GE
159 Plastics Avenue
Pittsfield, MA 01201
USA

Transmitted via Overnight Courier

March 20, 2007

Mr. Richard Hull
U.S. Environmental Protection Agency
EPA New England
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Re: GE-Pittsfield/Housatonic River Site
Hill 78 Area–Remainder (GECD160)
Second Supplemental Data Letter

Dear Mr. Hull:

On September 18, 2006, the General Electric Company (GE) submitted to the U.S. Environmental Protection Agency (EPA) a Supplemental Data Letter summarizing the results of additional field activities conducted at the Hill 78 Area-Remainder Removal Action Area (RAA) in accordance with the Consent Decree (CD) for the GE-Pittsfield/Housatonic River Site and the accompanying *Statement of Work for Removal Actions Outside the River* (SOW). Those field activities were initially described in a September 7, 2005 document titled *Hill 78 Area-Remainder Pre-Design Investigation Report* (PDI Report), modified by EPA in a conditional approval letter for the PDI Report dated April 13, 2006, then further described (as modified in the EPA conditional approval letter) in a May 11, 2006 Supplemental Sampling Proposal. GE's Supplemental Sampling Proposal was, in turn, conditionally approved by EPA in a letter dated June 5, 2006.

In addition to providing the results of the activities performed during supplemental pre-design investigations conducted at the Hill 78 Area-Remainder RAA in the summer of 2006, the Supplemental Data Letter also contained a proposal by GE to conduct additional soil sampling to address newly-identified data needs for the Hill 78 Area-Remainder Removal Action. EPA conditionally approved the Supplemental Data Letter in a letter dated January 5, 2007. Condition Nos. 1 and 3 of EPA's January 5, 2007 letter required GE to perform certain additional sampling activities beyond those proposed by GE in the Supplemental Data Letter, and to submit the results of those sampling activities in this Second Supplemental Data Letter. GE has performed those activities and this letter summarizes the results. Moreover, Condition No. 2 of EPA's January 5, 2007 letter required GE to provide information in this Second Supplemental Data Letter concerning additional properties potentially subject to sampling during the approved investigations. That information is provided in this letter as well.

By way of update on the status of the remaining two conditions in EPA's January 5, 2007 conditional approval letter, Condition No. 4 required that the results of additional sampling activities related to GE's proposed re-routing of sanitary and storm sewer pipelines be incorporated into GE's Conceptual RD/RA Work Plan for Hill 78 Area-Remainder (Conceptual Work Plan). GE subsequently proposed that sampling in GE's February 19, 2007 Supplemental Sampling Plan for Re-routing of Sanitary and Storm

Sewer Pipelines, and GE acknowledged in that plan that the appropriate data from that proposed sampling would be incorporated into the Conceptual Work Plan. Condition No. 5 required that GE submit a sampling plan to meet the sampling requirements of the CD along the northern boundary of the RAA. That last condition was addressed in GE's February 16, 2007 Supplemental Sampling Proposal.

I. Summary of Second Supplemental Pre-Design Investigation Activities

The supplemental pre-design investigations described in the Supplemental Sampling Proposal, as approved by EPA, were performed between February 13 and 15, 2007. Sampling activities were conducted in accordance with GE's approved *Field Sampling Plan/Quality Assurance Project Plan* (FSP/QAPP). Analytical services were provided by SGS Environmental Services, Inc. of Wilmington, North Carolina.

GE collected soil samples from 11 locations at the depths approved by EPA in its January 5, 2007 letter. A total of 13 soil samples from nine of the soil borings were analyzed for polychlorinated biphenyls (PCBs). Specifically:

- GE conducted additional supplemental sampling along the south boundary of the RAA to further assess the extent of PCBs exceeding 2 ppm in this area. GE conducted supplemental soil sampling at locations RAA9-X2S, and RAA9-X3S, and RAA9-X7. In addition, contingency samples from locations RAA-X5 and RAA-X6 were collected and held by the laboratory pending review of the results of sampling at locations RAA-X2S and RAA-X3S.

- GE re-sampled six locations for PCB analysis where prior supplemental pre-design PCB data were rejected during validation. Those locations are: RAA9-B12 (1- to 6-foot depth interval and 6- to 15- foot depth interval), RAA9-C10 (6- to 15-foot depth interval), RAA9-I18 (6- to 15-foot depth interval), RAA9-J21 (6- to 15-foot depth interval), RAA9-J22 (1- to 6-foot depth interval), and RAA9-X2 (1- to 6-foot depth interval).

These samples locations are illustrated on Figure 1 and the soil boring logs are provided as Attachment A to this letter.

II. Second Supplemental Preliminary Data Investigation Results

The analytical results for PCBs obtained during the second supplemental preliminary design investigation (PDI) are presented in Table 1. PCBs were detected in 8 of the 13 samples analyzed. Where detected, PCB concentrations ranged from 0.107 ppm to 2.13 ppm. As shown in Table 1, only one sample result greater than MCP Reportable Concentration of 2 ppm was detected during the recent investigation and that result was only slightly above the 2 ppm level (2.13 ppm at location RAA9-X3S from the 0- to 1-foot depth interval).

The remaining samples analyzed along the southern boundary of the RAA, including the underlying 1- to 6- foot depth increment sample at location RAA9-X3S, all contained PCB concentrations below 2 ppm. Following receipt from the laboratory, GE discussed the preliminary analytical data with EPA and the need to analyze the contingency samples collected from locations RAA9-X5 and RAA9-X6. On February 23, 2007, EPA informed GE via electronic mail that analysis of the contingency samples was not necessary. GE therefore understands that it has completed collection of data in the vicinity of these samples.

All of the analytical data collected during this supplemental pre-design investigation have undergone data validation in accordance with Section 7.5 of the FSP/QAPP. The results of this data validation are presented as Attachment B to this letter report. As discussed in that report 95.8% of the second supplemental pre-design data are considered to be usable, which is greater than the minimum required usability of 90% as specified in the FAP/QAPP. Thus, the second supplemental pre-design dataset meets the data quality objectives set forth in the PDI Work Plan and the FSP/QAPP. The rejected data was limited to a portion of the results from a single sample (RAA9-X3S, 0- to 1-foot) and only involved PCB Aroclors that are not typically observed at the Site. The analytical data from all locations that were re-sampled because prior PCB data were rejected during validation were acceptable during this sampling round.

Condition 2 in EPA January 5, 2007 letter of states the GE shall include ownership information, historical data, current and future land use information and any other relevant information on additional parcels sampled to the south of the RAA in the Second Supplement Data Letter. Samples from locations RAA9-X2S, RAA9-X3S, and RAA9-X7 were all collected from the former Merrill Road, which is not listed as a parcel on City of Pittsfield Assessors Maps. Although no samples were analyzed from any other parcels in this area, contingency samples RAA9-X5, and RAA9-X6 were collected from parcel K11-1-10, but (with EPA's approval) not analyzed. That parcel is owned by the City of Pittsfield and is used as Right of Way (Pittsfield Tax Assessor's Records, September 13, 2005).

III. Future Activities

As noted above, GE submitted a Supplemental Sampling Proposal to EPA on February 16, 2007. That letter proposed additional sampling activities within the portion of the RAA to the north of Tyler Street Extension to satisfy the requirements of Condition No. 5 of EPA's January 5, 2007 letter. The analytical results from that proposed soil sampling will be presented in a Third Supplemental Data Letter to be submitted within 75 days following EPA approval of the February 16, 2007 proposal.

GE submitted a Supplemental Sampling Plan for Re-routing of Sanitary and Storm Sewer Pipelines GE-Pittsfield/Housatonic River Site Hill 78 On-Plant Consolidation Area to EPA on February 19, 2007. That plan provides a proposal for supplemental soil sampling activities to characterize the existing soils in the area where re-routed portions of the sanitary and storm sewer pipelines are planned to be installed. GE will submit a Supplemental Sampling and Engineering Design Report within 120 days after EPA approval of the supplemental sampling for re-routing of sanitary and storm sewer pipelines.

Based on the results of the second supplemental pre-design investigations, no additional soil sampling activities beyond those already proposed by GE appear necessary to complete the characterization of Hill 78 Area-Remainder. As such, if no additional data needs are identified based on the results of the supplemental sampling activities proposed in GE's February 16, 2007 Supplemental Sampling Proposal and February 19, 2007 Supplemental Sampling Plan for Re-routing of Sanitary and Storm Sewer Pipelines GE-Pittsfield/Housatonic River Site Hill 78, the Third Supplemental Data Letter will also provide a proposed schedule for the submittal of a Conceptual RD/RA Work Plan for the Hill 78 Area-Remainder Removal Action. If additional data needs are identified, GE will propose to conduct additional pre-design investigations to address those data needs.

Please call Andrew Silfer or me if you have any questions about this data letter or the upcoming activities at the Hill 78 Area-Remainder RAA.

Sincerely,

Richard W. Gates
Remediation Project Manager

Attachments

cc: Tim Conway, EPA *
Dean Tagliaferro, EPA
Holly Inglis, EPA (CD-ROM)
Rose Howell, EPA (CD-ROM)
Robert Cianciarulo, EPA*
K.C. Mitkevicius, USACE (CD-ROM)
Linda Palmieri, Weston
(2 copies & CD-ROM)
Susan Steenstrup, MDEP (2 copies)
Anna Symington, MDEP *
Jane Rothchild, MDEP *
Thomas Angus, MDEP *
Nancy E. Harper, MA AG *
Dale Young, MA EOEA
Mayor James Ruberto, City of Pittsfield
Pittsfield Commissioner of Public Health
Thomas Hickey, Director, PEDA
Jeffrey Bernstein, Bernstein, Cushner & Kimmel
Theresa Bowers, Gradient
Michael Carroll, GE *
Rod McLaren, GE *
Andrew Silfer, GE (CD-ROM)
James Nuss, ARCADIS BBL
James Bieke, Goodwin Procter
Tim Eglin, Purenergy I, LLC
Public Information Repositories
GE Internal Repositories
(Copy of letter only)

Table

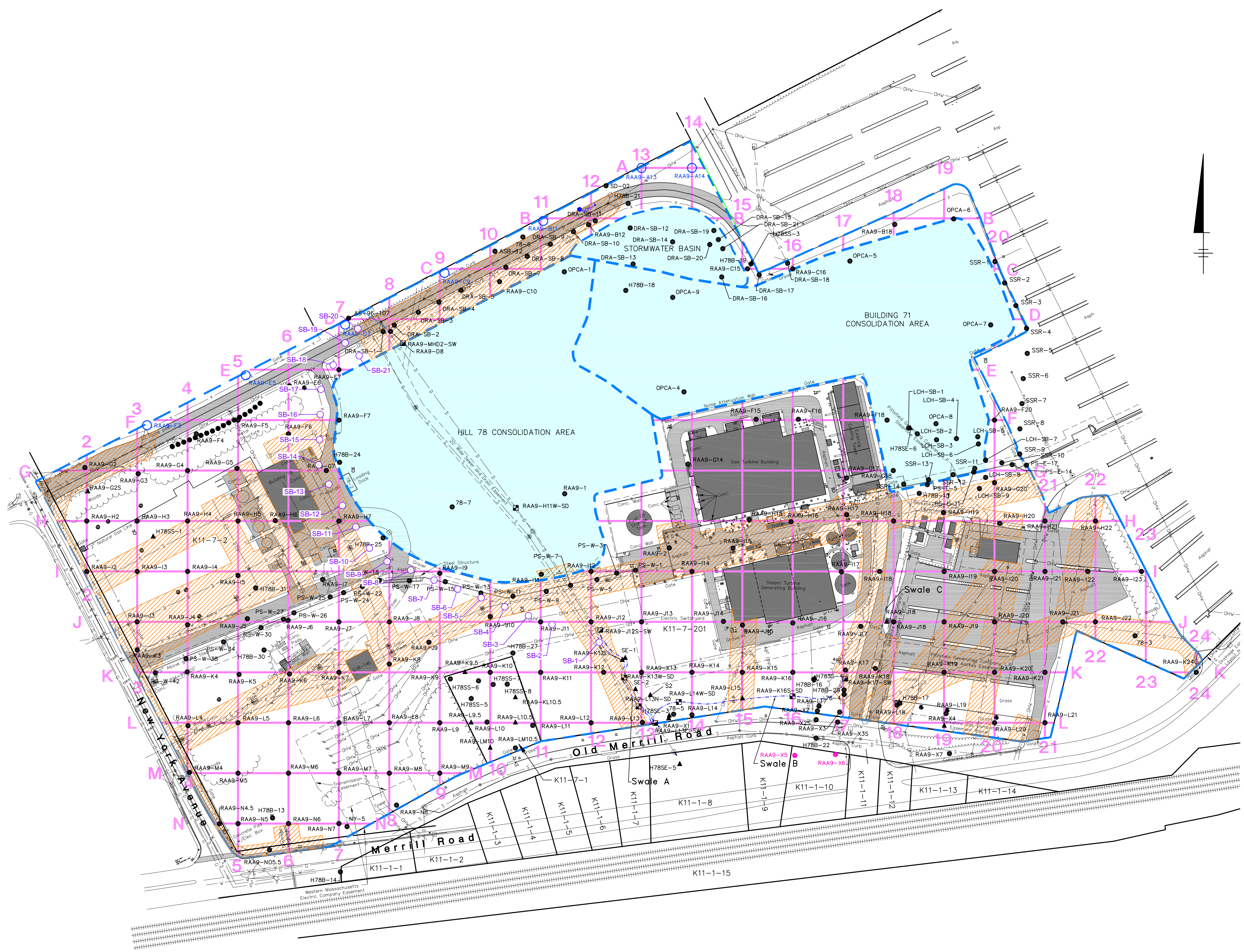
Table 1
Soil Analytical Results - PCBs

Second Supplemental Data Letter
Hill 78 Area-Remainder
General Electric Company - Pittsfield, Massachusetts
(Results are presented in dry weight parts per million, ppm)

Sample ID	Depth(Feet)	Date Collected	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Total PCBs
RAA9-B12	1-6	2/15/2007	ND(0.034)	ND(0.034)	ND(0.034)	ND(0.034)	ND(0.034)	ND(0.034)	ND(0.034)	ND(0.034)
	6-15	2/15/2007	ND(0.035)	ND(0.035)	ND(0.035)	ND(0.035)	ND(0.035)	ND(0.035)	0.11	0.11
RAA9-C10	6-15	2/14/2007	ND(0.038)	ND(0.038)	ND(0.038)	ND(0.038)	ND(0.038)	ND(0.038)	ND(0.038)	ND(0.038)
RAA9-I18	6-15	2/14/2007	ND(0.034)	ND(0.034)	ND(0.034)	ND(0.034)	ND(0.034)	0.057	0.090	0.147
RAA9-J21	6-15	2/14/2007	ND(0.032)	ND(0.032)	ND(0.032)	ND(0.032)	ND(0.032)	ND(0.032)	ND(0.032)	ND(0.032)
RAA9-J22	1-6	2/13/2007	ND(0.031)	ND(0.031)	ND(0.031)	ND(0.031)	ND(0.031)	ND(0.031)	ND(0.031)	ND(0.031)
RAA9-X2	1-6	2/13/2007	ND(0.037)	ND(0.037)	ND(0.037)	ND(0.037)	ND(0.037)	0.059	0.048	0.107
RAA9-X2S	0-1	2/13/2007	ND(0.18)	ND(0.18)	ND(0.18)	ND(0.18)	ND(0.18)	0.47	1.5	1.97
	1-6	2/13/2007	ND(0.035) [ND(0.035)]	ND(0.035) [ND(0.035)]	ND(0.035) [ND(0.035)]	ND(0.035) [ND(0.035)]	ND(0.035) [ND(0.035)]	0.17 [0.21]	0.22 [0.23]	0.39 [0.44]
RAA9-X3S	0-1	2/13/2007	ND(0.18)	ND(0.18)	ND(0.18)	ND(0.18)	ND(0.18)	0.83	1.3	2.13
	1-6	2/13/2007	ND(0.18)	ND(0.18)	ND(0.18)	ND(0.18)	ND(0.18)	1.3	0.54	1.84
RAA9-X7	0-1	2/13/2007	ND(0.037)	ND(0.037)	ND(0.037)	ND(0.037)	ND(0.037)	ND(0.037)	ND(0.037)	ND(0.037)
	1-6	2/13/2007	ND(0.034)	ND(0.034)	ND(0.034)	ND(0.034)	ND(0.034)	0.042	0.089	0.131

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

Figure



LEGEND:

K11-7-2	PROPERTY ID
	APPROXIMATE SITE BOUNDARY
	HILL 78 AND BUILDING 71 CONSOLIDATION AREAS (NOT PART OF HILL 78 AREA-REMAINDER RAA)
	PROPERTY LINE
	EASEMENT LINE
	FENCE LINE
	EDGE OF SWALE
	INDEX ELEVATION CONTOUR LINE
	INTERMEDIATE ELEVATION CONTOUR LINE
	EDGE OF WOODS
	LIGHT POLE
	UTILITY POLE
	BUSH/TREE/SHRUB
	GAS MARKER
	MANHOLE
	SANITARY MANHOLE
	CATCH BASIN
	DRAIN MANHOLE
	ELECTRIC MANHOLE
	WATER VALVE
	FIRE HYDRANT
OHW	OVERHEAD WIRE
D	STORM SEWER (DRAINAGE) LINE
E	UNDERGROUND ELECTRIC LINE
S	SANITARY LINE
W	WATER LINE
G	GAS LINE
	GE-OWNED PAVED AREA
	BUILDING/STRUCTURE
	APPROXIMATE LOCATION OF BAND SURROUNDING SUBSURFACE UTILITIES (25 FEET WIDE ON EACH SIDE OF UTILITY)
78-7	EXISTING PCB SOIL BORING LOCATION
H78SS-1	EXISTING PCB SURFACE SAMPLE LOCATION
	EXISTING SURFACE WATER SAMPLE LOCATION (PCB & APPENDIX IX+3)
	EXISTING SEDIMENT SAMPLE LOCATION (PCB & APPENDIX IX+3)
RAA9-X5	PROPOSED SUPPLEMENTAL SAMPLING LOCATION
SB-1	PROPOSED BORING LOCATIONS FOR RE-ROUTING OF SANITARY AND STORM PIPELINES
RAA9-X6	CONTINGENCY SOIL BORING LOCATION (NOT ANALYZED)

NOTES:

1. MAPPING BASED ON ELECTRONIC FILE (S2149W01.DWG) OF SURVEY BY FORESIGHT LAND SEVICES, DATED 3/16/06. UTILITY LOCATIONS BASED ON AVAILABLE RECORD DATA AND VISIBLE FIELD EVIDENCE AND ARE NOT REPRESENTED AS BEING EXACT OR COMPLETE.
2. SAMPLES FROM LOCATIONS RAA9-X5 AND RAA9-X6 ARE PROPOSED TO BE HELD PENDING ANALYTICAL RESULTS OF SAMPLES RAA9-X2S AND RAA9-X3S.

0 100' 200'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

SUPPLEMENTAL PRE-DESIGN INVESTIGATION WORK PLAN FOR HILL 78 AREA-REMAINDER

SUPPLEMENTAL SOIL CHARACTERIZATION SAMPLE LOCATIONS

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE
1

ARCADIS BBL

Attachments

ARCADIS BBL

Attachment A

Soil Boring Logs

Date Start/Finish: 2/15/07 **Drilling Company:** BBL **Driller's Name:** Jason Gutkowske **Drilling Method:** AMS PowerProbe **Sampler Size:** 2" OD x 4' L Macrocore	**Northing:** 535944.6 **Easting:** 136048.7 **Borehole Depth:** 15' **Surface Elevation:** 1015.5 **Descriptions By:** Greg Rabasco	**Boring ID:** RAA9-B12 **Client:** General Electric Company **Location:** Hill 78 Area - Remainder Pittsfield, MA

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
0 1015				0.0	X		Brown SILT, some organic matter.	
	1	0-4	3.8	0.0			Grey-brown SILT, some Gravel	Borehole backfilled with Bentonite chips to grade.
				0.0				
5 1010				0.0				
	2	4-8	3.4				Grey SILT, some Gravel	
				0.0				
				0.0			Grey fine SAND, some Gravel.	
10 1005	3	8-12	2.5		X			
				0.0				
				0.0			Brown fine Sand, some Gravel, wet.	
	4	12-15	3.0					
15 1000				0.0				

Remarks: NA = Not Applicable/Available; bgs = below ground surface.

Analyses: 1'-6': PCBs; 6-15':PCBs.

ARCADIS BBL
Infrastructure, environment, facilities

Date Start/Finish: 2/14/07 **Drilling Company:** BBL **Driller's Name:** Jason Gutkowske **Drilling Method:** AMS PowerProbe **Sampler Size:** 2" OD x 4' L Macrocore	**Northing:** 535831.6 **Easting:** 135872.4 **Borehole Depth:** 15' **Surface Elevation:** 1010.9 **Descriptions By:** Greg Rabasco	**Boring ID:** RAA9-C10 **Client:** General Electric Company **Location:** Hill 78 Area - Remainder Pittsfield, MA

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
0 1010	1	0-4	3.5	0.0 0.0 0.0			Brown SILT, organic matter.	
							Gray fine SAND, some Gravel.	Borehole backfilled with Bentonite chips to grade.
5 1005	2	4-8	3.2	0.0 0.0				
10 1000	3	8-12	3.5	0.0 0.0	X			
	4	12-15	3.0	0.0 0.0			Wet grey fine SAND. Brown PEAT Grey SILT.	
15 995								

Remarks: NA = Not Applicable/Available; bgs = below ground surface.

Analyses: 6-15':PCBs

ARCADIS BBL
Infrastructure, environment, facilities

Date Start/Finish: 2/14/07 **Drilling Company:** BBL **Driller's Name:** Jason Gutkowske **Drilling Method:** AMS PowerProbe **Sampler Size:** 2" ID x 4' L Macrocore	**Northing:** 535257.2 **Easting:** 136625.9 **Borehole Depth:** 15' **Surface Elevation:** 1010.0 **Descriptions By:** Greg Rabasco	**Boring ID:** **RAA9-I18** **Client:** General Electric Company **Location:** Hill 78 Area - Remainder Pittsfield, MA

DEPTH ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
01010								
	1	0-4	4.0	0.0 0.0 0.0			Gray fine SAND, some Gravel.	
51005	2	4-8	3.5	0.0 0.0			Brown fine SAND.	Borehole backfilled with Bentonite chips to grade.
							Grey fine SAND.	
10000	3	8-12	3.5	0.0 0.0	X		Orange-brown fine to medium SAND, some coarse Sand.	
	4	12-15	2.8	0.0 0.0				
15995								

ARCADIS BBL
Infrastructure, environment, facilities

Remarks: NA = Not Applicable/Available; bgs = below ground surface.

Analyses: 6-15' PCBs

Date Start/Finish: 2/14/07 **Drilling Company:** BBL **Driller's Name:** Jason Gutkowske **Drilling Method:** AMS PowerProbe **Sampler Size:** 2" OD x 4' L Macrocore	**Northing:** 535157.1 **Easting:** 136989.1 **Borehole Depth:** 15' **Surface Elevation:** 1004.3 **Descriptions By:** Greg Rabasco	**Boring ID:** RAA9-J21 **Client:** General Electric Company **Location:** Hill 78 Area - Remainder Pittsfield, MA

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
1005								
0				0.0			Brown SILT	
							Gray fine SAND	
	1	0-4	3.9	0.0			Brown fine to medium SAND, some coarse Sand, some Gravel.	
				0.0				Borehole backfilled with Bentonite chips to grade.
1000								
5				0.0				
	2	4-8	3.8					
				0.0				
				0.0				
995								
10	3	8-12	3.5		X		Gray tight SILT, some Gravel.	
				0.0				
				0.0				
	4	12-15	2.7					
990				0.0				
15								

ARCADIS BBL
Infrastructure, environment, facilities

Remarks: NA = Not Applicable/Available; bgs = below ground surface.

Analyses: 6'-15': PCBs.

Date Start/Finish: 2/13/07 **Drilling Company:** BBL **Driller's Name:** Jason Gutkowske **Drilling Method:** AMS PowerProbe **Sampler Size:** 2" OD x 4' L Macrocore	**Northing:** 535157.1 **Easting:** 137053.8 **Borehole Depth:** 6' bgs **Surface Elevation:** 1004.9 **Descriptions By:** Greg Rabasco	**Boring ID:** **RAA9-J22** **Client:** General Electric Company **Location:** Hill 78 Area - Remainder Pittsfield, MA

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
0 / 1005								
				0.0			Brown SILT, some fine Sand.	
	1	0-4	4.0	0.0	X		Brown fine-coarse SAND.	Borehole backfilled with Bentonite chips to grade.
				0.0				
5 / 1000	2	4-6	2.0	0.0				
10 / 995								
15 / 990								

Remarks: NA = Not Applicable/Available; bgs = below ground surface.

Analyses: 1-6': PCBs

ARCADIS BBL
Infrastructure, environment, facilities

Date Start/Finish: 2/13/07 **Drilling Company:** BBL **Driller's Name:** Jason Gutkowske **Drilling Method:** AMS PowerProbe **Sampler Size:** 2" ID x 4' L Macrocore	**Northing:** 534980.8 **Easting:** 136502.7 **Borehole Depth:** 6' bgs **Surface Elevation:** 996.3 **Descriptions By:** Greg Rabasco	**Boring ID:** **RAA9-X2** **Client:** General Electric Company **Location:** Hill 78 Area - Remainder Pittsfield, MA

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
0 995	1	0-4	3.7	0.0	×		Brown SILT, some fine Sand.	Borehole backfilled with Bentonite chips to grade.
				0.0			Dark-brown fine SAND.	
				0.0	×		Brown fine SAND	
5	2	4-6	1.8	0.0			Brown fine SAND, wet.	
990 10 985 15								

Remarks: NA = Not Applicable/Available; bgs = below ground surface.

Analyses: 1-6': PCBs

ARCADIS BBL
Infrastructure, environment, facilities

Date Start/Finish: 2/13/07 **Drilling Company:** BBL **Driller's Name:** Jason Gutkowske **Drilling Method:** AMS PowerProbe **Sampler Size:** 2" ID x 4' L Macrocore	**Northing:** 534959.0 **Easting:** 136500.1 **Borehole Depth:** 6' bgs **Surface Elevation:** 996.5 **Descriptions By:** Greg Rabasco	**Boring ID:** **RAA9-X2S** **Client:** General Electric Company **Location:** Hill 78 Area - Remainder Pittsfield, MA

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
0								
995	1	0-4	3.8	0.0	X		Brown SILT, light-brown fine Sand.	
				0.0	X		Brown fine SAND, some Gravel, strong odor.	Borehole backfilled with Bentonite chips to grade.
5	2	4-6	1.9	0.0				
990								
10								
985								
15								

ARCADIS BBL
Infrastructure, environment, facilities

Remarks: NA = Not Applicable/Available; bgs = below ground surface.

Analyses: 0-1': PCBs; 1-6': PCBs

This location was moved 4' south due to gas pipeline.

Date Start/Finish: 2/13/07 **Drilling Company:** BBL **Driller's Name:** Jason Gutkowske **Drilling Method:** AMS PowerProbe **Sampler Size:** 2" ID x 4' L Macrocore	**Northing:** 534958.3 **Easting:** 136542.8 **Borehole Depth:** 6' **Surface Elevation:** 996.8 **Descriptions By:** Greg Rabasco	**Boring ID:** **RAA9-X3S** **Client:** General Electric Company **Location:** Hill 78 Area - Remainder Pittsfield, MA

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
0								
995	1	0-4	3.9	0.0	X		Brown SILT, and fine Sand, slight odor.	
				0.0	X		Brown fine SAND, some dark-brown fine Sand, little Gravel.	Borehole backfilled with Bentonite chips to grade.
5				0.0				
	2	4-6	1.8	0.0				
990								
10								
985								
15								

Remarks: NA = Not Applicable/Available; bgs = below ground surface.

Analyses: 0-1': PCBs; 1'-6': PCBs.

ARCADIS BBL
Infrastructure, environment, facilities

Date Start/Finish: 2/13/07 **Drilling Company:** BBL **Driller's Name:** Jason Gutkowske **Drilling Method:** AMS PowerProbe **Sampler Size:** 2" ID x 4' L Macrocore	**Northing:** 534895.9 **Easting:** 136764.4 **Borehole Depth:** 6' bgs **Surface Elevation:** 1000.6 **Descriptions By:** Greg Rabasco	**Boring ID:** **RAA9-X7** **Client:** General Electric Company **Location:** Hill 78 Area - Remainder Pittsfield, MA

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Boring Construction
0 1000				0.0	X		Brown SLIT and fine SAND.	
	1	0-4	3.9	0.0	X		Brown fine SAND.	
				0.0			Dark-brown fine SAND.	Borehole backfilled with Bentonite chips to grade.
5 995	2	4-6	1.9	0.0			Brown, dark-brown, gray-brown fine SAND, some Gravel.	
10 990								
15 985								

ARCADIS BBL
Infrastructure, environment, facilities

Remarks: NA = Not Applicable/Available; bgs = below ground surface.

Analyses: 0-1': PCBs; 1-6':PCBs.

ARCADIS BBL

Attachment B

Data Validation Report

Attachment B
Soil Sampling Data Validation Report
Hill 78 Area-Remainder
General Electric Company
Pittsfield, Massachusetts

1.0 General

This attachment summarizes the Tier I and Tier II data reviews performed for soil samples collected during Remedial Investigation activities conducted at the Hill 78 Area-Remainder Removal Action Area (RAA) located at the General Electric Company facility in Pittsfield, Massachusetts. The samples were analyzed for polychlorinated biphenyls (PCBs) by SGS Environmental Services, Inc. (formerly Paradigm Analytical Labs, Inc.) of Wilmington, North Carolina. Data validation was performed for 15 PCB samples.

2.0 Data Evaluation Procedures

This attachment outlines the applicable quality control criteria utilized during the data review process and any deviations from those criteria. The data review was conducted in accordance with the following documents:

- *Field Sampling Plan/Quality Assurance Project Plan, General Electric Company, Pittsfield, Massachusetts*, Blasland, Bouck & Lee, Inc. (BBL; FSP/QAPP, approved May 25, 2004 and resubmitted June 15, 2004);
- *Region I Tiered Organic and Inorganic Data Validation Guidelines*, USEPA Region I (July 1, 1993);
- *Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses*, USEPA Region I (February 1, 1988) (Modified November 1, 1988); and
- *Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses*, USEPA Region I (Draft, December 1996).

A tabulated summary of the Tier I and Tier II data evaluations is presented in Table B-1. Each sample subjected to evaluation is listed in Table B-1 to document that data review was performed, as well as present the highest level of data validation (Tier I or Tier II) that was applied. Samples that required data qualification are listed separately for each parameter (compound or analyte) that required qualification.

The following data qualifiers were used in this data evaluation:

J The compound was positively identified, but the associated numerical value is an estimated concentration. This qualifier is used when the data evaluation procedure identifies a deficiency in the data generation process. This qualifier is also used when a compound is detected at an estimated concentration less than the corresponding practical quantitation limit (PQL).

U The compound was analyzed for, but was not detected. The sample quantitation limit is presented and adjusted for dilution and (for solid samples only) percent moisture. Non-detect sample results are presented as ND(PQL) within this report and in Table B-1 for consistency with documents previously prepared for investigations conducted at this site.

UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is estimated and may or may not represent the actual level of quantitation. Non-detect sample results that required qualification are presented as ND(PQL) J within this report and in Table B-1 for consistency with documents previously prepared for this investigation.

R Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data should not be used for any qualitative or quantitative purpose.

3.0 Data Validation Procedures

The FSP/QAPP provides (in Section 7.5) that all analytical data will be validated to a Tier I level following the procedures presented in the *Region I Tiered Organic and Inorganic Data Validation Guidelines* (USEPA guidelines). Accordingly, 100% of the analytical data for these investigations were subjected to Tier I review. The Tier I review consisted of a completeness evidence audit, as outlined in the *USEPA Region I CSF Completeness Evidence Audit Program* (USEPA Region I, 7/31/91), to ensure that all laboratory data and documentation were present. In the event data packages were determined to be incomplete, the missing information was requested from the laboratory. Upon completion of the Tier I review, the data packages complied with the USEPA Region I Tier I data completeness requirements.

As specified in the FSP/QAPP, approximately 25% of the laboratory sample delivery group packages were randomly chosen to be subjected to Tier II review. A Tier II review was also performed to resolve data usability limitations identified from laboratory qualification of the data during the Tier I data review. The Tier II data review consisted of a review of all data package summary forms for identification of quality assurance/quality control (QA/QC) deviations and qualification of the data according to the Region I Data Validation Functional Guidelines. Due to the variable sizes of the data packages and the number of data qualification issues identified during the Tier I review, approximately 87% of the data were subjected to a Tier II review. The Tier II review resulted in the qualification of data for several samples due to minor QA/QC deficiencies. Additionally, all field duplicates were examined for relative percent difference (RPD) compliance with the criteria specified in the FSP/QAPP.

Summary of Samples Subjected to Tier I and Tier II Data Validation

Parameter	Tier I Only			Tier I &Tier II			Total
	Samples	Duplicates	Blanks	Samples	Duplicates	Blanks	
PCBs	2	0	0	11	1	1	15
Total	**2**	**0**	**0**	**11**	**1**	**1**	**15**

When qualification of the sample data was required, the sample results associated with a QA/QC parameter deviation were qualified in accordance with the procedures outlined in USEPA Region I data validation guidance documents. When the data validation process identified several quality control deficiencies, the cumulative effect of the various deficiencies was employed in assigning the final data qualifier. A summary of the QA/QC parameter deviations that resulted in data qualification is presented below for each analytical method.

4.0 Data Review

Matrix spike/matrix spike duplicate (MS/MSD) sample analysis recovery criteria for organics require that the MS/MSD recovery be within the laboratory-generated QC control limits specified on the MS/MSD reporting form. Associated sample results with MS/MSD recoveries that were less than the laboratory-generated QC control limits and have recoveries greater than 10% were qualified as estimated (J) and non-detect sample results with MS/MSD recoveries less than 10% were qualified as rejected (R). The compounds that did not meet MS/MSD recovery criteria and the number of samples qualified due to those deviations are presented in the following table.

Compounds Qualified Due to MS/MSD Recovery Deviations

Analysis	Compound	Number of Affected Samples	Qualification
PCBs	Aroclor-1016	1	R
	Aroclor-1221	1	R
	Aroclor-1232	1	R
	Aroclor-1242	1	R
	Aroclor-1248	1	R
	Aroclor-1254	1	J
	Aroclor-1260	1	J

MS/MSD sample analysis recovery criteria for organics require that the relative percent difference (RPD) between the MS and MSD recoveries be less than the laboratory-generated QC acceptance limits specified on the MS/MSD reporting form. The compounds that exceeded the RPD limit and the number of samples qualified due to deviations are presented in the following table.

Compounds Qualified Due to MS/MSD RPD Deviations

Analysis	Compound	Number of Affected Samples	Qualification
PCBs	Aroclor-1016	1	J
	Aroclor-1221	1	J
	Aroclor-1232	1	J
	Aroclor-1248	1	J
	Aroclor-1254	1	J
	Aroclor-1260	1	J
	Total PCBs	1	J

5.0 Overall Data Usability

This section summarizes the analytical data in terms of its completeness and usability for site characterization purposes. Data completeness is defined as the percentage of sample results that have been determined to be usable during the data validation process. The percent usability calculation included analyses evaluated under both the Tier I and Tier II data validation reviews. Data completeness with respect to usability was calculated separately for inorganic and each of the organic analysis. The percent usability calculation also includes quality control samples collected to aid in the evaluation of data usability. Therefore, field/equipment blank, trip blank, and field duplicate data determined to be unusable as a result of the validation process are represented in the percent usability value tabulated in the following table.

Data Usability

Parameter	Percent Usability	Rejected Data
PCBs	95.8	A total of 5 sample results were rejected due to MS/MSD recovery deviations.

The data package completeness, as determined from the Tier I data review, was used in combination with the data quality deviations identified during the Tier II data review to determine overall data quality. As specified in the FSP/QAPP, the overall precision, accuracy, representativeness, comparability, and completeness (PARCC) parameters determined from the Tier I and Tier II data reviews were used as indicators of overall data quality. These parameters were assessed through an evaluation of the results of the field and laboratory QA/QC sample analyses to provide a measure of compliance of the analytical data with the Data Quality Objectives (DQOs) specified in the FSP/QAPP. Therefore, the following sections present summaries of the PARCC parameters assessment with regard to the DQOs specified in the FSP/QAPP.

5.1 Precision

Precision measures the reproducibility of measurements under a given set of conditions. Specifically, it is a quantitative measure of the variability of a group of measurements compared to their average value. For this investigation, precision was defined as the RPD between duplicate sample results. The duplicate samples used to evaluate precision included field duplicates and MS/MSD samples. For this analytical program, 6.7% of the data required qualification due to MS/MSD RPD deviations. None of the data required qualification due to field duplicate RPD deviations.

5.2 Accuracy

Accuracy measures the bias in an analytical system or the degree of agreement of a measurement with a known reference value. For this investigation, accuracy was defined as the percent recovery of QA/QC samples that were spiked with a known concentration of an analyte or compound of interest. The QA/QC samples used to evaluate analytical accuracy included instrument calibration, LCSs, MS/MSD recovery samples, and surrogate compound recoveries. For this analytical program, 6.7% of the data required qualification due to MS/MSD recovery deviations. None of the data required qualifications due to instrument calibration, LCS recovery, or surrogate compound recovery deviations.

5.3 Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness is a qualitative parameter, which is most concerned with the proper design of the sampling program. The representativeness criterion is best satisfied by making certain that sampling locations are selected properly and a sufficient number of samples are collected. This parameter has been addressed by collecting samples at locations specified in MDEP-approved work plans, and by following the procedures for sample collection/analyses that were described in the FSP/QAPP. Additionally, the analytical program used procedures consistent with USEPA-approved analytical methodology. A QA/QC parameter that is an indicator of the representativeness of a sample is holding time. Holding time criteria are established to maintain the samples in a state that is representative of the in-situ field conditions before analysis. For this analytical program, none of the data required qualification due to holding time deviations.

5.4 Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. This goal was achieved through the use of the standardized techniques for sample collection and analysis presented in the FSP/QAPP. The USEPA SW-846[1] analytical methods presented in the FSP/QAPP are updated on occasion by the USEPA to benefit from recent technological advancements in analytical chemistry and instrumentation. In most cases, the method upgrades include the incorporation of new technology that improves the sensitivity and stability of the instrumentation or allows the laboratory to increase throughput without hindering accuracy and precision. Overall, the analytical methods for this investigation have remained consistent in their general approach through continued use of the basic analytical techniques (e.g., sample extraction/preparation, instrument calibration, QA/QC procedures). Through this use of consistent base analytical procedures and by requiring that updated procedures meet the QA/QC criteria specified in the FSP/QAPP, the analytical data from past, present, and future sampling events will be comparable to allow for qualitative and quantitative assessment of site conditions.

5.5 Completeness

Completeness is defined as the percentage of measurements that are judged to be valid or usable to meet the prescribed DQOs. The completeness criterion is essentially the same for all data uses -- the generation of a sufficient amount of valid data. The actual completeness of this analytical data set was 95.8% with an overall usability of 95.8%, which is greater than the minimum required usability of 90% as specified in the FSP/QAPP.

The rejected sample data for these investigations include sample analyses results for five PCBs due to low MS/MSD recovery for sample location RAA9-X3S (0 - 1). Resampling at this location is not recommended since duplicate analysis of the MS has demonstrated matrix interference and the same analytical performance limitations for the analysis could occur again; therefore, resampling at this location is not recommended.

[1] Test Methods for evaluating Solid Waste, SW-846, USEPA, Final Update III, December 1996.

Table B-1
Analytical Data Validation Summary

Second Supplemental Data Letter
Hill 78 Area-Remainder
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Sample Delivery Group No.	Sample ID	Date Collected	Matrix	Validation Level	Qualification	Compound	QA/QC Parameter	Value	Control Limits	Qualified Result	Notes
PCBs											
G135-309	RAA9-07-Dup-1 (1 - 6)	2/13/2007	Soil	Tier II	No						
G135-309	RAA9-X2S (0 - 1)	2/13/2007	Soil	Tier II	No						
G135-309	RAA9-X2S (1 - 6)	2/13/2007	Soil	Tier II	No						
G135-309	RAA9-X3S (0 - 1)	2/13/2007	Soil	Tier II	Yes	Aroclor-1016	MS/MSD %R	9.0%, 8.7%	32% to 142%	R	
						Aroclor-1221	MS/MSD %R	9.0%, 8.7%	32% to 142%	R	
						Aroclor-1232	MS/MSD %R	9.0%, 8.7%	32% to 142%	R	
						Aroclor-1242	MS/MSD %R	9.0%, 8.7%	32% to 142%	R	
						Aroclor-1248	MS/MSD %R	9.0%, 8.7%	32% to 142%	R	
						Aroclor-1254	MS/MSD %R	9.0%, 8.7%	32% to 142%	0.83 J	
						Aroclor-1260	MS/MSD %R	9.0%, 8.7%	32% to 142%	1.3 J	
						Total PCBs	MS/MSD %R	9.0%, 8.7%	32% to 142%	2.13 J	
G135-309	RAA9-X3S (1 - 6)	2/13/2007	Soil	Tier II	No						
G135-309	RAA9-X7 (0 - 1)	2/13/2007	Soil	Tier II	No						
G135-309	RAA9-X7 (1 - 6)	2/13/2007	Soil	Tier II	No						
G135-311	RAA9-J22 (1 - 6)	2/13/2007	Soil	Tier I	No						
G135-311	RAA9-X2 (1 - 6)	2/13/2007	Soil	Tier I	No						
G135-312	RAA9-07-RB-1	2/15/2007	Water	Tier II	No						
G135-312	RAA9-B12 (1 - 6)	2/15/2007	Soil	Tier II	No						
G135-312	RAA9-B12 (6 - 15)	2/15/2007	Soil	Tier II	No						
G135-312	RAA9-C10 (6 - 15)	2/14/2007	Soil	Tier II	No						
G135-312	RAA9-I18 (6 - 15)	2/14/2007	Soil	Tier II	No						
G135-312	RAA9-J21 (6 - 15)	2/14/2007	Soil	Tier II	Yes	Aroclor-1016	MS/MSD RPD	24.3%	<12%	ND(0.032) J	
						Aroclor-1221	MS/MSD RPD	24.3%	<12%	ND(0.032) J	
						Aroclor-1232	MS/MSD RPD	24.3%	<12%	ND(0.032) J	
						Aroclor-1242	MS/MSD RPD	24.3%	<12%	ND(0.032) J	
						Aroclor-1248	MS/MSD RPD	24.3%	<12%	ND(0.032) J	
						Aroclor-1254	MS/MSD RPD	24.3%	<12%	ND(0.032) J	
						Aroclor-1260	MS/MSD RPD	24.3%	<12%	ND(0.032) J	
						Total PCBs	MS/MSD RPD	24.3%	<12%	ND(0.032) J	