michael T. Carroll Mgr. Pittsfield Remediation Prog.	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.	M. T. Carroll	413 494-3500	2004	9	21
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*
SEE PAGE 11 OF PERMIT. SEE DMRS 009A + 009B. REPORT SUM OF LOAD 09A + 09B, FOR BOD, TSS, FLOW. SAMPLE AT DISCHARGE POINT TO BROOK FOR PH, OIL & GREASE, AND PCB.

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*
NAME GENERAL ELECTRIC CORPORATION
ADDRESS ATTN: JEFFREY G. RUEBESAM
100 WOODLAWN AVENUE
PITTSFIELD MA 01201
FACILITY GENERAL ELECTRIC COMPANY
LOCATION PITTSFIELD MA 01201
ATTN: MICHAEL T CARROLL, EHS&F

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

Form Approved.
OMB No. 2040-0004

MA0003891	009 A
PERMIT NUMBER	DISCHARGE NUMBER

MAJOR
(SUBR W)
F - FINAL
09A SAMPLE POINT BEFORE 009

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	04	08	01	TO	04	08	31

*** NO DISCHARGE | | ***

NOTE: Read Instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
BOD, 5-DAY (20 DEG. C) 00310 V 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	0.1	0.3	(26) LBS/DY	******	******	******		0	01/07	CP
	PERMIT REQUIREMENT	106 MO AVG	438 DAILY MX	LBS/DY	******	******	******	**** ****		WEEKLY	COMPOS
SOLIDS, TOTAL SUSPENDED 00530 V 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	0.04	0.1	(26) LBS/DY	******	******	******		0	01/07	CP
	PERMIT REQUIREMENT	213 MO AVG	876 DAILY MX	LBS/DY	******	******	******	**** ****		WEEKLY	COMPOS
FLOW, IN CONDUIT OR THRU TREATMENT PLANT 50050 V 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	0.001	0.013	(03) MGD	******	******	******		0	99/99	RC
	PERMIT REQUIREMENT	REPORT MO AVG	REPORT DAILY MX	MGD	******	******	******	**** ****		CONTIN UOUS	RCORDR
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
Michael T. Carroll Mgr. Pittsfield Remediation Prog.	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.	M. T. Carroll	413 494-3500	2004	9	21
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*
SEE PAGE 11 OF PERMIT. SEE DMR 0091. SAMPLE AT 09A.

NAME GENERAL ELECTRIC CORPORATION
ADDRESS ATTN: JEFFREY G. RUEBESAM
100 WOODLAWN AVENUE
PITTSFIELD MA 01201
FACILITY GENERAL ELECTRIC COMPANY
LOCATION PITTSFIELD MA 01201
ATTN: MICHAEL T CARROLL, EHS&F

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

Form Approved.
OMB No. 2040-0004

MA0003891	009 B	MAJOR
PERMIT NUMBER	DISCHARGE NUMBER	(SUBR W)

F - FINAL
09B SAMPLE POINT PRIOR TO 009

MONITORING PERIOD: FROM YEAR 04 MO 08 DAY 01 TO YEAR 04 MO 08 DAY 31

*** NO DISCHARGE | | ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
80D, 5-DAY (20 DEG. C) 00310 V 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	0.5	1.0	(26) LBS/DY	******	******	******		0	01/DW	CP
	PERMIT REQUIREMENT	106 MO AVG	438 DAILY MX	LBS/DY	******	******	******	**** ****		WEEKLY	COMPOS
SOLIDS, TOTAL SUSPENDED 00530 V 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	1.2	2.5	(26) LBS/DY	******	******	******		0	01/DW	CP
	PERMIT REQUIREMENT	213 MO AVG	876 DAILY MX	LBS/DY	******	******	******	**** ****		WEEKLY	COMPOS
FLOW, IN CONDUIT OR THRU TREATMENT PLANT 50050 V 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	0.020	0.292	(03) MGD	******	******	******		0	99/99	RC
	PERMIT REQUIREMENT	REPORT MO AVG	REPORT DAILY MX	MGD	******	******	******	**** ****		CONTINUOUS	RCORDR
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE	DATE		
Michael T. Carroll Mgr. Pittsfield Remediation Prog.	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.	M.T. Carroll	413 494-3500	2004	9	21
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*
SEE PAGE 11 OF PERMIT. SEE DMR 0091; SAMPLE AT 09B.

PERMITTEE NAME/ADDRESS *(Include Facility Name/Location if Different)*
NAME GENERAL ELECTRIC CORPORATION
ADDRESS ATTN: JEFFREY G. RUEBESAM
100 WOODLAWN AVENUE
PITTSFIELD MA 01201
FACILITY GENERAL ELECTRIC COMPANY
LOCATION PITTSFIELD MA 01201
ATTN: MICHAEL T CARROLL, EHS&F

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

MA0003891	SUM A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	04	08	01	TO	04	08	31

MAJOR
(SUBR W)
F - FINAL
METALS: 001, 004, 005, 007, 009, 011

*** NO DISCHARGE |__| ***

Form Approved.
OMB No. 2040-0004

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING AVERAGE	QUANTITY OR LOADING MAXIMUM	UNITS	QUALITY OR CONCENTRATION MINIMUM	QUALITY OR CONCENTRATION AVERAGE	QUALITY OR CONCENTRATION MAXIMUM	UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
PHOSPHORUS, TOTAL (AS P)	SAMPLE MEASUREMENT	******	0.4	(26) LBS/DY	******	******	******		0	03/30	CP
00665 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	REPORT DAILY MX	LBS/DY	******	******	******	**** ****		ONCE/ MONTH	COMPOS
NICKEL TOTAL RECOVERABLE	SAMPLE MEASUREMENT	******	0.02	(26) LBS/DY	******	******	******		0	03/30	CP
01074 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	REPORT DAILY MX	LBS/DY	******	******	******	**** ****		ONCE/ MONTH	COMPOS
SILVER TOTAL RECOVERABLE	SAMPLE MEASUREMENT	******	0.02	(26) LBS/DY	******	******	******		0	03/30	CP
01079 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	REPORT DAILY MX	LBS/DY	******	******	******	**** ****		ONCE/ MONTH	COMPOS
ZINC TOTAL RECOVERABLE	SAMPLE MEASUREMENT	******	0.3	(26) LBS/DY	******	******	******		0	02/07	CP
01094 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	REPORT DAILY MX	LBS/DY	******	******	******	**** ****		WEEKLY	COMPOS
ALUMINUM, TOTAL (AS AL)	SAMPLE MEASUREMENT	******	1.8	(26) LBS/DY	******	******	******		0	03/30	CP
01105 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	REPORT DAILY MX	LBS/DY	******	******	******	**** ****		ONCE/ MONTH	COMPOS
CADMIUM TOTAL RECOVERABLE	SAMPLE MEASUREMENT	******	0.004	(26) LBS/DY	******	******	******		0	03/30	CP
01113 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	REPORT DAILY MX	LBS/DY	******	******	******	**** ****		ONCE/ MONTH	COMPOS
LEAD TOTAL RECOVERABLE	SAMPLE MEASUREMENT	******	0.06	(26) LBS/DY	******	******	******		0	02/07	CP
01114 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	REPORT DAILY MX	LBS/DY	******	******	******	**** ****		WEEKLY	COMPOS

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Michael T. Carroll
Mgr. Pittsfield Remediation Prog.
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 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.

M. T. Carroll
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
413	494-3500	2004	9	21
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*
COMPOSITE PROPORTIONATE TO FLOW.

PERMITTEE NAME/ADDRESS *(Include Facility Name/ Location if Different)*
NAME GENERAL ELECTRIC CORPORATION
ADDRESS ATTN: JEFFREY G. RUEBESAM
100 WOODLAWN AVENUE
PITTSFIELD MA 01201
FACILITY GENERAL ELECTRIC COMPANY
LOCATION PITTSFIELD MA 01201
ATTN: MICHAEL T CARROLL, EHS&F

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM *(NPDES)*
DISCHARGE MONITORING REPORT *(DMR)*

Form Approved.
OMB No. 2040-0004

MA0003891	SUM A
PERMIT NUMBER	DISCHARGE NUMBER

MAJOR
(SUBR W)
F - FINAL
METALS: 001, 004, 005, 007, 009, 011

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	04	08	01	TO	04	08	31

*** NO DISCHARGE | | ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
CHROMIUM TOTAL RECOVERABLE 01118 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	******	0.02	(26) LBS/DY	******	******	******		0	03/30	CP
	PERMIT REQUIREMENT	******	REPORT DAILY MX	LBS/DY	******	******	******	**** ****		ONCE/ MONTH	COMPOS
COPPER TOTAL RECOVERABLE 01119 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	******	0.14	(26) LBS/DY	******	******	******		0	02/07	CP
	PERMIT REQUIREMENT	******	REPORT DAILY MX	LBS/DY	******	******	******	**** ****		WEEKLY	COMPOS
CYANIDE, TOTAL RECOVERABLE 78248 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	******	0.08	(26) LBS/DY	******	******	******		0	03/30	CP
	PERMIT REQUIREMENT	******	REPORT DAILY MX	LBS/DY	******	******	******	**** ****		ONCE/ MONTH	GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		TELEPHONE	DATE		
Michael T. Carroll Mgr. Pittsfield Remediation Prog.	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.	M. T. Carroll	413 494-3500	2004	9	21
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE / NUMBER	YEAR	MO	DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*
COMPOSITE PROPORTIONATE TO FLOW.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

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 01201
ATTN: MICHAEL T CARROLL, EHS&F

PERMIT NUMBER	DISCHARGE NUMBER
MA0003891	SUM B

MAJOR
(SUBR W)
F - FINAL
TOXICS: 001, 004, 005, 007, 009, 011

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	04	08	01	TO	04	08	31

*** NO DISCHARGE | __ | ***

NOTE: Read instructions before completing this form.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
NOEL STAT 7DAY CHR C ERIODAPHNIA	SAMPLE MEASUREMENT	******	******		100	******	******	% 23)	0	01/30	CP
TBD3B 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	REPORT DAILY MN	******	******	PER-CENT		ONCE/ MONTH	COMPOS
NOAEL STAT 48HR ACU CERIODAPHNIA	SAMPLE MEASUREMENT	******	******		NODI [8]	******	******	(23)			
TDA3B 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	REPORT DAILY MN	******	******	PER-CENT		ONCE/ MONTH	COMPOS
NOAEL STATRE 48HR AC U D. PULEX	SAMPLE MEASUREMENT	******	******		100	******	******	% 23)	0	01/30	01/30
TDM3D 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	35 DAILY MN	******	******	PER-CENT		ONCE/ MONTH	COMPOS
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Michael T. Carroll
Mgr. Pittsfield Remediation Prog.
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 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.

M. T. Carroll
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
413	494-3500	2004	9	21
AREA CODE	NUMBER	YEAR	MO	DAY

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.~~

Attachment C

Toxicity Evaluation of Wastewaters Discharged From the General Electric Plant; Pittsfield, Massachusetts [Samples Collected in September 2004]

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

Toxicity Evaluation of Wastewaters Discharged from The General Electric Plant Pittsfield, Massachusetts

Samples collected in September 2004

Submitted to:

General Electric
Area Environmental & Facility Programs
100 Woodlawn Avenue
Pittsfield, Massachusetts 01201

SGS Sample ID: TA4-I0-P283

Study Director: Ken Holliday

22 September 2004

SGS Environmental Services
1258 Greenbrier Street
Charleston, West Virginia 25311-1002
Tel: 304.346.0725 Fax: 304.346.0761
www.sgs.com

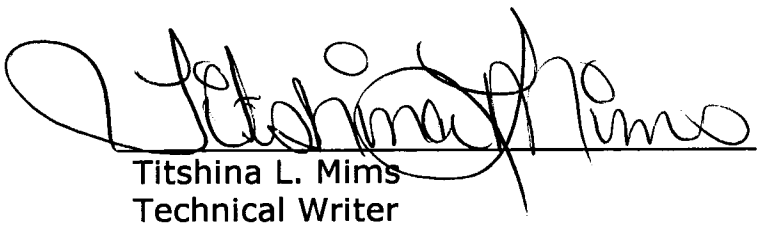
Signatures and Approval

Submitted by: SGS Environmental Services
1258 Greenbrier Street
Charleston, West Virginia 25311-1002

Tel: 304.346.0725
Fax: 304.346.0761
www.sgs.com

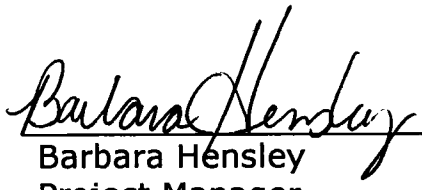
September 22, 2004
Date

Ken Holliday
Study Director
ken_holliday@sgs.com



September 22, 2004
Date

Titshina L. Mims
Technical Writer



September 22, 2004
Date

Barbara Hensley
Project Manager
barbara_hensley@sgs.com

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: September 22, 2004
Date

Jeannie Latterner
Authorized signature

Jeannie Latterner
Name

QA/QC Manager
Title

SGS Environmental Services
Laboratory

Table of Contents

List of Tables

Summary

Static Acute Toxicity Test with *Daphnia pulex*

Sponsor:	General Electric
Protocol Title:	*Acute Aquatic Toxicity Testing*, SGS Document Control Number 7002, version 4.0
SGS Study Number:	TA4-I0-P283
Test Material:	Composite effluent from the General Electric Company located in Pittsfield, Massachusetts
GE Sample ID:	A5945C
Dilution Water:	Water from the Housatonic River (grab sample)
GE Sample ID:	A5944R
Dates Collected:	September 12, 2004 to September 13, 2004
Date Received:	September 14, 2004
Test Dates:	September 14, 2004 to September 16, 2004
Test Concentrations:	100% effluent 75% effluent 50% effluent 35% effluent 15% effluent 5% effluent dilution water control reference control secondary reference control (sodium thiosulfate)
Results:	The 48-hour LC50 value was determined to be >100% effluent. The No-Observed-Acute-Effect-Level (NOAEL) was observed to be 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 process wastewater and municipal sewage.

The purpose of the National Pollutant Discharge Elimination System (NPDES) Program is to protect human health and the environment. The Clean Water Act requires that all point sources discharging pollutants into waters of the United States must obtain an NPDES permit. By point sources, EPA means discrete conveyances such as pipes or man made ditches.

For many years, discharge limits were based on available technology for wastewater treatment. However, in 1984, the U.S. Environmental Protection Agency (EPA) released a national policy statement entitled "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants" (U.S. EPA, 1984) which addresses the control of toxic pollutants beyond technology-based requirements in order to meet water quality standards. To implement the new policy, guidance was provided to the respective state and regional permit personnel in the EPA's "Technical Support Document for Water Quality-Based Toxics Control" (U.S. EPA, 1985; U.S. EPA, 1991). The EPA's policy statement and the support document recommended that, where appropriate, permit limits should be based on effluent toxicity as measured in aquatic toxicity tests.

1.2 Clean Water Act, 33 U.S.C. s/s 1251 et seq. (1977)

The Clean Water Act is a 1977 amendment to the Federal Water Pollution Control Act of 1972, which set the basic structure for regulating discharges of pollutants to waters of the United States. The law gave EPA the authority to set effluent standards on an industry basis (technology-based) and continued the requirements to set water quality standards for all contaminants in surface waters. The CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit (NPDES) is obtained under the Act. The 1977 amendments focused on toxic pollutants. In 1987, the CWA was reauthorized and again focused on toxic substances, authorized citizen suit provisions, and funded sewage treatment plants (POTWs) under the Construction Grants Program. The CWA provisions for the delegation by EPA of many permitting, administrative, and enforcement aspects of the law to state governments. In states with the authority to implement CWA programs, EPA still retains oversight responsibilities.

1.3 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, using *Daphnia pulex* under static conditions. Whereas *D. pulex* are not considered locally important, they are routinely used by regulatory agencies and contract laboratories nationwide for toxicity testing. A toxicity test was conducted from September 14, 2004 to September 16, 2004 at SGS Environmental Services, Charleston, West Virginia. All original raw data and the final report produced for this study are stored in SGS's archives at the above location.

2.0 Materials and Methods

2.1 Protocol

Procedures used in this acute toxicity test followed those described in the SGS Standard Operating Procedure (SOP) entitled *Acute Aquatic Toxicity Testing*, SGS document control number 7002, version 4.0. This SOP generally follows the standard methodology presented in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (U.S. EPA, 1993. Additional SOPs used in this study are outlined below:

Title	Document Number	Version
Culture Waters for Aquatic Toxicity Testing	7005	4.0
Culture of *Daphnia*	7006	5.0
Reference Toxicant Testing	7008	5.0
Sample Handling for Aquatic Toxicity Testing	7009	4.0

Copies of these documents are included in the References section of this report.

2.2 Effluent Sample

The effluent sample (A5945C) was collected by GE personnel September 12, 2004 to September 13, 2004. Upon receipt at SGS on September 14, 2004, the sample temperature was 4.2° C. The effluent sample was characterized as having

Parameter	Result
Total Hardness	400
Alkalinity (as $CaCO_3$)	343
pH	7.48
Specific Conductance	767
Dissolved Oxygen Concentration*	8.71

*Dissolved oxygen concentration was recorded after sample was aerated and warmed to approximately 20°C).

The effluent sample was observed to be clear and colorless.

2.3 Dilution Water

Dilution water consisted of receiving water collected from the Housatonic River. The receiving water (A5944R) was collected by General Electric personnel on September 13, 2004. Upon receipt at SGS on September 14, 2004, the sample temperature was 4.2°C. The dilution water was characterized as having

Parameter	Result
Total Hardness	90
Alkalinity (as $CaCO_3$)	69
pH	6.98
Specific Conductance	128
Dissolved Oxygen Concentration*	8.67

*Dissolved oxygen concentration was recorded after sample was aerated and warmed to approximately 20°C).

The dilution water sample was observed to be slightly cloudy with a straw color.

2.4 Reference Control Water

Water used in the reference control vessels was deionized (DI) water adjusted to the appropriate hardness (moderately hard reconstituted water) by the addition of reagent grade chemicals (U.S. EPA, 1993). Characterization of this water resulted in:

Parameter	Result
Total Hardness	110
Alkalinity (as $CaCO_3$)	72
pH	7.07
Specific Conductance	319
Dissolved Oxygen	8.92

2.5 Test Organisms

Daphnids (*Daphnia pulex*), less than 24-hours old, were obtained from SGS laboratory cultures maintained in Charleston. The culture system consisted of twenty-four (24) 100 ml disposable plastic beakers each containing 80 ml of culture medium and one (1) daphnid. The culture medium was deionized (DI) water for which the hardness was raised by addition of reagent grade chemicals (U.S. EPA, 1993). Prior to use, the culture water was characterized:

Parameter	Result
Total Hardness	within range of 80-110 mg/L
Alkalinity (as $CaCO_3$)	within range of 60-70 mg/L
pH	within range of 7.0 to 7.2

The culture area was maintained at a temperature of 20°C (± 1°C) with a regulated photoperiod of 16 hours of light and 8 hours of darkness.

Daphnid cultures were fed a combination of green algae (*Selanastrum capricorium*), approximately 4.0 x 10^7 cells/ml) and YCT (yeast, cereal leaves and trout chow). Approximately 1.0 ml of algae and 0.5 ml of YCT was added to each culture vessel daily. Three times per week, daphnids are transferred to fresh culture media.

Approximately twenty-four hours before test initiation, all immature daphnids were removed from the culture flasks. Offspring produced during the period were used in the toxicity test.

2.6 Test Procedures

A subsample of the effluent and the dilution water (approximately 2250 ml) was analyzed by SGS for total phosphorus, chloride, total suspended solids, and total solids. The 48-hour toxicity test was conducted at 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 250 ml. Test solutions were then divided into replicate (5 replicates per concentration) 30 ml medicine cups, each containing 20 ml of test solution. One set of five control beakers (containing Housatonic River water) and one set of five reference control beakers (containing moderately hard reconstituted water) were established and maintained under the same conditions as the exposure concentrations. A secondary set of five reference control beakers (containing sodium thiosulfate) was also maintained. Test solutions were placed in an incubator to maintain solution temperature of 20°C (± 1°C). Light was provided on a 16-hour light and 8-hour dark photoperiod. Florescent bulbs provided an illumination of 90 to 100 foot-candles in the test area.

Prior to test initiation, daphnids less than 24-hours old were culled individually with a plastic pipette and placed into a 1000 ml holding beaker containing approximately 500 ml of reference water. The test was initiated when daphnids were individually transferred from the holding beaker to the test solutions (4 daphnids per replicate). The daphnids were fed prior to test initiation but were not fed during the exposure period.

2.7 Test Monitoring

The number of mortalities and observations in each replicate vessel were recorded at 24 and 48 hours of exposure and observed mortalities were removed from the test solutions. Biological observations and observations from the physical characteristics of each replicate test solution and control were also made and recorded at 0, 24 and 48 hours. Dissolved oxygen concentrations pH and temperature were measured at test initiation and at 24-hour intervals thereafter, in one replicate vessel (a) for each test concentration in which there were surviving organisms.

Total hardness concentrations were measured by the EDTA titrimetric method and total alkalinity concentrations were determined by potentiometric titration to an endpoint of pH 4.5 (APHA, 1989). Total residual chorine was measured by Hach test. Concentrations of ammonia were determined using a Buchi model 212 distillation unit and titrated automatically with a Brinkman titroprocessor. Specific conductivity was measured with a Cole Palmer Model 71250 salinity-conductivity-temperature meter and probe; pH was measured with a Fisher Scientific Accumet 910 pH meter and combination electrode; dissolved oxygen concentration was measured with an YSI Model 59 dissolved oxygen meter. Daily temperature measurements were performed with a Princo mercury thermometer and a Fisher minimum-maximum thermometer. Light intensity was measured with a General Electric type 217 light meter.

2.8 Reference Toxicity Test

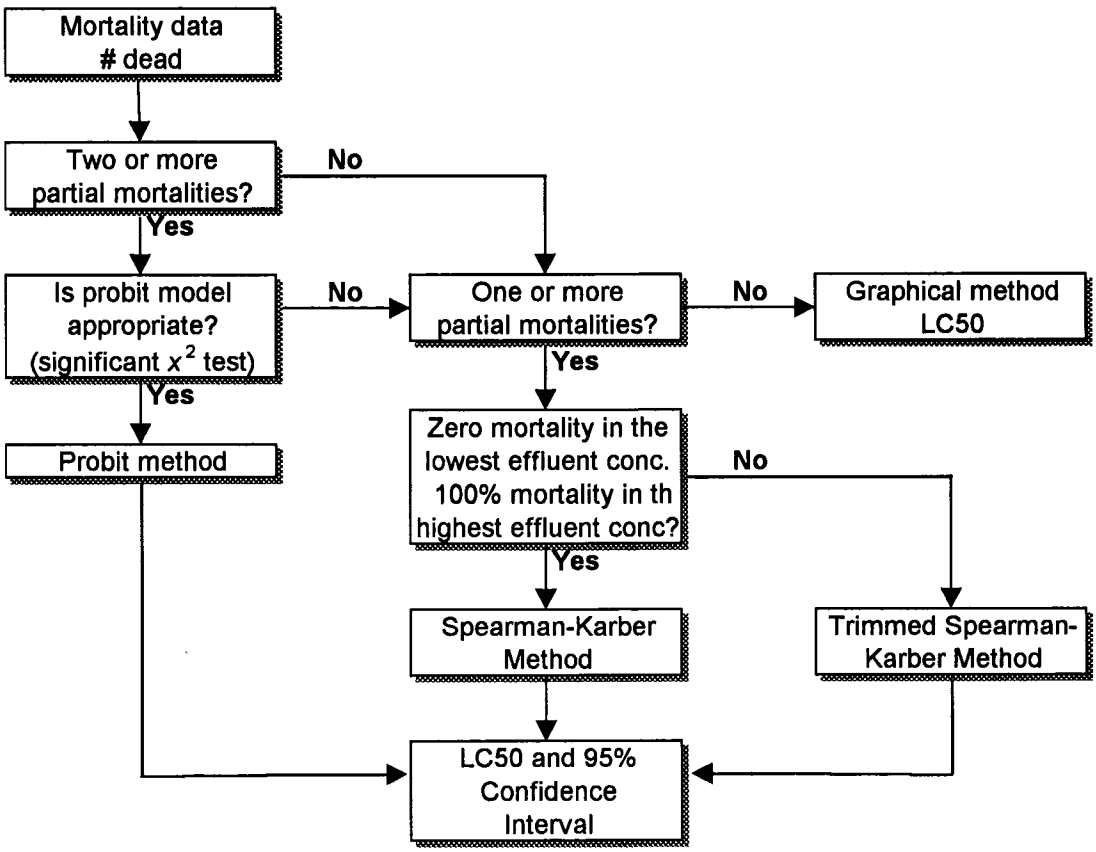
A 48-hour reference toxicity test exposing *Daphnia pulex* to sodium chloride (NaCl) was conducted from September 14, 2004 to September 16, 2004. The reference test was conducted to establish the health of the test organisms. The reference toxicity test included five NaCl concentrations and a dilution water control (moderately hard reconstituted water). The nominal NaCl concentrations for the test with *Daphnia pulex* ranged from 625 to 10,000 mg of NaCl/L. Test methods were the same as those described above for the effluent test.

3.0 Statistics

The concentration-response relationships observed were characterized by the median lethal concentrations (LC50), which is the concentration that is calculated to be lethal to 50 percent of the organisms within the test period. If no concentration caused mortality of 50%, then the LC50 value was determined to be greater than the highest concentration tested and no statistical analysis were performed. If at least one concentration caused mortality of greater than 50% of the test population, then a computer program (TOXSTAT 3.5) was used to calculate the LC50 value. Three statistical methods were available in the computer program: probit analysis, the Trimmed Spearman-Karber, and the Spearman-Karber methods. The graphical method is available if appropriate. Generally, to choose the best estimate of the LC50 value for a particular data set, the U.S. EPA flow chart on page 15 was followed.

The No-Observable-Acute-Effect-Level (NOAEL) was estimated for the acute toxicity test, and is defined as the highest concentration of effluent that produced $\geq$ 90% survival.

Flowchart 1. Determination of the LC50 from a Multi-Effluent-Concentration Acute Toxicity Test



Flowchart for determination of the LC50 for multi-effluent-concentration acute toxicity tests.

4.0 Results

4.1 Effluent Toxicity Test

The methods and detection limits of chemical analyses performed on the composite effluent sample and dilution water are summarized in Table 1. Results of the characterization and analysis of the effluent and the dilution water are presented in Table 2. Water quality parameters measured during the toxicity test are presented in Table 3. Daily and continuous monitoring of the test solutions established the temperature ranged from 19°C to 21°C throughout the exposure period. The effluent concentration was tested (expressed as %) and the corresponding percent mortalities recorded during the 48-hour toxicity test are presented in Table 4. Significant toxicity was not demonstrated in this examination. Based on the results of this study, the 48-hour LC_{50} value was >100% effluent. The NOAEL value for this study was determined to be 100% effluent.

4.2 Reference Toxicity Test

SGS uses sodium chloride (NaCl) as a reference toxicant. The reference test was conducted from September 14, 2004 to September 16, 2004, and the resulting 48-hour LC50 was estimated by Trimmed Spearman-Karber Method to be 2253 mg NaCl/L (95% confidence intervals of 1908 to 2660 mg NaCl/L).

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.* 17th Edition.

U.S. Environmental Protection Agency. 1984. Development of water Quality-Based Permit Limitations for Toxic Pollutants. Federal Register 49(48): 90160-90190.

U.S. Environmental Protection Agency. 1985. Technical Support Document for Water Quality-Based Toxics Control. Office of Water, Washington, DC.

U.S. Environmental Protection Agency. 1991. Technical Support Document for Water Quality-Based Toxics Control. Office of Water, Washington, DC.

U.S. Environmental Protection Agency. 1993. for *Measuring the Acute Toxicity of Effluents and Receiving Methods Waters to Freshwater and Marine Organisms*. EPA/600/4-90/027F.

Table 1. Methods and detection limits of chemical analyses of the General Electric Pittsfield Plant effluent and the dilution water (Housatonic River).

Parameters	Method	Detection Limits
Ammonia Nitrogen as N	EPA 350.2	1.0 mg/L
Chloride	EPA 325.2	1.0 mg/L
Total Organic Carbon	EPA 415.1	1.0 mg/L
Total Solids	EPA 160.3	10.0 mg/L
Phosphorus, Total as P	Standard Methods 4500-P	0.02 mg/L
Total Residual Chlorine	Standard Methods 4500-Cl G	0.01 mg/L
Total Suspended Solids	EPA 160.2	5.0 mg/L

Table 2. Results of the characterization and analyses of the General Electric Pittsfield Plant effluent and the dilution water (Housatonic River).

Parameter	Effluent (A5945C)	Housatonic River (A5944R)
Temperature	20.7°C	20.7°C
pH	7.48	6.98
Alkalinity (as $CaCO_3$)	343 mg/L	69 mg/L
Hardness (as $CaCO_3$)	400 mg/L	90 mg/L
Dissolved Oxygen	8.71 mg/L	8.67 mg/L
Specific Conductivity	767 µmhos/cm	128 µmhos/cm
Salinity	N/A	N/A
Total Residual Chlorine	ND	ND
Ammonia as N (0-Hour)	ND	ND
Total Phosphorus as P	ND	ND
Chloride	130 mg/L	12 mg/L
Total Suspended Solids	ND	5.0 mg/L
Total Solids	620 mg/L	100 mg/L
Total Organic Carbon	4.8 mg/L	7.1 mg/L

Dissolved oxygen concentrations recorded after samples were aerated and warmed to approximately 20°C.
N/A = not applicable ND = non detectable

Table 3. The water quality measurements recorded during the 48-hour static toxicity test exposing *Daphnia pulex* to General Electric Pittsfield Plant effluent.

Matrix ↓	pH			Dissolved Oxygen (mg/L)			Temperature (°C)		
	0	24	48	0	24	48	0	24	48
Reference Control	7.07	7.12	7.13	8.92	8.72	8.64	20.7	19.6	20.3
Secondary Ref Control	7.13	7.20	7.22	8.98	8.77	8.68	20.7	19.6	20.3
Dilution Water Control	6.98	7.04	7.09	8.67	8.54	8.51	20.7	19.6	20.3
5% Effluent	7.04	7.05	7.08	8.67	8.70	8.67	20.7	19.6	20.3
15% Effluent	7.19	7.22	7.27	8.69	8.71	8.62	20.7	19.6	20.3
35% Effluent	7.27	7.23	7.28	8.72	8.70	8.67	20.7	19.6	20.3
50% Effluent	7.32	7.28	7.25	8.74	8.72	8.64	20.7	19.6	20.3
75% Effluent	7.39	7.41	7.38	8.73	8.75	8.70	20.7	19.6	20.3
100% Effluent	7.48	7.45	7.48	8.71	8.68	8.61	20.7	19.6	20.3

Dissolved oxygen, pH and temperature were measured in one replicate test chamber (A) for each concentration and controls.
The appearance of the effluent was clear, with some sediment.

Reference Control = moderately hard synthetic water
Secondary Control = moderately hard synthetic water and 0.1 N sodium thiosulfate ($Na_2S_2O_3$)
Dilution Water Control = receiving water collected from the Housatonic River

Table 4. Cumulative percent mortalities recorded during the 48-hour static toxicity test exposing *Daphnia pulex* to General Electric Pittsfield Plant effluent.

Test Matrix ↓	Cumulative Percent Mortality (%)											
	24-Hour						48-Hour					
	A	B	C	D	E	Mean	A	B	C	D	E	Mean
Reference Control	0	0	0	0	0	0	0	0	0	0	0	0
Secondary Ref Control	0	0	0	0	0	0	0	0	0	0	0	0
Dilution Water Control	0	0	0	0	0	0	0	0	0	0	0	0
5% Effluent	0	0	0	0	0	0	0	0	0	0	0	0
15% Effluent	0	0	0	0	0	0	0	0	0	0	0	0
35% Effluent	0	0	0	0	0	0	0	0	0	0	0	0
50% Effluent	0	0	0	0	0	0	0	0	0	0	0	0
75% Effluent	0	0	0	0	0	0	0	0	0	0	0	0
100% Effluent	0	0	0	0	0	0	0	0	0	0	0	0

Reference Control = moderately hard synthetic water
$Na_2S_2O_3$ Control = moderately hard synthetic water and sodium thiosulfate (0.1 N)
Dilution Water Control = receiving water collected from the Housatonic River

Appendix I

References

CT&E Environmental Services Inc.

Standard Operating Procedure

Document Title: Acute Aquatic Toxicity Testing
Method Reference: CT&E/USEPA
Document File Name: 7002-04.DOC
Revision Number: 4.0
Effective Date: October 20, 1998

UNCONTROLLED COPY

Document Control Number: 7002.

Approved by: Ken Holliday (Supervisor) Date: 10/21/98

Approved by: Linda M. Dark (QA/QC Officer) Date: 10/20/98

1.0 SUMMARY

A 24-, 48-, or 96-hour test to determine the toxicity to freshwater aquatic animals of effluents.

2.0 REFERENCES

2.1 Weber, Cornelius I., *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.*, Fourth Edition. EPA-600/4-90/027. U.S.EPA, Cincinnati, Ohio.

2.2 *Reporting and Testing Guidance for Biomonitoring Required by the Ohio Environmental Protection Agency* , October, 1991.

2.3 *Toxics Management Program's Guidance for Conduction and Reporting the Results of Toxicity Tests in Fulfillment of VPDES Permit Requirements*, Revised July 1992.

3.0 SCREENING

3.1 Test Duration

24 Hours, 48 Hours or 96 Hours.

3.2 Test Preparation

3.2.1 Measure the pH, D.O. and total residual chlorine of the 100% effluent and the control water. If the effluent pH falls outside of the range of 6.0-9.0, two parallel tests are set up in which one effluent is adjusted and the other is not. The pH is adjusted to 7.0 using additions of 1N NaOH and HCl, (other pH adjustment endpoints may be utilized depending on local requirements). The measured amount of acid or base is recorded on the bench sheet. If the D.O. is below 40% saturation or above 100% saturation, the effluent is aerated prior to test initiation. If the total chlorine is above 0.1 mg/L, two parallel tests are set up in which one

effluent is dechlorinated and the other is not (Dechlorination may be prohibited; permit is checked to determine if dechlorination is allowed). The effluent is dechlorinated by the addition of anhydrous sodium thiosulfate. The measured amount is recorded on the bench sheet. Care is taken to add the least amount of sodium thiosulfate needed to decrease the TRC level below 0.10 mg/L. Typically, adjustment of effluent is unnecessary.

3.2.2 Twenty organisms per concentration are used in acute screening tests.

3.2.3 This is a static, non-renewal test, using *Ceriodaphnia dubia, Daphnia pulex, Daphnia magna*, or *Pimephales promelas* (Fathead minnow).

3.2.4 Water quality (D.O., pH, conductivity, hardness, alkalinity and TRC), is measured at the time of test initiation. At test termination, temperature, D.O. conductivity and pH are measured. The final mortality and percent effected counts are recorded. Temperature is maintained at 25°± 1°C for *Daphnia*, and 20° ± 1°C for fathead minnows. Facilities exist to perform both fish and *Daphnia* tests at either temperature.

3.3 Test Results

No statistical analysis is performed on screening data.

4.0 DEFINITIVE TEST

4.1 *Pimephales promelas* (Fathead Minnows)

4.1.1 Test Duration

48-Hours or 96-Hours

4.1.2 Static non-renewal

4.1.3 Test Preparation

4.1.3.1 This test is comprised of a control and an effluent dilution series usually consisting of 100%, 50%, 25%, 12.5% and 6.25% (unless otherwise indicated).

4.1.3.2 The sample is brought up to test temperature in a room temperature water bath. Chemical parameters are checked and

recorded. If the pH, D.O. or chlorine fall outside the acceptable testing range, the effluent may be adjusted (see screening; Test Preparation).

4.1.3.3 The dilutions are prepared in calibrated graduated cylinders using moderately hard synthetic water as dilution water. Other dilution water may be used if specified.

4.1.3.4 Approximately 400 ml of test solution is placed in each of two 800 ml disposable plastic beakers.

4.1.4 Loading

Ten (10) organisms are placed in each beaker. CT&E uses fish which are less than 14 days old and are hatched within the same 24 hour period. A loading limit of 0.8 g/l is observed. Fish are loaded by first transferring them to a shallow dish where they are easily transferred into the test solutions with wide-bore pipettes.

4.1.5 Test Temperature

20° C (± 1)

4.1.6 Daily Procedures

4.1.6.1 At the end of each 24 hours, the pH, D.O. and temperatures are checked and recorded. At this time mortalities are also recorded.

4.1.6.2 If a 96 hour static acute test is required, the test solution may be renewed at 48 hours. Renewal is accomplished by siphoning old test solution and debris and replacing with fresh solution of the appropriate concentration.

4.1.6.3 At the end of 48 hours or 96 hours the final mortalities and percent affected are recorded along with the final water qualities (D.O., pH, conductivity).

4.1.7 Feeding

Organisms are allowed to feed only prior to test initiation, and prior to renewal at 48 hours in a 96 hour test.

CT&E Environmental Services Inc.
Standard Operating Procedure

4.2 *Ceriodaphnia dubia, Daphnia magna,* and *Daphnia pulex*

4.2.1 Test Duration

48-Hours

4.2.2 Static Non-renewal

4.2.3 Test Preparation

4.2.3.1 This test is comprised of a control and a dilution series consisting of 100%, 50%, 25%, 12.5% and 6.25% of the effluent (unless otherwise indicated).

4.2.3.2 The sample is brought up to test temperature in a room temperature waterbath. Chemical parameters are checked and recorded. If the pH, D.O. or chlorine fall outside the acceptable testing range, the effluent may be adjusted (see screening; Test Preparation).

4.2.3.3 The dilutions are prepared in beakers using moderately hard synthetic water (see Section II; Dilution Waters and Culture Media), unless other dilution water is specified. At least 25 ml. of each dilution are placed in five 30 ml. testing vessels.

4.2.4 Loading

4.2.4.1 Four organisms are placed in each vessel. The *Daphnids* are loaded with a disposable polyethylene transfer pipette and are gently released below the surface of the water to avoid the risk of injury.

4.2.5 Test Temperature

The test is conducted in a constant temperature incubator at 25° ±1° C(To satisfy local requirements tests may be conducted at other temperatures).

4.2.6 Daily Procedure

4.2.6.1 At 24 and 48 hours the mortalities and number adversely effected are noted.

4.2.6.2 Due to the fragile structure of *Daphnia* organisms, dissolved oxygen, hardness alkalinity, specific conductance and pH readings are not taken after the organisms have been added to the sample. These analyses could cause injury to the *Daphnia* organisms.

4.2.7 Photoperiod

16 hours light, 8 hours dark.

4.2.8 Feeding

Organisms are allowed to feed prior to test initiation; they are not fed for the duration of the test.

5.0 TEST DATA

5.1 *Pimephales promelas*, *Ceriodaphnia dubia*, *Daphnia magna* and *Daphnia pulex*

5.1.1 Mortality and adverse effects are used as the endpoints for a definitive test.

5.1.2 Chemical parameters checked before test initiation, at 24 hours, 48 hours, 72 hours and 96 hours.

5.1.3 Mortalities recorded at 24 hours, 48 hours, 72 hours and 96 hours.

5.1.4 Any atypical behavior or complications are recorded.

6.0 DATA ANALYSIS

6.1 Introduction

Data from acute effluent toxicity tests are used to estimate the **LC50** and **EC50**. The **LC50** is a point estimate of the effluent concentration that is expected to cause lethality to 50% of the test organisms. The **EC50** is a point estimate of

the effluent concentration that is expected to cause and adverse effects to 50% of the test organisms.

6.2 Methods for Estimating the LC50 & EC50

6.2.1 The flow chart (Figure 6) on page 76 of the manual, *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms* (Fourth Edition), EPA-600/4-90-27F, Appendix A, Sections 4.4.1 through 4.4.3. is observed for determination of the LC50 for multi-concentration acute toxicity tests.

6.2.2 Several statistics packages, including Toxstat® 3.4, are available for data analysis.

7.0 REPORT PREPARATION

7.1 CT&E Acute Toxicity Test Reports Typically Contain the Following Information:

7.1.1 Test background information - Includes client, NPDES or state permit number, sampling point reference number, date collected and received, collector's name, type and date of test, dilution water used, test results, and chain of custody forms.

7.1.2 Results - **LC50 & EC50** values and analysis method used; Any comments concerning the test results.

7.1.3 Initial Characterization of the Effluent Sample - Raw Data Sheets: Includes dissolved oxygen (DO), pH, specific conductivity, hardness, alkalinity and a description of the sample source.

7.1.4 Reference Toxicity Data

CT&E Environmental Services Inc.

Standard Operating Procedure

Document Title:	**Culture Waters for Aquatic Toxicity Testing**
Method Reference:	**CT&E/USEPA**
Document File Name:	**7005-04.DOC**
Revision Number:	**4.0**
Effective Date:	**October 20, 1998**

Document Control Number: 7005

Approved by: Ken Halliday (Supervisor) Date: 10/21/98

Approved by: Wade M. Wark (QA/QC Officer) Date: 10/20/98

1.0 Summary

This document describes the preparation of various waters used for the culture of aquatic organisms.

2.0 Moderately-Hard Synthetic Water

2.1 Place 19 liter of de-ionized, or equivalent, water in a properly cleaned and labeled plastic carboy.

2.2 Add 1.20 g of $MgSO_4$, 1.92 g $NaHCO_3$ and 0.08g KCl to the carboy.

2.3 Aerate overnight.

2.4 Add 1.20 g of $CaSO_4 \cdot 2H_2O$ to 1 liter of de-ionized or equivalent water in a separate flask. Stir on magnetic stirrer until calcium sulfate is dissolved and add to the 19 liter above and mix well.

2.5 Aerate vigorously for 24 hours to stabilize the medium.

3.0 Hard Synthetic Water

3.1 Place 9 liter of de-ionized, or equivalent, water in a properly cleaned and labeled plastic carboy.

3.2 Add 1.20 g of $MgSO_4$, 1.92 g $NaHCO_3$ and 0.08g KCl to the carboy.

3.3 Aerate overnight.

3.4 Add 1.20 g of $CaSO_4 \cdot 2H_2O$ to 1 liter of de-ionized, or equivalent water in a separate flask. Stir on magnetic stirrer until calcium sulfate is dissolved and add to the 9 liter above and mix well.

3.5 Aerate vigorously for 24 hours to stabilize the medium.

4.0 Synthetic Water Solutions

4.1 KCL Stock Solution

4.1.1 Place 8 g of crystalline, reagent grade KCL in a 1 liter volumetric flask.
4.1.2 Bring the volume to one liter with distilled water.
4.1.3 Aerate vigorously for several hours before using.
4.1.4 Store in a 1 liter polyethylene bottle.

4.2 $MgSO_4$ Stock Solution

4.2.1 Place 120 g of regent water, anhydrous $MgSO_4$ powder in a 1 liter volumetric flask.
4.2.2 Bring the volume to one liter with distilled water.
4.2.3 Aerate vigorously for several hours before using.
4.2.4 Store in a 1 liter polyethylene bottle.

4.3 $NaHCO_3$ Stock Solution

4.3.1 Place 96 g of reagent grade $NaHCO_3$ powder in a 1 liter volumetric flask.
4.3.2 Bring the volume to 1 liter with distilled water
4.3.3 Aerate vigorously for several hours before using.
4.3.4 Store in a 1 liter polyethylene bottle.

5.0 Activated Carbon Treated Tap Water Diluent

5.1 Fill a 5-gallon carboy with water from the treatment system using the attached hose. Water should be allowed to flow slowly through the hose into the sink for 2-3 minutes before filling the carboy. Flow rate to fill the carboy should be slow.

5.2 One or two long airstones are placed in the filled carboy. Water is aerated vigorously for 48-hours.

5.3 Total residual chlorine must be checked on water from newly filled carboys before using.

5.4 Alkalinity, hardness and pH are checked on samples from dechlorinated water carboys according to the Laboratory Procedure Checklist.

5.5 Log information on the Dechlorinated Tap Water and Cechlorimeter log sheet including the carboy number and date filled.

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Standard Operating Procedure

6.0 Synthetic Sea Water Preparation

6.1 Fill a clean carboy with dechlorinated water to approximately the 25-gallon mark.

6.2 The newly filled carboy should be checked for the presence of chlorine and the results recorded on the saltwater carboy log sheet. If chlorine is present, two 4-inch airstones (adjusted to a moderately heavy air flow) should be introduced and the water aerated until a level of <0.01 mg/L is reached.

6.3 A sufficient amount of synthetic salt is added to the carboy to obtain the required salinity (usually 20 ppt).

6.4 All information should be logged on the Saltwater Carboy log sheet.

CT&E Environmental Services Inc.

Standard Operating Procedure

Document Title:	**Culture of *Daphnia***
Method Reference:	**CT&E/USEPA**
Document File Name:	**7006-05.DOC**
Revision Number:	**5.0**
Effective Date:	**March 12, 2001**

UNCONTROLLED COPY

Document Control Number: 7006

Approved by: Ken Halliday (Supervisor) 3/23/2001 (Date)

Approved by: Cynthia M Dork (QA/QC Officer) 3/23/2001 (Date)

1.0 Summary

This document describes the procedure for the culture of *Ceriodaphnia dubia, Daphnia pulex, Daphnia magna* that are used in aquatic toxicity testing.

2.0 Mass Stock Cultures of *Ceriodaphnia dubia, Daphnia pulex,* and *Daphnia magna*

2.1 Stock cultures are maintained in 1000 ml beakers/jars with 900 mls of culture media at 20 ± 1° C. These cultures are maintained only as a back-up source of organisms.

2.2 Culture media for *Ceriodaphnia dubia* and *Daphnia pulex* is moderately-hard synthetic water. Culture media for *Daphnia magna* is hard synthetic water (see document control number 7005.04, "Culture Waters for Aquatic Toxicity Testing").

2.3 Many cultures are maintained simultaneously with an informal rotation cycle. New cultures are started with young produced by individual cultures. These cultures are maintained for approximately 3 weeks after which they are discarded.

2.4 Cultures are fed YCT (yeast, cerophyll, digested trout chow/flake food) and algae (*Selanastrum capricorium*) on Monday, Wednesday and Friday. Feeding, as well as culture rotation, temperature and all other relevant data is recorded by species in a log book.

2.5 Stock cultures are also fed algae and YCT. These feedings are recorded in the log book.

3.0 Individual Cultures of *Ceriodaphnia dubia, Daphnia pulex, Daphnia magna*

3.1 Cultures of *Daphnia magna* and *Daphnia pulex* are maintained in 100 ml plastic beakers. Twenty-four (24) beakers with one organism each are kept at all times to ensure continuous availability of neonates for testing. Cultures of individual *Ceriodaphnia dubia* are maintained in 30 ml sterile plastic medicine cups. One to two cultures of approximately 100 organisms each are kept at all times.

3.2 Cultures are renewed three times per week. Organisms are fed daily.

4.0 Obtaining Neonates for Testing

4.1 Cultures of *Ceriodaphnia* are started by placing one neonate into a 30 ml disposable plastic cup containing approximately 20 ml of Moderately Hard Synthetic Water. New *Ceriodaphnia* cultures are started every ten to fourteen days. *D. magna* and *D. pulex* are replaced whenever mortality occurs.

4.2 The individual cultures are transferred to fresh media three times per week. Synthetic water, algae and YCT are mixed prior to pouring into culture vessel to ensure uniformity of media. The old media and neonates are kept for stock cultures for several weeks and then discarded.

4.3 To assure neonates for chronic tests are of a very similar age, transfer of individual brood stock to fresh media should be made the morning of the test. The cultures are then checked approximately every two hours to find an adequate number of neonates all released with an 8 hour period. For acute tests, individuals are either transferred less than 24 hours before a test or the young are separated from adults less than 24 hours before a test.

4.4 Young used in chronic testing are obtained from adults who have produced at least three broods, with no less than 8 neonates in their third or subsequent brood. Neonates are then distributed in a "blocking" procedure, i.e., neonates from the same organism are placed in one replication of each concentration.

5.0 *DAPHNIA* Food

5.1 Digested Flake Food

5.1.1 Add 5g flake food to 1 L deionized water. Mix well in a blender and place in a 2 L separatory funnel. To digest, aerate this mixture at room temperature for one week.

5.1.2 At end of the digestion period, remove aeration and allow to settle.

5.1.3 Drain sediment. Place supernatant in a beaker and allow to settle in refrigerator overnight.

5.1.4 Filter through fine mesh.

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Standard Operating Procedure

5.2 Cerophyll®

5.2.1 Add 5g Cerophyll® to 1 L deionized water. Mix in a blender on high speed for 5 minutes.

5.2.2 Remove from blender and allow to settle in refrigerator overnight.

5.2.3 Retain supernatant for combined YCT food.

5.3 Yeast

5.3.1 Add 5g dry yeast to 1 L deionized water. Mix in a blender at low speed.

5.3.2 Do not allow mixture to settle.

5.4 Combined YCT Food

5.4.1 Mix equal parts of each of the above preparations in large clean beakers.

5.4.2 Pour well mixed YCT into small screw cap bottles. Freeze until needed.

CT&E Environmental Services Inc.
Standard Operating Procedure

Document Title: Reference Toxicant Testing
Method Reference: CT&E/USEPA
Document File Name: 7008-05.DOC
Revision Number: 5.0
Effective Date: March 12, 2001

UNCONTROLLED COPY

Document Control Number: 7008

Approved by: Ken Holliday Supervisor 3/23/2001 Date

Approved by: QA/QC Officer 3/23/2001 Date

1.0 Summary

To insure that healthy organisms are used in testing, CT&E performs monthly QA/QC tests on all in-house cultured organisms. CT&E uses Sodium Chloride as a reference toxicant.

2.0 *Pimephales promelas*

2.1 48 hour static acute toxicity tests are run at 20°C (±1°C) using fish 1 to 14 days old.

2.2 This test consists of a control and a dilution series of 10g/L, 9g/L, 8g/L, 7g/L, and 6g/L, of sodium chloride. Other dilution series may be used.

2.3 The dilutions are prepared in 800 ml disposable plastic beakers using moderately hard synthetic water. 500 mls of test solution is placed in each of two replications. Water quality values are measured and recorded at this time.

2.4 Ten organisms are placed in each replicate. Fish are loaded by first siphoning them into a shallow pan from which they are transferred to the beakers with a large bore pipette.

2.5 The test is terminated at 48 hours. At this time, mortalities are recorded along with final water quality data.

3.0 Daphnids *(Ceriodaphnia dubia, Daphnia magna, Daphnia pulex)*

3.1 48 hour static acute tests are performed at 25°C (±1°C) using organisms less than 24 hours old.

3.2 These tests consist of a control and a five dilution series. The concentration of the reference toxicant is varied depending on species.

3.2.1 *Ceriodaphnia dubia, Daphnia pulex:* 10, 5, 2.5, 1.25, 0.625 grams/L

CT&E Environmental Services Inc.
Standard Operating Procedure

3.2.2 *Daphnia magna:* 10, 5, 2.5, 1.25, 0.625 grams/L

3.3 Dilutions are prepared using moderately hard synthetic water. 20 mls of each dilution are placed in each of 5 plastic medicine cups.

3.4 Four organisms are placed in each test vessel. The *Daphnids* are loaded with a disposable plastic pipette. Organisms are gently released below the surface of the water to minimize risk of injury.

3.5 The test is terminated at 48 hours. At this time, mortalities are recorded along with final water quality data.

4.0 Data Analysis

4.1 Toxicity tests are conducted on a monthly basis.

4.2 The LC_{50} is calculated according to EPA protocols.

4.3 Results from these tests are incorporated into Q-sum charts. These records are kept in monthly files.

CT&E Environmental Services Inc.
Standard Operating Procedure

Document Title: Sample Handling for Aquatic Toxicity Testing
Method Reference: CT&E/USEPA
Document File Name: 7009-04.DOC
Revision Number: 4.0
Effective Date: October 20, 1998

Document Control Number: 7009

Approved by: Ken Holliday — Supervisor — Date: 10/21/98

Approved by: Lydia M. Dorn — QA/QC Officer — Date: 10/20/98

1.0 Summary

This document describes the manner in which sample waters (effluents, wastewaters, etc.) are handled from point of collection to testing.

2.0 Sample Handling

2.1 Sampling Personnel

CT&E's sampling personnel are trained and experienced in the techniques for collecting samples according to NPDES permit requirements. This includes the use of automatic sampling equipment and the measurement of various field parameters.

2.2 Sample Containers

Sample containers used by CT&E are disposable plastic cubitainers®.

2.3 Sample Collection Points

For NPDES permit required tests, the sample will be collected at the point specified in the discharge permit unless otherwise directed by the regulatory agency.

2.4 Sample Shipment

Samples are placed on ice (sufficient to maintain 0-4°C) in a cooler and are transported as quickly as possible to the laboratory.

2.5 Laboratory Handling of Samples

Upon delivery to the laboratory, the effluent samples are inspected, given a sample control number and stored at 4° C until used for testing.

2.6 Sample Holding Time

Samples will be tested within 24 hours upon receipt in the laboratory. The maximum lapsed time for collection of a grab or composite sample and the initiation of test, or for test solution renewal, will not exceed 36-hours for Chronic and Acute Testing.

3.0 LABORATORY ENVIRONMENT

3.1 Laboratory Arrangement

The aquatic toxicity testing laboratory is divided into two separate areas: (1) the culturing laboratory and (2) the testing laboratory. See attached diagram for details of laboratory layout.

3.2 Temperature

The aquatic toxicity testing laboratory air temperature is maintained at 20 ± 1° C throughout the year by a central heating and cooling system which is regulated by thermostats. Temperatures are continuously recorded by thermographs.

3.3 Water

Several waters are available for use in the laboratory. CT&E has access to municipally supplied water, well water and reagent water from which synthetic water is prepared. Waters used for culturing and testing are analyzed semiannually for priority pollutants and other contaminants. A detailed report is available.

3.4 Lighting

Ambient laboratory lighting is regulated with a 16 hour day/8 hour night photoperiod controlled by an electronic timing system in the culturing and testing areas.

4.0 LABORATORY EQUIPMENT

4.1 General

Instruments used for the measurement of physical and chemical parameters are calibrated prior to use in testing. Any instrument that exceeds the calibration limits is taken out of service and corrective action is taken.

4.2 Balances

Analytical balances are calibrated against standard weights prior to use. All calibration results and adjustments are recorded in bound books.

4.3 Water Quality Meters

Meters are calibrated prior to use using known standards and the manufacturer's instructions. Records of calibration are kept in logbooks. Detailed procedures for the operation of these meters are found in SOP's for each specific instrument.

4.4 Reagents

All reagents are stored in a separate area. Expired reagents and chemicals are discarded.

4.5 Test Containers

All test containers are either clean reusable glassware or new, disposable plastic beakers.

5.0 EQUIPMENT CLEANING PROCEDURES

5.1 Equipment used in culturing or testing is washed in the following manner:

5.1.1 Soak 15 minutes and scrub with detergent in tap water.
5.1.2 Rinse three times with tap water.
5.1.3 Rinse once with 20% nitric acid.
5.1.4 Rinse twice with deionized water.
5.1.5 Rinse once with full-strength, pesticide-grade acetone.
5.1.6 Rinse well with deionized water.
5.1.7 Invert and air dry.
5.1.8 All equipment and test chambers are rinsed with deionized water immediately prior to use for each test.

Appendix II
Chain of Custody

Chain of Custody Record

General Electric Co.

100 Woodlawn Ave. Pittsfield, MA 01201

TA4-IO-P283-0012 **Chain of Custody #:** OBG091304-01

AD TOX
C.TOX 1
SEPT 2004

Dry **Weather Acute Aquatic Toxicity for** Sept. 2004 Split Sample

Project # NPDES PERMIT	Analytical Lab: CT&E Environmental Services Inc.			Sampled By: (Print) Mark Wasnewsky		
Sample #	**Date**	**Time**	**Containers**	**Parameters to be Analyzed**	**Preservative**	**Remarks**
1 A5945C	9/12 to 9/13/04	1100 AM	1 Gallon plastic	Definitive Test(LC50 and NOAEL), Static acute toxicity, 48 hr w/ Daphnia pulex	Chilled	(See below)
	to		1000 ml. plastic	Chloride, TSS,Total Solids, Alkalinity Specific Conductance, CL2	Chilled	
	to		500 ml. plastic	Total Phosphorus, TOC, NH3	H2SO4	
2 A5944R	9/13/04	820 AM	1 Gallon plastic	Housatonic River water dilution water for definitive test	Chilled	
			1000 ml. plastic	Chloride, TSS,Total Solids, Alkalinity Specific Conductance, CL2	Chilled	
			500 ml. plastic	Total Phosphorus, TOC, NH3	H2SO4	

Relinquished By:	**Date/Time**	**Received By:**	**Date/Time**
Mark Wasnewsky	9-13-04		9-13-04 1400
Relinquished By:	**Date/Time**	**Received By:**	**Date/Time** 14 (TNW) 9-10-04 1000 4.2°C

Additional Comments: The effluent sample being analyzed for toxicity is a flow-proportioned composite. Each outfall sample is a 24-hour composite. The sample collection times for each outfall are as follows:

001- 740 AM 004- / 005-64T- 700 AM 005-64G- 700 AM 007- / 09A- / 09B- 800 AM

The time of compositing the final flow-proportioned sample was 2/00 **A.M.**

Appendix III

Bench Data

General Electric – 48-hour Acute Biotoxicity Bench Sheet

Client: General Electric

Project: Dry Weather Acute

Lab. No.: TA4-10-P283-001/002

Date Received: 09/14/04

Sample Date: 09/12-13/04 Time: 11:00

Date Analyzed: 09/14/04

Source: EFFLUENT

Analyst(s): KH

Source of dilution water: Housatonic River Water

Test Species: *Daphnia pulex* Age: < 24 hours Temp. Range: °C

Type of Test: 48-Hour Static Acute

Total Chlorine: n/d

	Beginning	Ending
Date:	09/14/04	09/16/04
Time:	11:00	11:00

Concentration→	Housatonic River Control	MHSW Control	MHSW $Na_2S_2O_3$ Control	Effluent 5%	Effluent 15%	Effluent 35%	Effluent 50%	Effluent 75%	Effluent 100%
START									
Temperature	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7
Hardness	90	110	110						400
D.O.	8.67	8.92	8.98	8.67	8.69	8.72	8.74	8.73	8.71
pH	6.98	~~7.07~~ 7.07	7.13	7.04	7.19	7.27	7.32	7.39	7.48
Alkalinity	69	72	75						343
Sp. Conduct.	128	319	329	187	238	542	654	748	767
24 HOUR									
No. Surviving	20	20	20	20	20	20	20	20	20
Temperature	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
D.O.	8.54	8.72	8.77	8.70	8.71	8.70	8.72	8.75	8.68
pH	7.04	7.12	7.20	7.05	7.22	7.23	7.28	7.41	7.45
Sp. Conduct.	134	328	331	194	233	549	660	720	751
48 HOUR									
No. Surviving	20	20	20	20	20	20	20	20	20
Temperature	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3
D.O.	8.51	8.64	8.68	8.67	8.62	8.67	8.64	8.70	8.61
pH	7.09	7.13	7.22	7.08	7.27	7.28	7.25	7.38	7.48
Sp. Conduct.	137	332	326	190	242	561	669	724	768

Method Reference: *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.*, Fourth Edition. EPA-600/4-90/027F. U.S.EPA, Cincinnati, Ohio.

f:\public\forms\bioassay\GE bench sheet-acute.doc

Acute Biotoxicity Bench Sheet

Client: QC

Project: Reference Toxicant Lab. No.:

Date Received:

Sample Date: Time: Date Analyzed:

Source: Analyst: KH

Source of dilution water: Moderately Hard Synthetic Water

Test Species: Daphnia pulex Age: Temp. Range: °C

Type of Test: 48 hour Static Acute

Total Chlorine:

	Beginning	Ending
Date:	09/14/04	09/16/04
Time:	1500	1500

Concentration	Control		625	1250	2500	5000	10000
START							
Temperature	20.8		20.8	20.8	20.8	20.8	20.8
Hardness	110						110
D.O.	8.9		8.9	8.9	8.9	8.9	8.9
pH	7.0		7.1	7.1	7.1	7.2	7.2
Alkalinity	66						70
Sp. Conduct.	324		1168	2470	4170	8120	11340
24 HOUR							
Temperature	20.1		20.1	20.1	20.1	20.1	20.1
No. Surviving	20		20	20	14	6	0
48 HOUR							
Temperature	19.6		19.6	19.6	19.6	19.6	19.6
No. Surviving	20		20	19	8	0	0

Note: All results expressed in mg/L unless otherwise designated. < = less than

Note: Number in parenthesis equals number not adversely effected (EC_{50}). This number is used in calculating EC_{50} value.

Note: Due to fragile structure of *Daphnia* organisms, dissolved oxygen (DO), hardness, alkalinity, specific conductance, and pH reading could not be taken after the organisms are added to the sample. Doing so would cause injury to the organisms.

Method Reference: *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine*

TRIMMED SPEARMAN-KARBER METHOD. MONTANA STATE UNIV

FOR REFERENCE, CITE:
HAMILTON, M.A., R.C. RUSSO, AND R.V. THURSTON, 1977.
TRIMMED SPEARMAN-KARBER METHOD FOR ESTIMATING MEDIAN
LETHAL CONCENTRATIONS IN TOXICITY BIOASSAYS.
ENVIRON. SCI. TECHNOL. 11(7): 714-719;
CORRECTION 12(4):417 (1978).

DATE: 09/14/04 TEST NUMBER: - DURATION: 48 HOURS
CHEMICAL: NaCl SPECIES: Dp

RAW DATA:

CONCENTRATION(MG/L)	625.00	1250.00	2500.00	5000.00	*******
NUMBER EXPOSED:	20	20	20	20	20
MORTALITIES:	0	1	12	20	20

SPEARMAN-KARBER TRIM: 0.00%

SPEARMAN-KARBER ESTIMATES: LC50: 2253.13
95% LOWER CONFIDENCE: 1908.10
95% UPPER CONFIDENCE: 2660.54

Appendix IV

U.S. EPA Region I Toxicity Test Summary

Toxicity Test Summary Sheet

Facility Name: General Electric Co. Test Start Date: September 14, 2004
NPDES Permit Number: MA 000 3891 Pipe Number: 001, 005-64T, 005-64G, 09A, 09B

Test Type	Test Species	Sample Type	Sample Method
☑ Acute	☐ Fathead minnow	☐ Prechlorinated	☐ Grab
☐ Chronic	☐ Ceriodaphnia	☐ Dechlorinated	☑ Composite
☐ Modified*	☑ Daphnia pulex	☐ Chlorine	☐ Flow thru
☐ 24-hour Screening	☐ Mysid Shrimp	☐ Spiked at lab	☐ Other
	☐ Menidia	☑ Chlorinated on-site	
	☐ Sea Urchin	☐ Unchlorinated	
	☐ Champia		
	☐ Selenastrum		
	☐ Other		

*Modified (Chronic reporting acute values)

Dilution Water

X Receiving waters collected at a point upstream of or away from the discharge, free from toxicity or other sources of contamination (Receiving water name: Housatonic River);

___ Alternate surface water of known quality and a harness, etc. to generally reflect the characteristics of the receiving water;

___ Synthetic water prepared using either Millipore Mill-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water;

___ or artificial sea salts mixed with deionized water;

___ Deionized water and hypersaline brine; or

___ other

Effluent sampling date(s): September 12, 2004 to September 13, 2004

Effluent concentrations tested (in %): 100 75 50 35 15 5
*(Permit limit concentration): N/A

Was effluent salinity adjusted? No
If yes, to what value? N/A ppt
With sea salts? N/A Hypersaline brine solution? N/A

Actual effluent concentrations tested after salinity adjustment
(In %): N/A N/A N/A N/A N/A N/A
Reference Toxicant Test Date: September 14, 2004 to September 16, 2004

N/A= not applicable

Permit Limits & Test Results

Test Acceptability Criteria

MEAN CONTROL SURVIVAL: 100% MEAN CONTROL REPRODUCTION: N/A

MEAN CONTROL WEIGHT: N/A MEAN CONTROL CELL COUNT: N/A

Limits		Results	
LC50	N/A	48-hr LC50	>100%
		Upper Value	N/A
		Lower Value	N/A
		Data Analysis Method used:	N/A
A-NOEC	N/A	A-NOEC	100%
C-NOEC	N/A	C-NOEC	N/A
		LOEC	N/A
IC25	N/A	IC25	N/A
IC50	N/A	IC50	N/A

N/A = not applicable

Attachment D

Chronic Effects of the Process Wastewaters Discharged from the General Electric Plant; Pittsfield, Massachusetts [Samples Collected in September 2004]

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

Chronic Effects of the Process Wastewaters Discharged from the General Electric Plant Pittsfield, Massachusetts

Samples collected in September 2004

Submitted to:

General Electric
Area Environmental & Facility Programs
100 Woodlawn Avenue
Pittsfield, Massachusetts 01201

SGS Sample ID: TA4-I0-P284

Study Director: Ken Holliday

30 September 2004

SGS Environmental Services
1258 Greenbrier Street
Charleston, West Virginia 25311-1002
Tel: 304.346.0725 Fax: 304.346.0761
www.sgs.com

Signatures and Approval

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Ken Holliday — 30 September 2004
Ken Holliday
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Titshina L. Mims — 30 September 2004
Titshina L. Mims
Technical Writer

Barbara Hensley — 30 September 2004
Barbara Hensley
Project Manager
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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: 30 September 2004
Date

Jeannie Latterner
Authorized signature

Jeannie Latterner
Name

QA/QC Manager
Title

SGS Environmental Services
Laboratory

jlatterner@sgs.com

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List of Tables

Executive Summary

The following is a summary of the toxicity results exposing *Ceriodaphnia dubia* to effluent collected from the General Electric Company, Pittsfield, Massachusetts. Effluent samples were collected from September 12, 2004 to September 17, 2004. The freshwater species, *Ceriodaphnia dubia*, was exposed to the effluent under static-renewal conditions. Acute endpoints were derived 48-hours into the chronic studies.

Acute Toxicity Evaluation

Species	Exposure Period	LC_{50} % effluent	NOAEL % effluent
Ceriodaphnia dubia	48 hours	>100%	100%

Chronic Toxicity Evaluation

Species	Endpoint	Exposure Period	NOCEL % effluent	LOCEL % effluent	MAWC % effluent
Ceriodaphnia dubia	Survival	7 days	100%	>100%	≥100%
Ceriodaphnia dubia	Reproduction	7 days	100%	>100%	≥100%

Summary of Test Conditions and Test Results

Static Renewal Short-Term Toxicity Test with *Ceriodaphnia dubia*

Sponsor:	General Electric
Protocol Title:	*Chronic Aquatic Toxicity Testing*, SGS Document Control Number 7003, version 4.0
Study Number:	TA4-I0-P284
Test Material:	Composite effluent from the General Electric Company located in Pittsfield, Massachusetts
GE Sample ID:	A5945C, A5947C and A5949C
Dilution Water:	Water from the Housatonic River
Dilution Water ID:	A5944R, A5946R and A5948R

Dates Collected:

Effluent	Dilution Water
09/12/04 to 09/13/04 (A5945C)	09/13/04 (A5944R)
09/14/04 to 09/15/04 (A5947C)	09/15/04 (A5946R)
09/16/04 to 09/17/04 (A5949C)	09/17/04 (A5948R)

Dates Received:	09/14/04, 09/16/04, 09/18/04
Test Dates:	09/14/04 to 09/21/04
Test Concentrations:	100% effluent 75% effluent 50% effluent 25% effluent 12.5 effluent 6.25% effluent dilution water control (Housatonic River) reference control (moderately hard reconstituted water) secondary reference control (sodium thiosulfate)

Test Type:	Chronic static renewal
Temperature:	25°C (± 1°C)
Light Intensity:	90 to 100 foot-candles
Photoperiod:	16 hours light, 8 hours dark
Size of Test Chamber:	30 ml medicine cups
Test Solution Volume:	20 ml per medicine cup
Renewal of solutions:	Test solutions were renewed daily using the most recently collected effluent sample.
Age of Organisms:	The test organisms were less than 24-hours old and were all hatched within an 8-hour period of each other.
Number of Neonates per test chamber:	1 daphnid per test chamber (replicate)
Number of Replicate Test Chambers per treatment:	10 test chambers (replicates) per concentration
Feeding regime:	Daphnid cultures were fed a combination of green algae (*Selenastrum capricorium*) and YCT (yeast, cereal leaves and trout chow).
Aeration:	The effluent sample was supersaturated by aeration prior to use in the test.
Results:	LC_{50} The 48-hour LC_{50} value was determined to be >100% effluent.
	NOAEL The No-Observed-Acute-Effect-Level (NOAEL), based on survival, was observed to be 100% effluent
	NOCEL The No-Observed-Chronic-Effect-Level, based on reproduction, was determined to be 100% effluent

LOCEL The Lowest-Observed-Chronic-Effect-Level, based on reproduction, was determined to be >100% effluent

MAWC The Maximum Acceptable Wastewater Concentration was calculated to be ≥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 process wastewater and municipal sewage.

The purpose of the National Pollutant Discharge Elimination System (NPDES) Program is to protect human health and the environment. The Clean Water Act requires that all point sources discharging pollutants into waters of the United States must obtain an NPDES permit. By point sources, EPA means discrete conveyances such as pipes or man made ditches.

For many years, discharge limits were based on available technology for wastewater treatment. However, in 1984, the U.S. Environmental Protection Agency (EPA) released a national policy statement entitled "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants" (U.S. EPA, 1984) which addresses the control of toxic pollutants beyond technology-based requirements in order to meet water quality standards. To implement the new policy, guidance was provided to the respective state and regional permit personnel in the EPA's "Technical Support Document for Water Quality-Based Toxics Control" (U.S. EPA, 1985; U.S. EPA, 1991). The EPA's policy statement and the support document recommended that, where appropriate, permit limits should be based on effluent toxicity as measured in aquatic toxicity tests.

1.2 Clean Water Act, 33 U.S.C. s/s 1251 et seq. (1977)

The Clean Water Act is a 1977 amendment to the Federal Water Pollution Control Act of 1972, which set the basic structure for regulating discharges of pollutants to waters of the United States. The law gave EPA the authority to set effluent standards on an industry basis (technology-based) and continued the requirements to set water quality standards for all contaminants in surface waters. The CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit (NPDES) is obtained under the Act. The 1977 amendments focused on toxic pollutants. In 1987, the CWA was reauthorized and again focused on toxic substances, authorized citizen suit provisions, and funded sewage treatment plants (POTWs) under the Construction Grants Program. The CWA provisions for the delegation by EPA of many permitting, administrative, and enforcement aspects of the law to state governments. In states with the authority to implement CWA programs, EPA still retains oversight responsibilities.

1.3 The Chronic Toxicity Test

The acute toxicity test is used for predicting the maximum allowable concentrations of industrial waste waters that can be discharged into a receiving system. Chronic toxicity tests produce data that is useful in predicting the wastewater concentrations not likely to harm a resident population of invertebrates or fish.

1.4 Objective of the General Electric Study

The objective of this study was to measure the chronic toxicity of the composite process wastewater discharged by the General Electric facility located in Pittsfield, Massachusetts, using *Ceriodaphnia dubia* under static renewal conditions. Whereas *Ceriodaphnia dubia* are not considered locally important, they are routinely used by regulatory agencies and contract laboratories nationwide for toxicity testing. A short-term chronic toxicity test was conducted from

September 14, 2004 to September 21, 2004 at SGS Environmental Services, Charleston, West Virginia. All original raw data and the final report produced for this study are stored in SGS's archives at the above location.

2.0 Materials and Methods

2.1 Protocol

Procedures used in this chronic toxicity test followed those described in the SGS Standard Operating Procedure (SOP) entitled *Chronic Aquatic Toxicity Testing*, SGS document control number 7003, version 4.0. This SOP generally follows the standard methodology described by the U.S. Environmental Protection Agency.

Additional SOPs used in this study are outlined below:

Title	Document Number	Version
Culture Waters for Aquatic Toxicity Testing	7005	4.0
Daphnia, Culture of	7006	5.0
Reference Toxicant Testing	7008	5.0
Sample Handling for Aquatic Toxicity Testing	7009	4.0

Copies of these documents are included in the References section of this report.

2.2 Effluent Sample

The first effluent sample (A5945C) was collected by GE personnel from September 12, 2004 to September 13, 2004, and was used to initiate the short-term chronic test and renewal of the test solutions on Day 1 and Day 2. Upon receipt at SGS on September 14, 2004, the sample temperature was 4.2° C. The effluent sample was characterized as having

Sample #1 – collected from 09/12/04 to 09/13/04

Parameter	Result
Total Hardness	260
Alkalinity (as $CaCO_3$)	235
pH	7.65

Sample #1 – collected from 09/12/04 to 09/13/04

Parameter	Result
Specific Conductance	938
Dissolved Oxygen Concentration*	8.48
Appearance	Clear

The second effluent sample (A5947C) was collected by GE personnel from September 14, 2004 to September 15, 2004, and was used for renewal of test solutions on Day 3 and Day 4. Upon receipt at SGS on September 16, 2004, the sample temperature was 4.7° C. The effluent sample was characterized as having

Sample #2 – collected from 09/14/04 to 09/15/04

Parameter	Result
Total Hardness	270
Alkalinity (as $CaCO_3$)	205
pH	7.78
Specific Conductance	882
Dissolved Oxygen Concentration*	8.64
Appearance	Clear

The third effluent sample (A5949C) was collected by GE personnel from September 16, 2004 to September 17, 2004, and was used for renewal of test solutions on Days 5, 6 and 7. Upon receipt at SGS on September 18, 2004, the sample temperature was 3.8° C. The effluent sample was characterized as having

Sample #3 – collected from 09/16/04 to 09/17/04

Parameter	Result
Total Hardness	400
Alkalinity (as $CaCO_3$)	304
pH	7.31
Specific Conductance	1091
Dissolved Oxygen Concentration*	8.54
Appearance	Clear

*Dissolved oxygen concentration was recorded after sample was aerated and warmed to approximately 20°C).

2.3 Dilution Water

Dilution water consisted of receiving water collected from the Housatonic River and was collected as a "grab" sample. The first dilution water sample (A5944R) was collected by General Electric personnel on September 13, 2004, and was used with the Day 1 and Day 2 test. Upon receipt at SGS, the sample temperature was 4.2°C. The dilution water sample was characterized as having

Dilution Water #1	**Collected 09/13/04**
Parameter	**Result**
Total Hardness	100
Alkalinity (as $CaCO_3$)	74
pH	6.58
Specific Conductance	219
Dissolved Oxygen Concentration*	8.61
Appearance:	Slight yellow color

The second dilution water sample (A5946R) was collected by General Electric personnel on September 15, 2004, and was used with the Day 3 and Day 4 tests. Upon receipt at SGS, the sample temperature was 4.7°C. The dilution water sample was characterized as having

Dilution Water #2	**Collected 09/15/04**
Parameter	**Result**
Total Hardness	210
Alkalinity (as $CaCO_3$)	74
pH	7.31
Specific Conductance	219
Dissolved Oxygen Concentration*	8.58
Appearance:	Slight yellow color

The third dilution water sample (A5948R) was collected by General Electric personnel on September 17, 2004, and was used with the Day 5, 6 and 7 tests. Upon receipt at SGS, the sample temperature was 3.8°C. The dilution water sample was characterized as having

Dilution Water #3	Collected 9/17/04
Parameter	**Result**
Total Hardness	210
Alkalinity (as $CaCO_3$)	97
pH	6.67
Specific Conductance	226
Dissolved Oxygen Concentration*	8.67
Appearance:	Slight yellow color

*Dissolved oxygen concentration was recorded after sample was aerated and warmed to approximately 25°C).

2.4 Reference Control Water

Water used in the reference control vessels was deionized (DI) water adjusted to the appropriate hardness (moderately hard reconstituted water) by the addition of reagent grade chemicals (U.S. EPA, 1993). Characterization of this water resulted in:

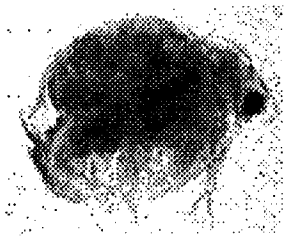
Parameter	Result
Total Hardness	100 - 110
Alkalinity (as $CaCO_3$)	69 - 76
pH	6.9 - 7.1
Specific Conductance	338 - 360

2.5 Secondary Reference Control

A secondary reference control consisted of deionized (DI) water adjusted to the appropriate hardness (moderately hard reconstituted water) and sodium thiosulfate (0.1 N).

2.6 Test Organisms

Ceriodaphnia dubia→



Daphnids (*Ceriodaphnia dubia*), less than 24-hours old, were obtained from SGS laboratory cultures maintained in Charleston. The culture system consisted of twenty-four (24) 100 ml disposable plastic beakers each containing 80 ml of culture medium

and one (1) daphnid. The culture medium was deionized (DI) water for which the hardness was raised by addition of reagent grade chemicals (U.S. EPA, 1993). Prior to use, the culture water was characterized:

Parameter	Result
Total Hardness	within range of 80-110 mg/L
Alkalinity (as $CaCO_3$)	within range of 60-75 mg/L
PH	within range of 7.0 to 7.2

The culture area was maintained at a temperature of 25°C (±1°C) with a regulated photoperiod of 16 hours of light and 8 hours of darkness.

Daphnid cultures were fed a combination of green algae (*Selenastrum capricorium*), approximately 4.0×10^7 cells/ml and YCT (yeast, cereal leaves and trout chow). Approximately 1.0 ml of algae and 0.5 ml of YCT was added to each culture vessel daily. Three times per week, daphnids are transferred to fresh culture media.

Approximately twenty-four hours before test initiation, all immature daphnids were removed from the culture flasks. Offspring produced during the period were used in the toxicity test. All Ceriodaphnia dubia were used in the test were ≤24 hours old and all were produced within an 8-hour period.

2.7 Test Procedures

A subsample of the effluent and the dilution water (approximately 2250 ml), from each of the three sampling events, was analyzed by SGS for total phosphorus, chloride, total suspended solids, and total solids. The short-term chronic toxicity test was conducted at concentrations of 100%, 75%, 50%, 25%, 12.5% and 6.25% effluent. Test concentrations were prepared from this solution by diluting the appropriate volume of effluent with dilution water to a total volume of 800 ml. Test solutions were then divided into replicate (10

replicates per concentration) 30 ml medicine cups, each containing 20 ml of test solution. One set of ten control beakers (containing Housatonic River water), one set of ten reference control beakers (containing moderately hard reconstituted water), and one set of ten secondary reference control beakers (containing moderately hard reconstituted water and sodium thiosulfate) were established and maintained under the same conditions as the exposure concentrations. Test solutions were placed in an incubator to maintain solution temperature of 25°C (± 1°C). Light was provided on a 16-hour light and 8-hour dark photoperiod. Florescent bulbs provided an illumination of 90 to 100 foot-candles in the test area.

Prior to test initiation, daphnids less than 24-hours old were culled individually with a plastic pipette and placed into a 1000 ml holding beaker containing approximately 500 ml of reference water. The test was initiated when daphnids were individually transferred from the holding beaker to the test solutions (5 daphnids per replicate). The renewal of the test solutions was conducted daily by transferring the adult organisms to freshly prepared solutions. The daphnids were fed prior to test initiation and immediately following renewal of the test solutions.

2.8 Test Monitoring

The number of mortalities and observations in each replicate vessel were recorded at 0, 24, 48, 72, 96, 120, 144 and 168 hours of exposure and observed mortalities were removed from the test solutions. Biological observations and observations from the physical characteristics of each replicate test solution and control were also made and recorded at 0, 24, 48, 72, 96, 120, 144 and 168 hours. Dissolved oxygen concentrations pH and temperature were measured at test initiation and at 24-hour intervals thereafter, in one replicate vessel (a) for each test concentration in which there were surviving organisms.

Total hardness concentrations were measured by the EDTA titrimetric method and total alkalinity concentrations were determined by potentiometric titration to an endpoint of pH 4.5 (APHA, 1989). Total residual chorine was measured by Hach test. Concentrations of ammonia were determined using a Buchi model 212 distillation unit and titrated automatically with a Brinkman titroprocessor. Specific conductivity was measured with a Cole Palmer Model 71250 salinity-conductivity-temperature meter and probe; pH was measured with a Fisher Scientific Accumet 910 pH meter and combination electrode; dissolved oxygen concentration was measured with a YSI Model 59 dissolved oxygen meter. Daily temperature measurements were performed with a Princo mercury thermometer and a Fisher minimum-maximum thermometer. Light intensity was measured with a General Electric type 217 light meter.

2.9 Reference Toxicity Test

A chronic reference toxicity test exposing *Ceriodaphnia dubia* to sodium chloride (NaCl) was conducted from September 13, 2004 to September 20, 2004. The reference test was conducted to establish the health of the test organisms. The reference toxicity test included five NaCl concentrations and a dilution water control (moderately hard reconstituted water). The nominal NaCl concentrations for the test with *Ceriodaphnia dubia* was 500, 1000, 2000, 3000 and 4000 mg of NaCl/L. Test methods were the same as those described above for the effluent test.

3.0 Statistics

All data generated during the test was tabulated, summarized and analyzed by SGS. The data generated at the end of 48 hours were analyzed and when appropriate a median lethal concentration (LC_{50}) was calculated. This value was derived using a computerized statistical method (TOXSTAT 3.5), which was also used to calculate confidence levels were possible for each test organism.

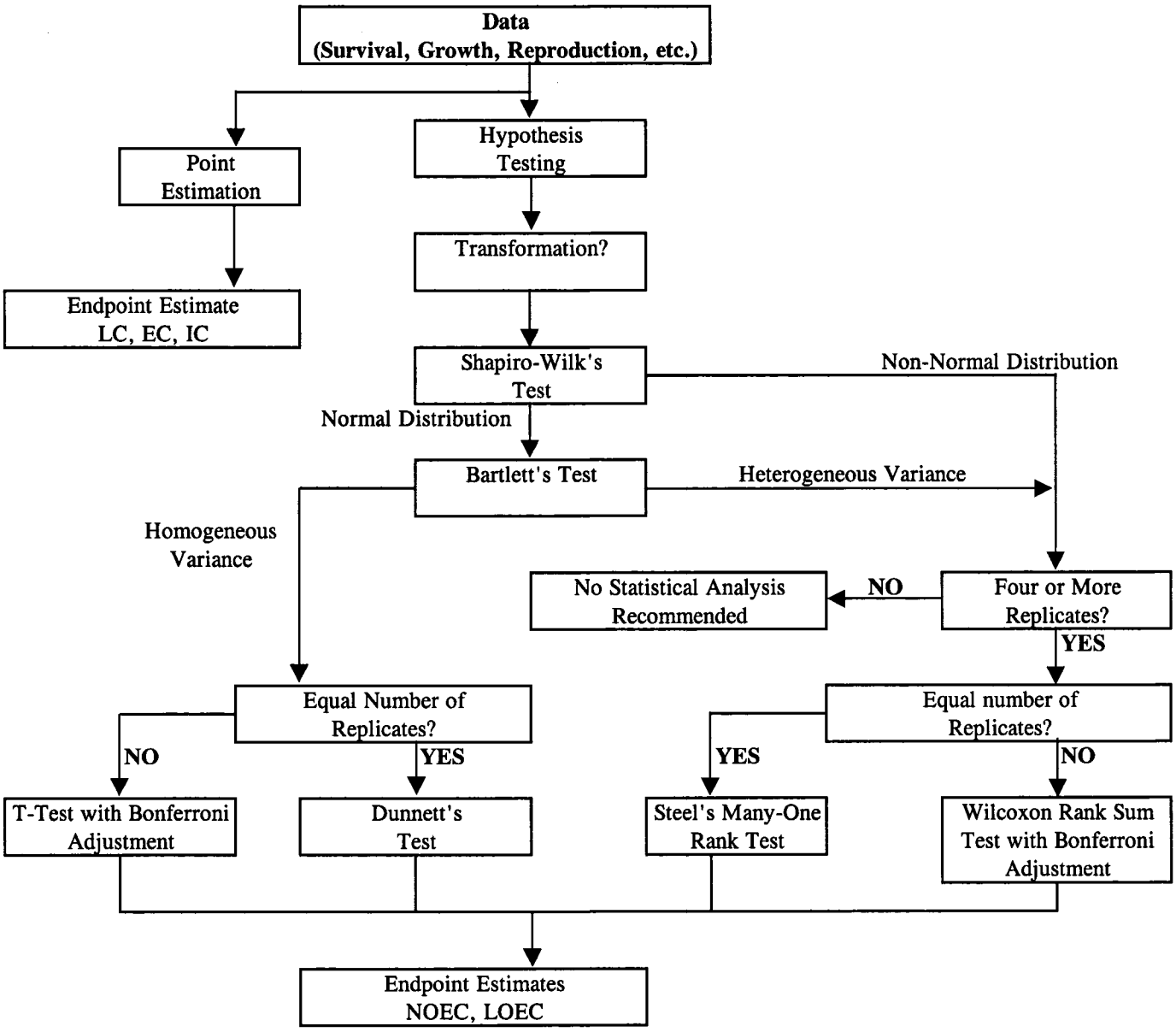
If partial mortalities were observed in at least two concentrations, the probit analysis, which yields LC_{50} values and 95 percent confidence levels, was used. When fewer than two partial mortalities were observed, the moving average method, binomial method, or non-linear interpolation, was used to generate LC_{50}s. The final report specifies the statistical methods used.

The Shapiro-Wilk's test and Bartlett's test are performed on all other chronic data to test for normality of data distribution and homogeneity of variance between treatments.

Concentrations above the NOECL for survival were excluded from the hypothesis tests for reproduction and growth. If assumptions of parametric analysis (Shapiro-Wilk's test and Bartlett's test) are met, the reproduction data will be analyzed using Dunnett's procedure or the T-test with Bonferroni Adjustment. If assumptions are not met, Steel's Many-One Rank test or Wilcoxon Rank Sum test with Bonferroni Adjustment (non-parametric analyses) are used to analyze data. Fisher's Exact is used to analyze Ceriodaphnia survival data. The final report specifies the statistical methods used.

Generally, to choose the best estimate values for a particular data set, the U.S. EPA flow chart on page 21 was followed.

Flowchart for Statistical Analysis of Data



4.0 Results

4.1 Effluent Toxicity Test

The methods and detection limits of chemical analyses performed on the composite effluent sample and dilution water are summarized in Table 1. Results of the characterization and analysis of the effluent and the dilution water are presented in Table 2. Water quality parameters measured during the toxicity test are presented in Table 3. Daily and continuous monitoring of the test solutions established the temperature ranged from 24°C to 26°C throughout the exposure period. The effluent concentration was tested (expressed as %) and the corresponding percent mortalities recorded during the 48-hour toxicity test are presented in Table 4.

The percent survival and number of offspring produced during the 7-day exposure to *C. dubia* are presented in Table 4. The 48-hour LC_{50} value was determined to be >100% effluent, since no concentrations caused ≥50% mortality during the first 48 hours of the study. At test termination, 100% survival was observed among *C. dubia* exposed to all effluent concentrations and the controls. Based on statistical analysis of the survival data, the NOCEL was determined to be 100% effluent.

By day seven, ≥60% of the reference control organisms had produced at least three broods with a minimum of 15 young per female.

	Mean Number of Offspring per Effluent Concentration								
	Effluent Concentration (%)						Dilution water control	Reference Control	Secondary Reference Control
	6.25	12.5	25	50	75	100			
Mean →	23.3	23.5	24.5	22.7	23.5	25.9	23.1	23.9	25.3

(Secondary reference control = sodium thiosulfate)

Statistical analyses of *C. dubia* reproduction using Dunnett's did not established a difference between the 100% effluent concentration and the control group. The NOCEL, based on reproduction, was therefore determined to be 100% effluent. The Lowest-Observed-Chronic-Effect-Level (LOCEL), based on reproduction, was determined to be >100% effluent. The Maximum-Acceptable-Wastewater-Concentration (MAWC) was calculated to be 100% effluent.

4.2 Reference Toxicity Test

SGS uses sodium chloride (NaCl) as a reference toxicant. The reference test was conducted from September 8, 2004 to September 10, 2004, and the resulting 48-hour LC_{50} was estimated by Spearman-Karber Trim to be 1238 mg of NaCl/L (95% confidence intervals of 1037 to 1479 mg NaCl/L).

5.0 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. 17th Edition*.

U.S. Environmental Protection Agency. 1984. *Development of water Quality-Based Permit Limitations for Toxic Pollutants*. Federal Register 49(48):90160-90190.

U.S. Environmental Protection Agency. 1985. *Technical Support Document for Water Quality-Based Toxics Control*. Office of Water, Washington, DC.

U.S. Environmental Protection Agency. 1991. Technical Support Document for Water Quality-Based Toxics Control. Office of Water, Washington, DC.

Weber, Cornelius I., et al., *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition. EPA-600/4-91/002. U.S.EPA, Cincinnati, Ohio.

Table 1. Methods and detection limits of chemical analyses of the General Electric Pittsfield Plant effluent and the dilution water (Housatonic River).

Parameters	Method	Detection Limits
Ammonia Nitrogen as N	EPA 350.2	1.0 mg/L
Chloride	EPA 325.2	1.0 mg/L
Total Organic Carbon	EPA 415.1	1.0 mg/L
Total Solids	EPA 160.3	10.0 mg/L
Phosphorus, Total as P	EPA 365.2	0.02 mg/L
Total Residual Chlorine	Standard Methods 4500-Cl G	0.01 mg/L
Total Suspended Solids	EPA 160.2	5.0 mg/L

Table 2a. Sample #1 – collected from 09/12/04 to 09/13/04
Dilution water collected on 09/13/04
Results of the characterization and analyses of the General Electric Pittsfield Plant effluent and the dilution water (Housatonic River).

Parameter	Effluent (A5945C)	Housatonic River (A5944R)
Temperature	24.8°C	24.8°C
pH	7.65	6.58
Alkalinity (as $CaCO_3$)	235	74
Hardness (as $CaCO_3$)	260	100
Dissolved Oxygen*	8.48	8.61
Specific Conductivity	938	219
Salinity	N/A	N/A
Total Residual Chlorine	ND	ND
Ammonia as N (0-Hour)	ND	ND
Total Phosphorus as P	ND	ND
Chloride	130 mg/L	12 mg/L
Total Suspended Solids	ND	5.0 mg/L
Total Solids	620 mg/L	100 mg/L
Total Organic Carbon	4.8 mg/L	7.1 mg/L
Description	clear	slight yellow color

*Dissolved oxygen concentrations recorded after samples were aerated and warmed to approximately 20°C.
N/A = not applicable ND = non detectable

Table 2b. Sample #2 – collected from 09/14/04 to 09/15/04
Dilution water collected on 09/15/04
Results of the characterization and analyses of the General Electric Pittsfield Plant effluent and the dilution water (Housatonic River).

Parameter	Effluent (A5947C)	Housatonic River (A5946R)
Temperature	25.7°C	25.7°C
pH	7.78	7.31
Alkalinity (as $CaCO_3$)	205	74
Hardness (as $CaCO_3$)	270	210
Dissolved Oxygen	8.64	8.58
Specific Conductivity	882	219
Salinity	N/A	N/A
Total Residual Chlorine	ND	ND
Ammonia as N (0-Hour)	ND	ND
Total Phosphorus as P	ND	ND
Chloride	160 mg/L	14 mg/L
Total Suspended Solids	ND	ND
Total Solids	580 mg/L	110 mg/L
Total Organic Carbon	4.6 mg/L	5.9 mg/L
Description	Clear	Slight yellow color

Dissolved oxygen concentrations recorded after samples were aerated and warmed to approximately 20°C.
N/A = not applicable ND = non detectable

Table 2c. Sample #3 – collected from 09/16/04 to 09/17/04
Dilution water collected on 09/17/04
Results of the characterization and analyses of the General Electric Pittsfield Plant effluent and the dilution water (Housatonic River).

Parameter	Effluent (A5949C)	Housatonic River (A5948R)
Temperature	24.8°C	24.8°C
pH	7.31	6.67
Alkalinity (as $CaCO_3$)	304	97
Hardness (as $CaCO_3$)	400	210
Dissolved Oxygen	8.54	8.67
Specific Conductivity	1091	226
Salinity	N/A	N/A
Total Residual Chlorine	ND	ND
Ammonia as N (0-Hour)	ND	ND
Total Phosphorus as P	0.036 mg/L	0.040 mg/L
Chloride	150 mg/L	15 mg/L
Total Suspended Solids	ND	5.0 mg/L
Total Solids	640 mg/L	140 mg/L
Total Organic Carbon	4.3 mg/L	5.3 mg/L
Description	Clear	Slight yellow color

Dissolved oxygen concentrations recorded after samples were aerated and warmed to approximately 20°C. N/A = not applicable ND = non detectable

Table 3. The water quality measurements (ranges) recorded during the 7-day short-term chronic toxicity test exposing *Ceriodaphnia dubia* to General Electric Pittsfield Plant effluent.

Sample ↓	pH	Dissolved Oxygen mg/L	Temperature (°C)	Conductivity µmhos/cm
Dilution Water Control	6.58-7.31	8.58-8.77	24.8-25.8	208-226
Reference Control	7.02-7.11	8.80-8.92	24.8-25.8	317-331
$Na_2S_2O_3$ Control	7.09-7.17	8.84-8.99	24.8-25.8	320-338
6.25% effluent	6.70-7.39	8.58-8.73	24.8-25.8	231-358
12.5% effluent	6.89-7.44	8.54-8.69	24.8-25.8	322-416
25% effluent	7.08-7.57	8.57-8.67	24.8-25.8	458-657
50% effluent	7.19-7.66	8.50-8.68	24.8-25.8	577-799
75% effluent	7.24-7.74	8.56-8.65	24.8-25.8	794-947
100% effluent	7.31-7.78	8.48-8.64	24.8-25.8	870-1091

Dilution Water Control = receiving water collected from the Housatonic River
Reference Control = moderately hard synthetic water
$Na_2S_2O_3$ Control = moderately hard synthetic water and sodium thiosulfate (0.1 N)

Table 4. Summary of the mean survival and reproduction recorded during the 7-day short-term chronic toxicity test exposing *Ceriodaphnia dubia* to General Electric Pittsfield Plant effluent.

Effluent Concentration (%)	Days 1	2	3	4	5	6	7
Reference Control	100%	100%	100%	100%	100%	100%	100%
$Na_2S_2O_3$ Control	100%	100%	100%	100%	100%	100%	100%
Control	100%	100%	100%	100%	100%	100%	100%
6.25	100%	100%	100%	100%	100%	100%	100%
12.5	100%	100%	100%	100%	100%	100%	100%
25	100%	100%	100%	100%	100%	100%	100%
50	100%	100%	100%	100%	100%	100%	100%
75	100%	100%	100%	100%	100%	100%	100%
100	100%	100%	100%	100%	100%	100%	100%

	Number of Offspring Produced							Mean
Reference Control	0	0	0	38	10	83	108	23.9
$Na_2S_2O_3$ Control	0	0	0	40	17	78	118	25.3
Control	0	0	0	38	5	90	98	23.1
6.25	0	0	0	40	14	71	108	23.3
12.5	0	0	0	34	18	78	105	23.5
25	0	0	0	32	18	73	122	24.5
50	0	0	0	35	1	93	98	22.7
75	0	0	0	34	7	85	109	23.5
100	0	0	0	37	13	102	107	25.9

Actual number of mortalities (if any) is presented in parentheses.

Reference Control = moderately hard synthetic water
$Na_2S_2O_3$ Control = moderately hard synthetic water and sodium thiosulfate (0.1 N)
Dilution Water Control = receiving water collected from the Housatonic River

030

Appendix I

References

CT&E Environmental Services Inc.

031

Standard Operating Procedure

Document Title:	**Acute Aquatic Toxicity Testing**
Method Reference:	**CT&E/USEPA**
Document File Name:	**7002-04.DOC**
Revision Number:	**4.0**
Effective Date:	**October 20, 1998**

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Document Control Number: 7002.

Approved by: Ken Holliday (Supervisor) Date: 10/21/98

Approved by: Melissa M. Work (QA/QC Officer) Date: 10/20/98

1.0 SUMMARY

A 24-, 48-, or 96-hour test to determine the toxicity to freshwater aquatic animals of effluents.

2.0 REFERENCES

2.1 Weber, Cornelius I., *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.*, Fourth Edition. EPA-600/4-90/027. U.S.EPA, Cincinnati, Ohio.

2.2 *Reporting and Testing Guidance for Biomonitoring Required by the Ohio Environmental Protection Agency*, October, 1991.

2.3 *Toxics Management Program's Guidance for Conduction and Reporting the Results of Toxicity Tests in Fulfillment of VPDES Permit Requirements*, Revised July 1992.

3.0 SCREENING

3.1 Test Duration

24 Hours, 48 Hours or 96 Hours.

3.2 Test Preparation

3.2.1 Measure the pH, D.O. and total residual chlorine of the 100% effluent and the control water. If the effluent pH falls outside of the range of 6.0-9.0, two parallel tests are set up in which one effluent is adjusted and the other is not. The pH is adjusted to 7.0 using additions of 1N NaOH and HCl, (other pH adjustment endpoints may be utilized depending on local requirements). The measured amount of acid or base is recorded on the bench sheet. If the D.O. is below 40% saturation or above 100% saturation, the effluent is aerated prior to test initiation. If the total chlorine is above 0.1 mg/L, two parallel tests are set up in which one

effluent is dechlorinated and the other is not (Dechlorination may be prohibited; permit is checked to determine if dechlorination is allowed). The effluent is dechlorinated by the addition of anhydrous sodium thiosulfate. The measured amount is recorded on the bench sheet. Care is taken to add the least amount of sodium thiosulfate needed to decrease the TRC level below 0.10 mg/L. Typically, adjustment of effluent is unnecessary.

3.2.2 Twenty organisms per concentration are used in acute screening tests.

3.2.3 This is a static, non-renewal test, using *Ceriodaphnia dubia, Daphnia pulex, Daphnia magna*, or *Pimephales promelas* (Fathead minnow).

3.2.4 Water quality (D.O., pH, conductivity, hardness, alkalinity and TRC), is measured at the time of test initiation. At test termination, temperature, D.O. conductivity and pH are measured. The final mortality and percent effected counts are recorded. Temperature is maintained at 25°± 1°C for *Daphnia*, and 20° ± 1°C for fathead minnows. Facilities exist to perform both fish and *Daphnia* tests at either temperature.

3.3 Test Results

No statistical analysis is performed on screening data.

4.0 DEFINITIVE TEST

4.1 *Pimephales promelas* (Fathead Minnows)

4.1.1 Test Duration

48-Hours or 96-Hours

4.1.2 Static non-renewal

4.1.3 Test Preparation

4.1.3.1 This test is comprised of a control and an effluent dilution series usually consisting of 100%, 50%, 25%, 12.5% and 6.25% (unless otherwise indicated).

4.1.3.2 The sample is brought up to test temperature in a room temperature water bath. Chemical parameters are checked and

recorded. If the pH, D.O. or chlorine fall outside the acceptable testing range, the effluent may be adjusted (see screening; Test Preparation).

4.1.3.3 The dilutions are prepared in calibrated graduated cylinders using moderately hard synthetic water as dilution water. Other dilution water may be used if specified.

4.1.3.4 Approximately 400 ml of test solution is placed in each of two 800 ml disposable plastic beakers.

4.1.4 Loading

Ten (10) organisms are placed in each beaker. CT&E uses fish which are less than 14 days old and are hatched within the same 24 hour period. A loading limit of 0.8 g/l is observed. Fish are loaded by first transferring them to a shallow dish where they are easily transferred into the test solutions with wide-bore pipettes.

4.1.5 Test Temperature

20° C (± 1)

4.1.6 Daily Procedures

4.1.6.1 At the end of each 24 hours, the pH, D.O. and temperatures are checked and recorded. At this time mortalities are also recorded.

4.1.6.2 If a 96 hour static acute test is required, the test solution may be renewed at 48 hours. Renewal is accomplished by siphoning old test solution and debris and replacing with fresh solution of the appropriate concentration.

4.1.6.3 At the end of 48 hours or 96 hours the final mortalities and percent affected are recorded along with the final water qualities (D.O., pH, conductivity).

4.1.7 Feeding

Organisms are allowed to feed only prior to test initiation, and prior to renewal at 48 hours in a 96 hour test.

CT&E Environmental Services Inc.
Standard Operating Procedure

4.2 *Ceriodaphnia dubia, Daphnia magna,* and *Daphnia pulex*

4.2.1 Test Duration

48-Hours

4.2.2 Static Non-renewal

4.2.3 Test Preparation

4.2.3.1 This test is comprised of a control and a dilution series consisting of 100%, 50%, 25%, 12.5% and 6.25% of the effluent (unless otherwise indicated).

4.2.3.2 The sample is brought up to test temperature in a room temperature waterbath. Chemical parameters are checked and recorded. If the pH, D.O. or chlorine fall outside the acceptable testing range, the effluent may be adjusted (see screening; Test Preparation).

4.2.3.3 The dilutions are prepared in beakers using moderately hard synthetic water (see Section II; Dilution Waters and Culture Media), unless other dilution water is specified. At least 25 ml. of each dilution are placed in five 30 ml. testing vessels.

4.2.4 Loading

4.2.4.1 Four organisms are placed in each vessel. The *Daphnids* are loaded with a disposable polyethylene transfer pipette and are gently released below the surface of the water to avoid the risk of injury.

4.2.5 Test Temperature

The test is conducted in a constant temperature incubator at 25° ±1° C(To satisfy local requirements tests may be conducted at other temperatures).

4.2.6 Daily Procedure

4.2.6.1 At 24 and 48 hours the mortalities and number adversely effected are noted.

4.2.6.2 Due to the fragile structure of *Daphnia* organisms, dissolved oxygen, hardness alkalinity, specific conductance and pH readings are not taken after the organisms have been added to the sample. These analyses could cause injury to the *Daphnia* organisms.

4.2.7 Photoperiod

16 hours light, 8 hours dark.

4.2.8 Feeding

Organisms are allowed to feed prior to test initiation; they are not fed for the duration of the test.

5.0 TEST DATA

5.1 *Pimephales promelas*, *Ceriodaphnia dubia*, *Daphnia magna* and *Daphnia pulex*

5.1.1 Mortality and adverse effects are used as the endpoints for a definitive test.

5.1.2 Chemical parameters checked before test initiation, at 24 hours, 48 hours, 72 hours and 96 hours.

5.1.3 Mortalities recorded at 24 hours, 48 hours, 72 hours and 96 hours.

5.1.4 Any atypical behavior or complications are recorded.

6.0 DATA ANALYSIS

6.1 Introduction

Data from acute effluent toxicity tests are used to estimate the LC50 and EC50. The LC50 is a point estimate of the effluent concentration that is expected to cause lethality to 50% of the test organisms. The EC50 is a point estimate of

the effluent concentration that is expected to cause and adverse effects to 50% of the test organisms.

6.2 Methods for Estimating the LC50 & EC50

6.2.1 The flow chart (Figure 6) on page 76 of the manual, *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms* (Fourth Edition), EPA-600/4-90-27F, Appendix A, Sections 4.4.1 through 4.4.3. is observed for determination of the LC50 for multi-concentration acute toxicity tests.

6.2.2 Several statistics packages, including Toxstat® 3.4, are available for data analysis.

7.0 REPORT PREPARATION

7.1 CT&E Acute Toxicity Test Reports Typically Contain the Following Information:

7.1.1 Test background information - Includes client, NPDES or state permit number, sampling point reference number, date collected and received, collector's name, type and date of test, dilution water used, test results, and chain of custody forms.

7.1.2 Results - LC50 & EC50 values and analysis method used; Any comments concerning the test results.

7.1.3 Initial Characterization of the Effluent Sample - Raw Data Sheets: Includes dissolved oxygen (DO), pH, specific conductivity, hardness, alkalinity and a description of the sample source.

7.1.4 Reference Toxicity Data

CT&E Environmental Services Inc.

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Standard Operating Procedure

Document Title:	**Culture Waters for Aquatic Toxicity Testing**
Method Reference:	**CT&E/USEPA**
Document File Name:	**7005-04.DOC**
Revision Number:	**4.0**
Effective Date:	**October 20, 1998**

UNCONTROLLED COPY

Document Control Number: 7005

Approved by: Ken Halliday Supervisor — Date: 10/21/98

Approved by: Lydia M. Wark QA/QC Officer — Date: 10/20/98

1.0 Summary

This document describes the preparation of various waters used for the culture of aquatic organisms.

2.0 Moderately-Hard Synthetic Water

2.1 Place 19 liter of de-ionized, or equivalent, water in a properly cleaned and labeled plastic carboy.

2.2 Add 1.20 g of $MgSO_4$, 1.92 g $NaHCO_3$ and 0.08g KCl to the carboy.

2.3 Aerate overnight.

2.4 Add 1.20 g of $CaSO_4 2H_2O$ to 1 liter of de-ionized or equivalent water in a separate flask. Stir on magnetic stirrer until calcium sulfate is dissolved and add to the 19 liter above and mix well.

2.5 Aerate vigorously for 24 hours to stabilize the medium.

3.0 Hard Synthetic Water

3.1 Place 9 liter of de-ionized, or equivalent, water in a properly cleaned and labeled plastic carboy.

3.2 Add 1.20 g of $MgSO_4$, 1.92 g $NaHCO_3$ and 0.08g KCl to the carboy.

3.3 Aerate overnight.

3.4 Add 1.20 g of $CaSO_4 2H_2O$ to 1 liter of de-ionized, or equivalent water in a separate flask. Stir on magnetic stirrer until calcium sulfate is dissolved and add to the 9 liter above and mix well.

3.5 Aerate vigorously for 24 hours to stabilize the medium.

4.0 Synthetic Water Solutions

4.1 KCL Stock Solution

4.1.1 Place 8 g of crystalline, reagent grade KCL in a 1 liter volumetric flask.
4.1.2 Bring the volume to one liter with distilled water.
4.1.3 Aerate vigorously for several hours before using.
4.1.4 Store in a 1 liter polyethylene bottle.

4.2 $MgSO_4$ Stock Solution

4.2.1 Place 120 g of regent water, anhydrous $MgSO_4$ powder in a 1 liter volumetric flask.
4.2.2 Bring the volume to one liter with distilled water.
4.2.3 Aerate vigorously for several hours before using.
4.2.4 Store in a 1 liter polyethylene bottle.

4.3 $NaHCO_3$ Stock Solution

4.3.1 Place 96 g of reagent grade $NaHCO_3$ powder in a 1 liter volumetric flask.
4.3.2 Bring the volume to 1 liter with distilled water
4.3.3 Aerate vigorously for several hours before using.
4.3.4 Store in a 1 liter polyethylene bottle.

5.0 Activated Carbon Treated Tap Water Diluent

5.1 Fill a 5-gallon carboy with water from the treatment system using the attached hose. Water should be allowed to flow slowly through the hose into the sink for 2-3 minutes before filling the carboy. Flow rate to fill the carboy should be slow.

5.2 One or two long airstones are placed in the filled carboy. Water is aerated vigorously for 48-hours.

5.3 Total residual chlorine must be checked on water from newly filled carboys before using.

5.4 Alkalinity, hardness and pH are checked on samples from dechlorinated water carboys according to the Laboratory Procedure Checklist.

5.5 Log information on the Dechlorinated Tap Water and Cechlorimeter log sheet including the carboy number and date filled.

6.0 Synthetic Sea Water Preparation

6.1 Fill a clean carboy with dechlorinated water to approximately the 25-gallon mark.

6.2 The newly filled carboy should be checked for the presence of chlorine and the results recorded on the saltwater carboy log sheet. If chlorine is present, two 4-inch airstones (adjusted to a moderately heavy air flow) should be introduced and the water aerated until a level of <0.01 mg/L is reached.

6.3 A sufficient amount of synthetic salt is added to the carboy to obtain the required salinity (usually 20 ppt).

6.4 All information should be logged on the Saltwater Carboy log sheet.

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Standard Operating Procedure

Document Title:	**Culture of *Daphnia***
Method Reference:	**CT&E/USEPA**
Document File Name:	**7006-05.DOC**
Revision Number:	**5.0**
Effective Date:	**March 12, 2001**

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Page 1 of 3

Document Control Number: 7006

Approved by: Ken Halliday (Supervisor) Date: 3/23/2001

Approved by: Cynthia M Work (QA/QC Officer) Date: 3/23/2001

1.0 Summary

This document describes the procedure for the culture of *Ceriodaphnia dubia, Daphnia pulex, Daphnia magna* that are used in aquatic toxicity testing.

2.0 Mass Stock Cultures of *Ceriodaphnia dubia, Daphnia pulex,* and *Daphnia magna*

2.1 Stock cultures are maintained in 1000 ml beakers/jars with 900 mls of culture media at 20 ± 1° C. These cultures are maintained only as a back-up source of organisms.

2.2 Culture media for *Ceriodaphnia dubia* and *Daphnia pulex* is moderately-hard synthetic water. Culture media for *Daphnia magna* is hard synthetic water (see document control number 7005.04, "Culture Waters for Aquatic Toxicity Testing").

2.3 Many cultures are maintained simultaneously with an informal rotation cycle. New cultures are started with young produced by individual cultures. These cultures are maintained for approximately 3 weeks after which they are discarded.

2.4 Cultures are fed YCT (yeast, cerophyll, digested trout chow/flake food) and algae (*Selanastrum capricornium*) on Monday, Wednesday and Friday. Feeding, as well as culture rotation, temperature and all other relevant data is recorded by species in a log book.

2.5 Stock cultures are also fed algae and YCT. These feedings are recorded in the log book.

3.0 Individual Cultures of *Ceriodaphnia dubia, Daphnia pulex, Daphnia magna*

3.1 Cultures of *Daphnia magna* and *Daphnia pulex* are maintained in 100 ml plastic beakers. Twenty-four (24) beakers with one organism each are kept at all times to ensure continuous availability of neonates for testing. Cultures of individual *Ceriodaphnia dubia* are maintained in 30 ml sterile plastic medicine cups. One to two cultures of approximately 100 organisms each are kept at all times.

3.2 Cultures are renewed three times per week. Organisms are fed daily.

4.0 Obtaining Neonates for Testing

4.1 Cultures of *Ceriodaphnia* are started by placing one neonate into a 30 ml disposable plastic cup containing approximately 20 ml of Moderately Hard Synthetic Water. New *Ceriodaphnia* cultures are started every ten to fourteen days. *D. magna* and *D. pulex* are replaced whenever mortality occurs.

4.2 The individual cultures are transferred to fresh media three times per week. Synthetic water, algae and YCT are mixed prior to pouring into culture vessel to ensure uniformity of media. The old media and neonates are kept for stock cultures for several weeks and then discarded.

4.3 To assure neonates for chronic tests are of a very similar age, transfer of individual brood stock to fresh media should be made the morning of the test. The cultures are then checked approximately every two hours to find an adequate number of neonates all released with an 8 hour period. For acute tests, individuals are either transferred less than 24 hours before a test or the young are separated from adults less than 24 hours before a test.

4.4 Young used in chronic testing are obtained from adults who have produced at least three broods, with no less than 8 neonates in their third or subsequent brood. Neonates are then distributed in a "blocking" procedure, i.e., neonates from the same organism are placed in one replication of each concentration.

5.0 *DAPHNIA* Food

5.1 Digested Flake Food

5.1.1 Add 5g flake food to 1 L deionized water. Mix well in a blender and place in a 2 L separatory funnel. To digest, aerate this mixture at room temperature for one week.

5.1.2 At end of the digestion period, remove aeration and allow to settle.

5.1.3 Drain sediment. Place supernatant in a beaker and allow to settle in refrigerator overnight.

5.1.4 Filter through fine mesh.

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Standard Operating Procedure

Document Title:	**Culture of *Daphnia***
Method Reference:	**CT&E/USEPA**
Document File Name:	**7006-05.DOC**
Revision Number:	**5.0**
Effective Date:	**March 12, 2001**

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Document Control Number: 7006

5.2 Cerophyll®

5.2.1 Add 5g Cerophyll® to 1 L deionized water. Mix in a blender on high speed for 5 minutes.

5.2.2 Remove from blender and allow to settle in refrigerator overnight.

5.2.3 Retain supernatant for combined YCT food.

5.3 Yeast

5.3.1 Add 5g dry yeast to 1 L deionized water. Mix in a blender at low speed.

5.3.2 Do not allow mixture to settle.

5.4 Combined YCT Food

5.4.1 Mix equal parts of each of the above preparations in large clean beakers.

5.4.2 Pour well mixed YCT into small screw cap bottles. Freeze until needed.

CT&E Environmental Services Inc.
Standard Operating Procedure

Document Title:	**Reference Toxicant Testing**
Method Reference:	**CT&E/USEPA**
Document File Name:	**7008-05.DOC**
Revision Number:	**5.0**
Effective Date:	**March 12, 2001**

UNCONTROLLED COPY

Document Control Number: 7008

Approved by: Ken Holliday — Supervisor — Date: 3/23/2001

Approved by: [signature] — QA/QC Officer — Date: 3/23/2001

1.0 Summary

To insure that healthy organisms are used in testing, CT&E performs monthly QA/QC tests on all in-house cultured organisms. CT&E uses Sodium Chloride as a reference toxicant.

2.0 *Pimephales promelas*

2.1 48 hour static acute toxicity tests are run at 20°C (±1°C) using fish 1 to 14 days old.

2.2 This test consists of a control and a dilution series of 10g/L, 9g/L, 8g/L, 7g/L, and 6g/L, of sodium chloride. Other dilution series may be used.

2.3 The dilutions are prepared in 800 ml disposable plastic beakers using moderately hard synthetic water. 500 mls of test solution is placed in each of two replications. Water quality values are measured and recorded at this time.

2.4 Ten organisms are placed in each replicate. Fish are loaded by first siphoning them into a shallow pan from which they are transferred to the beakers with a large bore pipette.

2.5 The test is terminated at 48 hours. At this time, mortalities are recorded along with final water quality data.

3.0 Daphnids *(Ceriodaphnia dubia, Daphnia magna, Daphnia pulex)*

3.1 48 hour static acute tests are performed at 25°C (±1°C) using organisms less than 24 hours old.

3.2 These tests consist of a control and a five dilution series. The concentration of the reference toxicant is varied depending on species.

3.2.1 *Ceriodaphnia dubia, Daphnia pulex:* 10, 5, 2.5, 1.25, 0.625 grams/L

3.2.2 *Daphnia magna:* 10, 5, 2.5, 1.25, 0.625 grams/L

3.3 Dilutions are prepared using moderately hard synthetic water. 20 mls of each dilution are placed in each of 5 plastic medicine cups.

3.4 Four organisms are placed in each test vessel. The *Daphnids* are loaded with a disposable plastic pipette. Organisms are gently released below the surface of the water to minimize risk of injury.

3.5 The test is terminated at 48 hours. At this time, mortalities are recorded along with final water quality data.

4.0 Data Analysis

4.1 Toxicity tests are conducted on a monthly basis.

4.2 The LC_{50} is calculated according to EPA protocols.

4.3 Results from these tests are incorporated into Q-sum charts. These records are kept in monthly files.

CT&E Environmental Services Inc.

045

Standard Operating Procedure

Document Title:	**Sample Handling for Aquatic Toxicity Testing**
Method Reference:	**CT&E/USEPA**
Document File Name:	**7009-04.DOC**
Revision Number:	**4.0**
Effective Date:	**October 20, 1998**

UNCONTROLLED COPY

Document Control Number: 7009

Approved by: Ken Holliday (Supervisor) Date: 10/21/98

Approved by: Lydia M. Dorn (QA/QC Officer) Date: 10/20/98

1.0 Summary

This document describes the manner in which sample waters (effluents, wastewaters, etc.) are handled from point of collection to testing.

2.0 Sample Handling

2.1 Sampling Personnel

CT&E's sampling personnel are trained and experienced in the techniques for collecting samples according to NPDES permit requirements. This includes the use of automatic sampling equipment and the measurement of various field parameters.

2.2 Sample Containers

Sample containers used by CT&E are disposable plastic cubitainers®.

2.3 Sample Collection Points

For NPDES permit required tests, the sample will be collected at the point specified in the discharge permit unless otherwise directed by the regulatory agency.

2.4 Sample Shipment

Samples are placed on ice (sufficient to maintain 0-4°C) in a cooler and are transported as quickly as possible to the laboratory.

2.5 Laboratory Handling of Samples

Upon delivery to the laboratory, the effluent samples are inspected, given a sample control number and stored at 4° C until used for testing.

2.6 Sample Holding Time

Samples will be tested within 24 hours upon receipt in the laboratory. The maximum lapsed time for collection of a grab or composite sample and the initiation of test, or for test solution renewal, will not exceed 36-hours for Chronic and Acute Testing.

3.0 LABORATORY ENVIRONMENT

3.1 Laboratory Arrangement

The aquatic toxicity testing laboratory is divided into two separate areas: (1) the culturing laboratory and (2) the testing laboratory. See attached diagram for details of laboratory layout.

3.2 Temperature

The aquatic toxicity testing laboratory air temperature is maintained at 20 ± 1° C throughout the year by a central heating and cooling system which is regulated by thermostats. Temperatures are continuously recorded by thermographs.

3.3 Water

Several waters are available for use in the laboratory. CT&E has access to municipally supplied water, well water and reagent water from which synthetic water is prepared. Waters used for culturing and testing are analyzed semiannually for priority pollutants and other contaminants. A detailed report is available.

3.4 Lighting

Ambient laboratory lighting is regulated with a 16 hour day/8 hour night photoperiod controlled by an electronic timing system in the culturing and testing areas.

4.0 LABORATORY EQUIPMENT

4.1 General

Instruments used for the measurement of physical and chemical parameters are calibrated prior to use in testing. Any instrument that exceeds the calibration limits is taken out of service and corrective action is taken.

4.2 Balances

Analytical balances are calibrated against standard weights prior to use. All calibration results and adjustments are recorded in bound books.

4.3 Water Quality Meters

Meters are calibrated prior to use using known standards and the manufacturer's instructions. Records of calibration are kept in logbooks. Detailed procedures for the operation of these meters are found in SOP's for each specific instrument.

4.4 Reagents

All reagents are stored in a separate area. Expired reagents and chemicals are discarded.

4.5 Test Containers

All test containers are either clean reusable glassware or new, disposable plastic beakers.

5.0 EQUIPMENT CLEANING PROCEDURES

5.1 Equipment used in culturing or testing is washed in the following manner:

5.1.1 Soak 15 minutes and scrub with detergent in tap water.
5.1.2 Rinse three times with tap water.
5.1.3 Rinse once with 20% nitric acid.
5.1.4 Rinse twice with deionized water.
5.1.5 Rinse once with full-strength, pesticide-grade acetone.
5.1.6 Rinse well with deionized water.
5.1.7 Invert and air dry.
5.1.8 All equipment and test chambers are rinsed with deionized water immediately prior to use for each test.

Appendix II
Chains of Custody

Chain of Custody Record
General Electric Co.
100 Woodlawn Ave. Pittsfield, MA 01201

TA4-IO-P284-0012 **Chain of Custody #:** OBG091304

Sept 2004 Chronic Toxicity - Comp. # 1

Project # NPDES PERMIT	Analytical Lab: CT&E Environmental Services Inc.			Sampled By: (Print) Mark Wasnewsky		
Sample #	Date	Time	Containers	Parameters to be Analyzed	Preservative	Remarks
1 A5945C	9/12 to 9/13/04	1100 AM	1 Gallon plastic	Definitive Test(NOCEL), Static reproductive chronic toxicity, 7-day w/Ceriodaphnia	Chilled	(See below)
1 A5945C	9/12 to 9/13/04	1100 AM	1000 ml. plastic	Chloride, TSS,Total Solids, Alkalinity Specific Conductance, CL2	Chilled	
1 A5945C	9/12 to 9/13/04	1100 AM	500 ml. plastic	Total Phosphorus, TOC, NH3	H2SO4	
2 A5944R	9/13/04	830 AM	1 Gallon plastic	Housatonic River water dilution water for chronic test	Chilled	
2 A5944R	9/13/04	830 AM	1000 ml. plastic	Chloride, TSS,Total Solids, Alkalinity Specific Conductance, CL2	Chilled	
2 A5944R	9/13/04	830 AM	500 ml. plastic	Total Phosphorus, TOC, NH3	H2SO4	

Relinquished By:	Date/Time	Received By:	Date/Time
Mark Wasnewsky	9-13-04		9-13-04 1400
Relinquished By:	Date/Time	Received By:	Date/Time TNW 9-14-04 1000 4.2°

Additional Comments: The effluent sample being analyzed for toxicity is a flow-proportioned composite. Each outfall sample is a 24-hour composite. The sample collection times for each outfall are as follows:

001- 740 AM 004- / 005-64T- 700 AM 005-64G- 700 AM 007- / 09A- / 09B- 800 AM

The time of compositing the final flow-proportioned sample was 1100 **A.M.**

049

TA4-I0-P284-3/4

Chain of Custody Record
General Electric Co.
100 Woodlawn Ave. Pittsfield, MA 01201

Chain of Custody #: OBG091504

SEPT 2004 Chronic Toxicity - Comp. # 2

Project # NPDES PERMIT	Analytical Lab: CT&E Environmental Services Inc.				Sampled By: (Print) Mark Wasnewsky		
Sample #	Date	Time	Containers		Parameters to be Analyzed	Preservative	Remarks
3 A5947C	9/14 to 9/15/04	11^00 AM	1 Gallon plastic		Definitive Test(NOCEL), Static reproductive chronic toxicity, 7-day w/Ceriodaphnia	Chilled	(See below)
3 A5947C	9/14 to 9/15/04	11^00 AM	1000 ml. plastic		Chloride, TSS,Total Solids, Alkalinity Specific Conductance, CL2	Chilled	
3 A5947C	9/14 to 9/15/04	11^00 AM	500 ml. plastic		Total Phosphorus, TOC, NH3	H2SO4	
4 A5946R	9/15/04	8^30 AM	1 Gallon plastic		Housatonic River water dilution water for chronic test	Chilled	
4 A5946R	9/15/04	8^30 AM	1000 ml. plastic		Chloride, TSS,Total Solids, Alkalinity Specific Conductance, CL2	Chilled	
4 A5946R	9/15/04	8^30 AM	500 ml. plastic		Total Phosphorus, TOC, NH3	H2SO4	
~~A~~							

Relinquished By:	Date/Time	Received By:	Date/Time
Mark Wasnewsky	9-15-04		9-15-04
Relinquished By:	Date/Time	Received By:	Date/Time
			9/16/04 0955

Additional Comments: The effluent sample being analyzed for toxicity is a flow-proportioned composite. Each outfall sample is a 24-hour composite. The sample collection times for each outfall are as follows:

001- 7^55 AM **004-** 7^50 AM **005-64T-** 7^00 AM **005-64G-** 7^00 AM **007-** / **09A-** / **09B-** 7^35 AM

4.7°C

The time of compositing the final flow-proportioned sample was 11^00 **A.M.**

050

Chain of Custody Record
General Electric Co.
100 Woodlawn Ave. Pittsfield, MA 01201

TA4-IO-P284-5/6

Chain of Custody #: OBG091704

Sept 2004 Chronic Toxicity - Comp. # 3

Project # NPDES PERMIT	Analytical Lab: CT&E Environmental Services Inc.				Sampled By: (Print) Mark Wasnewsky		
Sample #	Date	Time	Containers		Parameters to be Analyzed	Preservative	Remarks
A5949C	9/16 to 9/17/04	1100 AM	1 Gallon plastic		Definitive Test(NOCEL), Static reproductive chronic toxicity, 7-day w/Ceriodaphnia	Chilled	(See below)
A5949C	9/16 to 9/17/04	1100 AM	1000 ml. plastic		Chloride, TSS,Total Solids, Alkalinity Specific Conductance, CL2	Chilled	
A5949C	9/16 to 9/17/04	1100 AM	500 ml. plastic		Total Phosphorus, TOC, NH3	H2SO4	
A5948R	9/17/04	830 AM	1 Gallon plastic		Housatonic River water dilution water for chronic test	Chilled	
A5948R	9/17/04	830 AM	1000 ml. plastic		Chloride, TSS,Total Solids, Alkalinity Specific Conductance, CL2	Chilled	
A5948R	9/17/04	830 AM	500 ml. plastic		Total Phosphorus, TOC, NH3	H2SO4	

Relinquished By:	Date/Time	Received By:	Date/Time
Mark Wasnewsky	9-17-04		9-17-04 1400
Relinquished By:	Date/Time	Received By:	Date/Time
			9/18/04 11:30

3.8°C

Additional Comments: The effluent sample being analyzed for toxicity is a flow-proportioned composite. Each outfall sample is a 24-hour composite. The sample collection times for each outfall are as follows:

001- 745 AM 004- 740 AM 005-64T- 700 AM 005-64G- 700 AM 007- / 09A- / 09B- 800 AM

The time of compositing the final flow-proportioned sample was 1100 **A.M.**

051

052

Appendix III

Bench Data

General Electric – 7-Day Chronic Biotoxicity Bench Sheet

Client: General Electric
Project:
Lab. No.: TA4-10-P284-001/002
Date Received: 9/14/04
Sample Date: 9/12-13/04 Time: 1100
Date Analyzed: 9/14/04
Source: Effluent composite
Analyst(s): KH/JH
Source of dilution water: Housatonic River
Test Species: *Ceriodaphnia dubia* Age: < 24 hrs Temp. Range: °C
Type of Test: 7-day chronic

Total Chlorine: n/d

	Beginning	Ending
Date:	9/14/04	9/15/04
Time:	1100	1100

Concentration→	Housatonic River Control	MHSW Control	MHSW $Na_2S_2O_3$ Control	Effluent 6.25%	Effluent 12.5%	Effluent 25%	Effluent 50%	Effluent 75%	Effluent 100%
Initial									
Temperature	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8
Hardness	100	110	110						260
D.O.	8.61	8.92	8.94	8.60	8.54	8.57	8.50	8.56	8.48
pH	6.58	7.08	7.13	6.70	6.89	7.13	7.32	7.49	7.65
Alkalinity	74	68	72						235
Sp. Conduct.	219	326	338	247	322	458	604	830	938
End									
No. Surviving	10	10	10	10	10	10	10	10	10
Temperature	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3
D.O.	8.54	8.77	8.82	8.52	8.46	8.51	8.53	8.50	8.45
pH	6.61	7.11	7.19	6.77	6.92	7.18	7.46	7.50	7.62
Sp. Conduct.	223	340	348	258	340	461	612	816	922

DAY 1

Method Reference: *Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.*, Fourth Edition. EPA-600/4-91/002. U.S.EPA, Cincinnati, Ohio.

f:\public\forms\bioassay\GE bench sheet-chronic.doc

General Electric – 7-Day Chronic Biotoxicity Bench Sheet

Client: General Electric
Project:
Lab. No.: TA4-10-P284-001/002
Date Received: 9/14/04
Sample Date: 9/12-13/04 Time: 1100
Date Analyzed: 9/15/04
Source: Effluent composite
Analyst(s): KH/JH
Source of dilution water: Housatonic River
Test Species: *Ceriodaphnia dubia* Age: < 24 hrs Temp. Range: °C
Type of Test: 7-day chronic

Total Chlorine: n/d

	Beginning	Ending
Date:	9/15/04	9/16/04
Time:	1100	1100

Concentration→	Housatonic River Control	MHSW Control	MHSW $Na_2S_2O_3$ Control	Effluent 6.25%	Effluent 12.5%	Effluent 25%	Effluent 50%	Effluent 75%	Effluent 100%
Initial									
Temperature	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1
Hardness	110	110	100						240
D.O.	8.71	8.90	8.94	8.73	8.69	8.63	8.60	8.63	8.57
pH	6.62	7.10	7.14	6.84	6.97	7.23	7.34	7.57	7.72
Alkalinity	77	68	65						242
Sp. Conduct.	209	331	338	231	348	462	577	810	918
End									
No. Surviving	10	10	10	10	10	10	10	10	10
Temperature	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6
D.O.	8.64	8.70	8.81	8.64	8.61	8.57	8.55	8.53	8.54
pH	6.68	7.15	7.21	6.97	6.94	7.29	7.44	7.61	7.75
Sp. Conduct.	216	342	350	232	345	480	583	814	933

DAY 2

Method Reference: *Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.*, Fourth Edition. EPA-600/4-91/002. U.S.EPA, Cincinnati, Ohio.

f:\public\forms\bioassay\GE bench sheet-chronic.doc

General Electric – 7-Day Chronic Biotoxicity Bench Sheet

Client: General Electric
Project: _____ Lab. No.: TA4-10-P284-005/004
Date Received: 9/16/04
Sample Date: 9/14-15/04 Time: 1100 Date Analyzed: 9/16/04
Source: Effluent composite Analyst(s): KH/JH
Source of dilution water: Housatonic River
Test Species: *Ceriodaphnia dubia* Age: < 24 hrs Temp. Range: °C
Type of Test: 7-day chronic

Total Chlorine: n/d

	Beginning	Ending
Date:	9/16/04	9/17/04
Time:	1100	1100

Concentration→	Housatonic River Control	MHSW Control	MHSW $Na_2S_2O_3$ Control	Effluent 6.25%	Effluent 12.5%	Effluent 25%	Effluent 50%	Effluent 75%	Effluent 100%
Initial									
Temperature	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7
Hardness	210	110	110						270
D.O.	8.58	8.87	8.91	8.58	8.60	8.60	8.63	8.64	8.64
pH	7.31	7.10	7.15	7.39	7.44	7.57	7.66	7.74	7.78
Alkalinity	74	71	73						205
Sp. Conduct.	219	320	334	304	416	558	619	794	882
End									
No. Surviving	10	10	10	10	10	10	10	10	10
Temperature	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1
D.O.	8.47	8.60	8.63	8.45	8.42	8.45	8.51	8.53	8.50
pH	7.30	7.15	7.21	7.41	7.50	7.56	7.68	7.71	7.77
Sp. Conduct.	222	328	331	316	423	566	625	787	898

DAY 3

Method Reference: *Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*., Fourth Edition. EPA-600/4-91/002. U.S.EPA, Cincinnati, Ohio.

f:\public\forms\bioassay\GE bench sheet-chronic.doc

C30

General Electric – 7-Day Chronic Biotoxicity Bench Sheet

Client: General Electric
Project: _____ Lab. No.: TA4-10-P284-003/004
Date Received: 9/16/04
Sample Date: 9/14-15/04 Time: 1100 Date Analyzed: 9/17/04
Source: Effluent composite Analyst(s): KH/JH
Source of dilution water: Housatonic River
Test Species: *Ceriodaphnia dubia* Age: < 24 hrs Temp. Range: °C
Type of Test: 7-day chronic

Total Chlorine: n/d

	Beginning	Ending
Date:	9/17/04	9/18/04
Time:	1100	1100

Concentration→	Housatonic River Control	MHSW Control	MHSW $Na_2S_2O_3$ Control	Effluent 6.25%	Effluent 12.5%	Effluent 25%	Effluent 50%	Effluent 75%	Effluent 100%
Initial									
Temperature	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6
Hardness	200	100	110						240
D.O.	8.67	8.80	8.89	8.65	8.61	8.63	8.60	8.58	8.54
pH	7.24	7.11	7.17	7.31	7.42	7.51	7.54	7.59	7.69
Alkalinity	77	64	69						214
Sp. Conduct.	208	317	320	358	404	572	630	803	870
End									
No. Surviving	10	10	10	10	10	10	10	10	10
Temperature	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6
D.O.	8.52	8.68	8.57	8.51	8.50	8.50	8.45	8.50	8.56
pH	7.30	7.19	7.21	7.37	7.48	7.58	7.59	7.63	7.73
Sp. Conduct.	216	328	334	363	412	584	647	816	884

DAY 4

Method Reference: *Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.*, Fourth Edition. EPA-600/4-91/002. U.S.EPA, Cincinnati, Ohio.

f:\public\forms\bioassay\GE bench sheet-chronic.doc

059

General Electric – 7-Day Chronic Biotoxicity Bench Sheet

Client: General Electric

Project: _____ Lab. No.: TA4-10-P284-005/006

Sample Date: 9/16-17/04 Time: 1100 Date Received: 9/18/04

Source: Effluent composite Date Analyzed: 9/18/04

Source of dilution water: Housatonic River Analyst(s): KH/JH

Test Species: *Ceriodaphnia dubia* Age: < 24 hrs Temp. Range: °C

Type of Test: 7-day chronic

Total Chlorine: n/d

	Beginning	Ending
Date:	9/18/04	9/19/04
Time:	1130	1130

Concentration→	Housatonic River Control	MHSW Control	MHSW $Na_2S_2O_3$ Control	Effluent 6.25%	Effluent 12.5%	Effluent 25%	Effluent 50%	Effluent 75%	Effluent 100%
Initial									
Temperature	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8
Hardness	210	100	110						400
D.O.	8.67	8.88	8.94	8.65	8.67	8.64	8.62	8.58	8.54
pH	6.67	7.04	7.10	6.80	6.98	7.12	7.19	7.24	7.31
Alkalinity	97	67	72						304
Sp. Conduct.	226	318	324	287	410	638	768	922	1091
End									
No. Surviving	10	10	10	10	10	10	10	10	10
Temperature	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2
D.O.	8.54	8.72	8.79	8.52	8.51	8.54	8.48	8.46	8.41
pH	6.72	7.10	7.19	6.87	7.04	7.19	7.27	7.34	7.32
Sp. Conduct.	234	322	336	294	418	648	681	918	1094

DAY 5

Method Reference: *Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.*, Fourth Edition. EPA-600/4-91/002. U.S.EPA, Cincinnati, Ohio.

f:\public\forms\bioassay\GE bench sheet-chronic.doc

General Electric – 7-Day Chronic Biotoxicity Bench Sheet

Client: General Electric
Project:
Lab. No.: TA4-10-P284-005/006
Date Received: 9/18/04
Sample Date: 9/16-17/04 Time: 1100
Date Analyzed: 9/19/04
Source: Effluent composite
Analyst(s): KH/JH
Source of dilution water: Housatonic River
Test Species: *Ceriodaphnia dubia* Age: < 24 hrs Temp. Range: °C
Type of Test: 7-day chronic

Total Chlorine: n/d

	Beginning	Ending
Date:	9/19/04	9/20/04
Time:	1100	1100

Concentration→	Housatonic River Control	MHSW Control	MHSW $Na_2S_2O_3$ Control	Effluent 6.25%	Effluent 12.5%	Effluent 25%	Effluent 50%	Effluent 75%	Effluent 100%
Initial									
Temperature	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1
Hardness	220	110	110						280
D.O.	8.77	8.92	8.99	8.71	8.68	8.67	8.68	8.65	8.62
pH	6.74	7.07	7.15	6.84	6.97	7.10	7.24	7.29	7.38
Alkalinity	101	72	74						316
Sp. Conduct.	218	328	334	263	394	657	799	947	1073
End									
No. Surviving	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8
Temperature	10	10	10	10	10	10	10	10	10
D.O.	8.64	8.70	8.72	8.67	8.58	8.55	8.58	8.52	8.64
pH	6.81	7.11	7.21	6.70	7.10	7.12	7.29	7.36	7.34
Sp. Conduct.	227	334	339	274	412	667	814	954	1068

DAY 6

Method Reference: *Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.*, Fourth Edition EPA-600/4-91/002. U.S.EPA, Cincinnati, Ohio.

f:\public\forms\bioassay\GE bench sheet-chronic.doc

0508

General Electric – 7-Day Chronic Biotoxicity Bench Sheet

Client: General Electric

Project: _____ Lab. No.: TAA-10-P284-005/006

Date Received: 9/18/04

Sample Date: 9/16-17/04 Time: 1100 Date Analyzed: 9/20/04

Source: Effluent composite Analyst(s): KH/JH

Source of dilution water: Housatonic River

Test Species: *Ceriodaphnia dubia* Age: < 24 hrs Temp. Range: °C

Type of Test: 7-day chronic

Total Chlorine: n/d

	Beginning	Ending
Date:	9/20/04	9/21/04
Time:	1100	1100

Concentration→	Housatonic River Control	MHSW Control	MHSW $Na_2S_2O_3$ Control	Effluent 6.25%	Effluent 12.5%	Effluent 25%	Effluent 50%	Effluent 75%	Effluent 100%
Initial									
Temperature	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8
Hardness	200	110	110						410
D.O.	8.70	8.81	8.84	8.71	8.68	8.64	8.64	8.62	8.58
pH	6.64	7.02	7.09	6.79	6.84	7.08	7.27	7.28	7.40
Alkalinity	102	70	73						316
Sp. Conduct.	214	326	330	290	394	610	757	911	1068

End									
No. Surviving	10	10	10	10	10	10	10	10	10
Temperature	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7	24.7
D.O.	8.57	8.68	8.60	8.60	8.58	8.51	8.52	8.50	8.47
pH	6.72	7.11	7.17	6.84	6.94	7.11	7.31	7.43	7.49
Sp. Conduct.	219	338	339	298	382	619	767	922	1077

DAY 7

Method Reference: *Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.*, Fourth Edition. EPA-600/4-91/002. U.S.EPA, Cincinnati, Ohio.

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Biotoxicity Bench Sheet 060

Lab. No. 4IOP284 Test Organism _____ Start Date: 4-14-04 Time: 1100
Client: GE Lot No. _____ End Date: 9-21-04 End Time 1100
Effluent/Sample _____ Age: _____ Investigators _____

Conc. Control	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3													
	4	5	4	3	0	4	5	4	4	4	5			
	5	0	0	0	5	0	0	0	0	0	0			
	6	8	10	8	10	8	10	9	9	10	8			
	7	13	11	11	12	12	0	13	13	0	13			
	8													
	total	26	25	22	27	24	15	26	26	14	26			

Conc. ~~2°C 6.25%~~	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3													
	4	0	4	4	5	4	5	5	4	3	4			
	5	2	0	1	0	0	7	0	0	0	0			
	6	10	9	10	7	10	0	8	9	11	9			
	7	0	12	13	8	13	12	13	12	13	12			
	8													
	total	12	25	28	20	27	24	26	25	27	25			

Conc. 2°C+ ~~12.5%~~	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3													
	4	5	4	3	4	5	5	4	3	4	3			
	5	0	0	8	0	0	0	0	8	0	1			
	6	7	x-9	9	9	7	10	7	0	10	10			
	7	12	↓	12	13	12	12	11	12	13	12			
	8													
	total	24	x-13	32	26	24	27	22	23	27	26			

Biotoxicity Bench Sheet 061

Lab. No. 4I0P284 Test Organism _____ Start Date: 9-14-04 Time: 1100
Client: GE Lot No. _____ End Date: 9-21-04 End Time 1100
Effluent/Sample _____ Age: _____ Investigators _____

6.25%

Conc. ~~Control~~	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3													
	4	3	4	5	4	6	4	4	3	3	4			
	5	0	0	6	0	0	0	0	8	0	0			
	6	10	9	0	9	7	8	9	0	10	9			
	7	11	12	13	11	12	13	11	14	0	11			
	8													
	total	24	25	24	24	24	25	24	25	13	24			

12.5%

Conc. ~~6.25%~~	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3													
	4	6	4	3	4	3	2	3	4	3	2			
	5	0	0	8	0	0	9	0	0	0	1			
	6	10	9	0	8	7	7	9	10	8	10			
	7	12	11	12	10	11	0	13	12	11	13			
	8													
	total	28	24	23	22	21	18	25	26	22	26			

25%

Conc. ~~12.5%~~	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3													
	4	3	2	4	4	4	3	2	3	4	3			
	5	7	8	0	0	0	0	3	0	0	0			
	6	0	0	9	10	9	8	10	10	9	8			
	7	12	9	13	13	14	12	12	12	14	11			
	8													
	total	22	19	26	27	27	23	27	25	27	22			

062

Biotoxicity Bench Sheet

Lab. No. 4I0-P984 Test Organism _____ Start Date: 9-14-04 Time: 1100
Client: GE Lot No. _____ End Date: 9-21-04 End Time 1100
Effluent/Sample _____ Age: _____ Investigators _____

50%.

Conc. ~~25%~~	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3													
	4	3	4	3	2	4	3	2	4	6	4			
	5	0	0	1	0	0	0	0	0	0	0			
	6	6	9	7	10	9	8	10	8	13	9			
	7	12	13	9	0	11	13	13	14	0	13			
	8													
	total	25	26	20	12	24	24	25	26	19	26			

75%.

Conc. ~~50%~~	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3													
	4	2	4	5	4	2	3	3	4	3	4			
	5	0	0	6	0	1	0	0	0	0	0			
	6	9	8	0	9	14	9	8	9	9	10			
	7	12	12	11	13	0	12	13	11	12	13			
	8													
	total	23	24	22	26	17	24	24	24	24	27			

Conc. 100%	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3													
	4	5	4	4	3	3	4	3	4	3	4			
	5	0	0	0	2	0	0	0	0	1	10			
	6	10	9	8	11	10	10	11	9	11	13			
	7	13	14	7	14	12	12	13	10	12	0			
	8													
	total	28	27	19	30	25	26	27	23	27	27			

Appendix IV
Statistical Sheets

Title: GE CD REPROD. SEPT 2004
File: GECDREP .904 Transform: NO TRANSFORMATION

Kolmogorov Test for Normality

D = 0.2094 (p-value = 0.0000)
D* = 2.0031

Critical D* = 1.035 (alpha = 0.01 , N = 90)
= 0.895 (alpha = 0.05 , N = 90)

Data FAIL normality test (alpha = 0.01). Try another transformation.

Warning - The first three homogeneity tests are sensitive to non-normality and should not be performed with this data as is.

Title: GE CD REPROD. SEPT 2004
File: GECDREP .904 Transform: NO TRANSFORM

Steel's Many-One Rank Test - Ho: Control<Treatment

GROUP	IDENTIFICATION	MEAN IN ORIGINAL UNITS	RANK SUM	CRIT. VALUE	DF	SIG 0.05
1	CONTROL	23.1000				
2	CONTROL+	24.4000	110.50	73.00	10.00	
3	2' CONTROL	23.9000	110.00	73.00	10.00	
4	6.25%	23.2000	89.50	73.00	10.00	
5	12.5%	23.5000	99.00	73.00	10.00	
6	25%	24.5000	114.50	73.00	10.00	
7	50%	22.7000	96.00	73.00	10.00	
8	75%	23.5000	96.50	73.00	10.00	
9	100%	25.9000	129.50	73.00	10.00	

Critical values are 1 tailed (k = 8)

Appendix V

U.S. EPA Region I Toxicity Test Summary

NPDES Permit No. MA000 3891
SGS ID number: TA4-I0-P284
September 30, 2004

067

Toxicity Test Summary Sheet

Facility Name: General Electric Co. Test Start Date: September 14, 2004
NPDES Permit Number: MA 000 3891 Pipe Number: 001, 005-64T, 005-64G, 09A, 09B

Test Type	Test Species	Sample Type	Sample Method
☐ Acute	☐ Fathead minnow	☐ Prechlorinated	☐ Grab
☑ Chronic	☐ Ceriodaphnia	☐ Dechlorinated	☑ Composite
☐ Modified*	☑ Ceriodaphnia dubia	☐ Chlorine	☐ Flow thru
☐ 24-hour Screening	☐ Mysid Shrimp	☐ Spiked at lab	☐ Other
	☐ Menidia	☑ Chlorinated on-site	
	☐ Sea Urchin	☐ Unchlorinated	
	☐ Champia		
	☐ Selenastrum		
	☐ other		

*Modified (Chronic reporting acute values)

Dilution Water

X Receiving waters collected at a point upstream of or away from the discharge, free from toxicity or other sources of contamination (Receiving water name: Housatonic River);

___ Alternate surface water of known quality and a harness, etc. to generally reflect the characteristics of the receiving water;

___ Synthetic water prepared using either Millipore Mill-Q or equivalent deionized water and reagent grade chemicals; or deionized water combined with mineral water;

___ or artificial sea salts mixed with deionized water;

___ Deionized water and hypersaline brine; or

___ other

Effluent sampling date(s): September 12, 2004 to September 17, 2004

Effluent concentrations tested (in %): 100 75 50 25 12.5 6.25
*(Permit limit concentration): N/A

Was effluent salinity adjusted? No
If yes, to what value? N/A ppt
With sea salts? N/A Hypersaline brine solution? N/A

Actual effluent concentrations tested after salinity adjustment
(in %): N/A N/A N/A N/A N/A N/A
Reference Toxicant Test Date: September 13, 2004 to September 20, 2004

NPDES Permit No. MA000 3891
SGS ID number: TA4-I0-P284
September 30, 2004

068

Permit Limits & Test Results

Test Acceptability Criteria

MEAN CONTROL SURVIVAL: ≥90% MEAN CONTROL REPRODUCTION: N/A

MEAN CONTROL WEIGHT: N/A MEAN CONTROL CELL COUNT: N/A

Limits		Results	
LC_{50}	N/A	48-hr LC_{50}	>100%
		Upper Value	N/A
		Lower Value	N/A
		Data Analysis Method used:	N/A
A-NOEC	N/A	A-NOEC	100%
C-NOEC	N/A	C-NOEC	100%
		LOEC	100%
IC25	N/A	IC25	N/A
IC50	N/A	IC50	N/A

N/A = not applicable

Appendix VI
7-Day Chronic Reference
Toxicity Test Data

Biotoxicity Bench Sheet

Lab. No. _____ Test Organism CD Start Date: 9/13/04 Time: 1500
Client: QC Lot No. _____ End Date: 9/20/04 End Time 1500
Effluent/Sample NaCl Age: < 24 hrs Investigators KH

Conc. 1000 mg/l ~~25%~~	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3													
	4	0	0	0	2	3	4	0	0	0	0			
	5	4	3	X-3	X-0	0	0	3	3	0	3			
	6	0	0	↓	↓	0	2	0	2	2	X-0			
	7	2	4	↓	↓	2	0	4	0	4	↓			
	8			↓	↓						↓			
	total	6	7	X-3	X-2	5	6	7	5	6	X-3			

Conc. ~~200 mg/l~~ ~~50%~~	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3													
	4	0	0	0	0	0	0	0	0	0	0			
	5	X-0	0	0	X-2	0	X-0	0	0	3	3			
	6	↓	X-1	X-0	↓	X-0	↓	X-0	X-0	X-0	0			
	7	↓	↓	↓	↓	↓	↓	↓	↓	↓	X-0			
	8	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓			
	total	X-0	X-1	X-0	X-2	X-0	X-0	X-0	X-0	X-3	X-3			

Conc. ~~4000 mg/l~~ ~~100%~~	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3	X-0	X-0	X-0	X-0	X-0	X-0	X-0	X-0	X-0	X-0			
	4	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓			
	5	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓			
	6	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓			
	7	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓			
	8	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓			
	total	X-0	X-0	X-0	X-0	X-0	X-0	X-0	X-0	X-0	X-0			

Biotoxicity Bench Sheet 071

Lab. No.		Test Organism	CD	Start Date:	9/13/04	Time:	1500
Client:	QC	Lot No.		End Date:	9/20/04	End Time	1500
Effluent/Sample	NaCl	Age:	< 24 hrs	Investigators	KH		

Conc. Control	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3													
	4	0	4	5	4	5	4	4	5	2	4			
	5	4	0	0	0	1	0	0	0	3	0			
	6	0	9	8	9	10	9	10	9	10	9			
	7	10	13	13	12	11	12	14	12	13	0			
	8													
	total	14	26	26	25	27	25	28	26	28	13			

Conc. ~~250 mg/L 6.25%~~	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3													
	4	5	4	4	3	4	3	4	4	3	2			
	5	0	0	0	0	0	0	0	0	0	3			
	6	11	8	9	10	8	10	10	9	10	10			
	7	12	13	12	12	14	13	12	0	12	12			
	8													
	total	28	25	25	25	26	26	26	13	25	27			

Conc. ~~500 mg/L 12.5%~~	Day	Replicate 1	2	3	4	5	6	7	8	9	10	No. of Young	No. of Adults	Young per Adult
	1													
	2													
	3													
	4	4	3	2	4	3	4	3	4	3	4			
	5	10	0	11	0	0	0	0	0	10	0			
	6	13	9	0	9	8	x-9	8	7	12	9			
	7	0	12	13	12	13	↓	13	13	0	12			
	8													
	total	27	24	26	25	24	x-13	24	24	25	25			

Fisher's Exact Test

IDENTIFICATION	NUMBER OF ALIVE	DEAD	TOTAL ANIMALS
CONTROL	10	0	10
250mg/l	10	0	10
TOTAL	20	0	20

Critical Fisher's value (10,10,10) (alpha=0.05) is 6.0. b value is 10.
Since b is greater than 6.0 there is no significant difference
between CONTROL and TREATMENT at the 0.05 level.

Fisher's Exact Test

IDENTIFICATION	NUMBER OF ALIVE	DEAD	TOTAL ANIMALS
CONTROL	10	0	10
500mg/l	9	1	10
TOTAL	19	1	20

Critical Fisher's value (10,10,10) (alpha=0.05) is 6.0. b value is 9.
Since b is greater than 6.0 there is no significant difference
between CONTROL and TREATMENT at the 0.05 level.

Fisher's Exact Test

IDENTIFICATION	NUMBER OF ALIVE	DEAD	TOTAL ANIMALS
CONTROL	10	0	10
1000mg/l	7	3	10

TOTAL	17	3	20

Critical Fisher's value (10,10,10) (alpha=0.05) is 6.0. b value is 7.
Since b is greater than 6.0 there is no significant difference
between CONTROL and TREATMENT at the 0.05 level.

Fisher's Exact Test

	NUMBER OF		
IDENTIFICATION	ALIVE	DEAD	TOTAL ANIMALS
CONTROL	10	0	10
2000mg/l	0	10	10
TOTAL	10	10	20

Critical Fisher's value (10,10,10) (alpha=0.05) is 6.0. b value is 0.
Since b is less than or equal to 6.0 there is a significant difference
between CONTROL and TREATMENT at the 0.05 level.

Fisher's Exact Test

	NUMBER OF		
IDENTIFICATION	ALIVE	DEAD	TOTAL ANIMALS
CONTROL	10	0	10
4000mg/l	0	10	10
TOTAL	10	10	20

Critical Fisher's value (10,10,10) (alpha=0.05) is 6.0. b value is 0.
Since b is less than or equal to 6.0 there is a significant difference
between CONTROL and TREATMENT at the 0.05 level.

Summary of Fisher's Exact Tests

	NUMBER	NUMBER	SIG

GROUP	IDENTIFICATION	EXPOSED	DEAD	0.05
	CONTROL	10	0	
1	250mg/l	10	0	
2	500mg/l	10	1	
3	1000mg/l	10	3	
4	2000mg/l	10	10	*
5	4000mg/l	10	10	*

Title: CD REFTOX SEPT 2004
File: QCCDREP .904 Transform: NO TRANSFORMATION

Steel's Many-One Rank Test - Ho: Control<Treatment

GROUP	IDENTIFICATION	MEAN IN ORIGINAL UNITS	RANK SUM	CRIT. VALUE	DF	SIG 0.05
1	CONTROL	23.8000				
2	250 MG/L	24.6000	100.50	76.00	10.00	
3	500 MG/L	23.7000	85.50	76.00	10.00	
4	1000 MG/L	5.0000	55.00	76.00	10.00	*
5	2000 MG/L	0.9000	55.00	76.00	10.00	*

Critical values are 1 tailed (k = 4)

Title: CD REFTOX SEPT 2004
File: QCCDREP .904 Transform: NO TRANSFORMATION

Shapiro - Wilk's Test for Normality

D = 613.0000
W = 0.7169

Critical W = 0.9300 (alpha = 0.01 , N = 50)
W = 0.9470 (alpha = 0.05 , N = 50)

Data FAIL normality test (alpha = 0.01). Try another transformation.

Warning - The first three homogeneity tests are sensitive to non-normality and should not be performed with this data as is.

Acute Biotoxicity Bench Sheet

Client: QC

Project: Reference Toxicant Lab. No.:

Date Received:

Sample Date: Time: Date Analyzed:

Source: NaCl Analyst: KH

Source of dilution water: Moderately Hard Synthetic Water

Test Species: Ceriodaphnia dubia Age: Temp. Range: °C

Type of Test: 48 hour Acute

Total Chlorine: n/d

	Beginning	Ending
Date:	9/8/04	9/10/04
Time:	1600	1600

Concentration	Control		500	1000	2000	3000	4000
START							
Temperature	25.3		25.3	25.3	25.3	25.3	25.3
Hardness	110						130
D.O.	8.9		8.9	8.9	8.9	8.9	8.9
pH	7.0		7.0	7.1	7.1	7.1	7.1
Alkalinity	73						75
Sp. Conduct.	338		2460	3210	4140	5180	7710
24 HOUR							
Temperature	25.3		25.3	25.3	25.3	25.3	25.3
No. Surviving	20		20	20	17	11	0
48 HOUR							
Temperature	24.8		24.8	24.8	24.8	24.8	24.8
No. Surviving	20		20	13	4	0	0

Note: All results expressed in mg/L unless otherwise designated. < = less than

Note: Number in parenthesis equals number not adversely effected (EC_{50}). This number is used in calculating EC_{50} value.

Note: Due to fragile structure of *Daphnia* organisms, dissolved oxygen (DO), hardness, alkalinity, specific conductance, and pH reading could not be taken after the organisms are added to the sample. Doing so would cause injury to the organisms.

Method Reference: *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine*

TRIMMED SPEARMAN-KARBER METHOD. MONTANA STATE UNIV

FOR REFERENCE, CITE:
HAMILTON, M.A., R.C. RUSSO, AND R.V. THURSTON, 1977.
TRIMMED SPEARMAN-KARBER METHOD FOR ESTIMATING MEDIAN
LETHAL CONCENTRATIONS IN TOXICITY BIOASSAYS.
ENVIRON. SCI. TECHNOL. 11(7): 714-719;
CORRECTION 12(4):417 (1978).

DATE: 09/08/04 TEST NUMBER: - DURATION: 48 HOURS
CHEMICAL: NaCl SPECIES: CD

RAW DATA:

CONCENTRATION(MG/L)	500.00	1000.00	2000.00	3000.00	4000.00
NUMBER EXPOSED:	20	20	20	20	20
MORTALITIES:	0	7	16	20	20

SPEARMAN-KARBER TRIM: 0.00%

SPEARMAN-KARBER ESTIMATES:		
LC50:	1238.42	
95% LOWER CONFIDENCE:	1036.97	
95% UPPER CONFIDENCE:	1478.99	