*Transmitted via Overnight Carrier*

August 12, 2003

Mr. Bryan Olson
EPA Project Coordinator
U.S. Environmental Protection Agency
EPA New England
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

**Re: GE-Pittsfield/Housatonic River Site**
**Newell Street Area II (GECD450)**
**Supplemental Pre-Design Investigation Report**

Dear Mr. Olson:

In October 2001, the General Electric Company (GE) submitted to the U.S. Environmental Protection Agency (EPA) the *Pre-Design Investigation Work Plan for the Newell Street Area II Removal Action* (PDI Work Plan). Subsequently, in May 2002, GE submitted to EPA a document titled *Newell Street Area II Pre-Design Investigation Work Plan Addendum* (PDI Work Plan Addendum). The PDI Work Plan and the May 2002 PDI Work Plan Addendum, collectively referred to as the PDI Work Plans, were conditionally approved by EPA in letters dated April 18, 2002 and August 21, 2002, respectively. GE completed the field investigations described in the PDI Work Plans between September and October 2002. Those field investigations are summarized in the *Pre-Design Investigation Report for Newell Street Area II Removal Action* (PDI Report) dated February 2003.

The PDI Report summarized the pre-design soil investigations performed by GE within Newell Street Area II, and evaluated the sufficiency of the available data (including the pre-design data, data from prior soil investigations, and EPA sampling data) to satisfy the pre-design soil sampling requirements and to support the development of a Conceptual Removal Design/Removal Action (RD/RA) Work Plan. Based on this assessment, GE found that the available soil characterization data were generally sufficient. However, GE did identify data needs related to the future evaluation of soils located in close proximity to some subsurface utilities, and additional data needs to allow a property owned by the City of Pittsfield to be evaluated as a separate averaging area. Supplemental sampling to satisfy these data needs was proposed in the PDI Report.

In a letter dated April 21, 2003, EPA conditionally approved the PDI Report and identified certain modifications related to the soil sampling proposed in the PDI Report. The letter also made other comments concerning the tables and figures presented in the PDI Report. GE confirmed that it had made the required changes in a May 5, 2003 letter to EPA.

This *Supplemental Pre-Design Investigation Report* (Supplemental PDI Report) summarizes the supplemental soil investigations and addresses several of EPA's general comments to tables and figures presented in the PDI Report. Those EPA comments not addressed herein will be addressed in future submittals.

A. Summary of Supplemental Pre-Design Soil Sampling

The supplemental soil investigation was performed by Blasland, Bouck & Lee, Inc. (BBL) on June 4, 2003, while CT&E Environmental Services, Inc. provided analytical services. In total, the supplemental soil sampling effort involved collecting and analyzing 13 soil samples from six locations. The scope of investigations is summarized below.

- As part of the pre-design soil investigations, a more detailed assessment of subsurface utilities and corresponding utility bands was performed. This utility assessment revealed that a 20-inch sanitary sewer line located in the western portion of Newell Street Area II is within the boundaries of the thin strip of land discussed below owned by the City of Pittsfield, and thus needed to be moved on the maps approximately 15 to 20 feet to the east of where it was shown on the maps in the PDI Work Plans. Due to this change, an approximate 220-foot portion of the 50-foot-wide utility band along this sewer line did not have sufficient polychlorinated biphenyl (PCB) data to characterize the soils consistent with prior pre-design investigations (i.e., PCB data every 100 to 150 linear feet to the depth of the utility). Thus, additional pre-design samples were collected for PCB analysis from boring location RAA13-C88 to the depth of the bottom of the utility trench bedding. At the time of preparation of the PDI Work Plans, sampling to a 7-foot depth was proposed because the sewer line was 7 feet below the ground surface. Based on discussions with the City of Pittsfield Engineer in the course of responding to EPA's April 21, 2003 conditional approval letter, it was learned that the bottom of the utility trench bedding can extend 2 feet below the invert of the utility pipe. Thus, although the PDI Report proposed sampling from the 1- to 3-foot, 3- to 6-foot, and 6- to 7-foot depth increments, samples actually were taken from the 1- to 3-foot, 3- to 6-foot, and 6- to 9-foot depth increments. This change was made pursuant to Condition No. 1 of the April 21, 2003 conditional approval letter and was confirmed in GE's May 5, 2003 response to the conditional approval letter.

- As a result of the rejection of certain historic PCB data through the evaluation of the sufficiency of the data summarized in the PDI Report, an approximate 230-foot segment of a 48-inch sewer line did not have sufficient PCB data to characterize the soils in the proximity of the utility. Thus, additional pre-design soil samples were collected for PCB analysis from boring location RAA13-Z90 to the depth of the bottom of the utility trench bedding. As with the sewer line described above, although this sewer line was 12 feet below ground surface, discussions with the City of Pittsfield Engineer indicated that the bottom of the utility trench bedding for this sewer line was several feet deeper. Therefore, although the PDI Report proposed sampling from the 1- to 3-foot, 3- to 6-foot, 6- to 10-foot, and 10- to 12-foot depth increments, samples were actually taken from the 1- to 3-foot, 3- to 6-foot, 6- to 10-foot, and 10- to 15-foot depth increments. This change also was made pursuant to Condition No. 1 of the April 21, 2003 conditional approval letter and was confirmed in GE's May 5, 2003 response to the conditional approval letter.

- Subsequent to submittal of the PDI Work Plans, GE determined that the thin strip of land situated to the southwest of Parcel J9-23-8, and on which overhead electric utility lines and a sanitary sewer line are located, is owned by the City of Pittsfield. Previously, this land was thought to be an easement rather than a separately owned property. Accordingly, to support future RD/RA evaluations of this City-owned property as a separate averaging area, GE collected and analyzed seven soil samples at four locations from within this parcel for one or more groups of Appendix IX+3 constituents.

- To better characterize the soils on the western portion of Parcel J9-23-8, a soil sample was collected at boring location RAA13-Z88 from the 3- to 6-foot depth increment and analyzed for semi-volatile organic compounds (SVOCs), polychlorinated dibenzo-p-dioxins/polychlorinated dibenzofurans (PCDDs/PCDFs), and inorganics. This sample was taken pursuant to Condition No. 2(b) of the April 21, 2003 conditional approval letter.

The supplemental soil sampling and analyses are summarized in the table below.

| Parcel ID | Sample Location | Sample Depth (feet) | Analyses Performed | | | | |
|---|---|---|---|---|---|---|---|
| | | | PCBs | VOCs | SVOCs | Inorganics | PCDDs/PCDFs |
| City of Pittsfield | RAA13-C88 | 1-3 | X | X | X | X | X |
| | RAA13-C88 | 3-6 | X | -- | -- | -- | -- |
| | RAA13-C88 | 6-9 | X | X | X | X | -- |
| | RAA13-F91 | 1-3 | -- | X | X | X | X |
| | RAA13-F91 | 3-6 | -- | X | X | X | X |
| | RAA13-G92 | 1-3 | -- | X | X | X | X |
| | RAA13-G92 | 10-15 | -- | X | X | X | -- |
| | SL0131 | 0-1 | -- | X | -- | -- | -- |
| J9-23-8 | RAA13-Z88 | 3-6 | -- | -- | X | X | X |
| | RAA13-Z90 | 1-3 | X | -- | -- | -- | -- |
| | RAA13-Z90 | 3-6 | X | -- | -- | -- | -- |
| | RAA13-Z90 | 6-10 | X | -- | -- | -- | -- |
| | RAA13-Z90 | 10-15 | X | -- | -- | -- | -- |

Notes:
-- = Analysis was not performed.
VOCs = Volatile Organic Compounds

All field and analytical activities conducted by GE were performed in accordance with GE's approved *Field Sampling Plan/Quality Assurance Project Plan* (FSP/QAPP). The boring logs for each location are presented in Attachment A.

Figure 1, attached, provides an overall site map. Figure 2 shows the identities of the different parcels that collectively comprise Newell Street Area II. The supplemental sample locations, along with the locations of the samples collected by GE and EPA during the pre-design investigations and the locations of usable historical samples, are identified on Figure 3 (for PCB samples) and Figures 4 through 8 (for samples analyzed for other Appendix IX+3 constituents). The data resulting from the collection of the supplemental soil samples are presented in Tables 1 and 2 (PCB and Appendix IX+3 data, respectively). Table 2 summarizes the results for constituents that were detected in one or more samples, while a complete listing of the Appendix IX+3 laboratory results is included in Attachment B.

The supplemental pre-design soil analytical data have undergone data review validation in accordance with Section 7.5 of the FSP/QAPP. The results of this data validation are presented in Attachment C. As discussed in that report, 100% of the GE supplemental pre-design data are considered to be usable, which is greater than the minimum required usability of 90% as specified in the FSP/QAPP. Thus, the supplemental pre-design soil data set meets the data quality objectives set forth in the PDI Work Plans and the FSP/QAPP.

As a result of the supplemental pre-design sampling, the data to satisfy the needs described above have been obtained. There are now adequate data in the 220-foot portion of the 20-inch sewer line utility corridor located in the western portion of Newell Street, in the 230-foot segment of the 48-inch sewer line utility corridor along the northern portion of the RAA, generally for the thin strip of land southwest of Parcel J9-23-8 owned by the City of Pittsfield, and for the characterization of non-PCB Appendix IX+3 constituents in the western portion of Parcel J9-23-12.

Other Modifications

In Condition No. 5 of its April 21, 2003 letter, EPA provided comments on some of the tables and figures presented in the PDI Report and directed GE to make certain changes or clarifications to those tables and figures. GE has made these changes, as appropriate, on the figures included in this Supplemental PDI Report. EPA comments to the report tables will be reflected in the forthcoming Conceptual RD/RA Work Plan, as discussed below.

Assessment of Potential Data Needs

As discussed above, the additional data resulting from this supplemental soil investigation combined with the soil data presented in the PDI Report satisfy pre-design sampling requirements and are sufficient to support future RD/RA evaluations. Therefore, GE is not proposing to collect any additional soil samples at this time. As stated in the May 5, 2003 response letter to EPA's conditional approval, GE will, as part of future RD/RA evaluations, evaluate the need for additional sampling to further delineate the extent of elevated lead or PCDD/PCDF concentrations at the sample locations specifically referred to in the EPA's April 21, 2003 conditional approval letter (i.e., G92, SL0124, A97, and B90) and at other locations if found necessary.

Future Activities and Schedule

GE proposes to proceed with the evaluation of the need for and type of any additional data that may be required to perform the RD/RA evaluations and with the mapping work described in Section 3.4 of the PDI Report. If the data evaluations indicate the need for any additional data to support a potential response action, GE will propose the scope of such sampling and a schedule, for EPA's review and approval, within 7 months from the date of EPA approval of this Supplemental PDI Report. If GE concludes within such time that no supplemental sampling is needed, GE will so advise EPA by letter and propose a schedule for submitting the Conceptual RD/RA Work Plan for Newell Street Area II, likely within approximately 2 months of EPA's approval of that letter. The contents of the Conceptual RD/RA Work Plan will be consistent with Section 3.3 of the SOW and as outlined in the PDI Report.

Please call Dick Gates or me if you have any questions about this Supplemental PDI Report.

Sincerely,

Andrew T. Silfer, P.E.
GE Project Coordinator

V:\GE_Pittsfield_Newell_St_II_Reports\1183199.doc
Attachments

cc: Tim Conway, EPA*
Holly Inglis, EPA*
Michael Nalipinski, EPA*
Rose Howell, EPA*
K.C. Mitkevicius, USACE*
S. Steenstrup, MDEP*
Alan Weinberg, MDEP
Robert Bell, MDEP
Thomas Angus, MDEP
Nancy E. Harper, MA AG*
Dale Young, MA EOEA*
Mayor Sarah Hathaway, City of Pittsfield
Thomas Hickey, Director, PEDA*
Pittsfield Department of Health*
J. Bernstein, Bernstein, Cushner & Kimmel*
Dawn Jamros, Weston*
Teresa Bowers, Gradient*
Michael Carroll, GE
Richard Gates, GE*
Rod McLaren, GE
James Nuss, BBL*
James Bieke, Shea & Gardner*
Western Massachusetts Electric Company*
(Owner of Parcels J9-23-6 and J9-23-8)
Affected Property Owner - Parcel J9-23-4*
Public Information Repositories*
GE Internal Repositories*

(* with attachments)

# *Tables*

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

**TABLE 1**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR PCBs**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**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 |
|---|---|---|---|---|---|---|---|---|---|---|
| RAA13-C88 | 1-3 | 6/4/2003 | ND(0.037) | ND(0.037) | ND(0.037) | ND(0.037) | ND(0.037) | 1.1 | 0.25 | 1.35 |
| | 3-6 | 6/4/2003 | ND(0.056) | ND(0.056) | ND(0.056) | ND(0.056) | ND(0.056) | 0.31 | 0.045 J | 0.355 |
| | 6-9 | 6/4/2003 | ND(0.051) | ND(0.051) | ND(0.051) | ND(0.051) | ND(0.051) | 0.24 | 0.044 J | 0.284 |
| RAA13-Z90 | 1-3 | 6/4/2003 | ND(22) [ND(22)] | ND(22) [ND(22)] | ND(22) [ND(22)] | ND(22) [ND(22)] | ND(22) [ND(22)] | 400 [530] | 83 [110] | 483 [640] |
| | 3-6 | 6/4/2003 | ND(1.9) | ND(1.9) | ND(1.9) | ND(1.9) | ND(1.9) | 7.1 | 5.3 | 12.4 |
| | 6-10 | 6/4/2003 | ND(0.041) | ND(0.041) | ND(0.041) | ND(0.041) | ND(0.041) | 0.11 | ND(0.041) | 0.11 |
| | 10-15 | 6/4/2003 | ND(0.044) | ND(0.044) | ND(0.044) | ND(0.044) | ND(0.044) | 0.093 | ND(0.044) | 0.093 |

Notes:
1. Samples were collected by Blasland, Bouck & Lee, Inc., and submitted to CT&E Environmental Services, Inc. for analysis of PCBs.
3. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan, General Electric Company, Pittsfield, Massachusetts, Blasland Bouck & Lee, Inc. (approved November 4, 2002 and resubmitted December 10, 2002).
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 that the associated numerical value is an estimated concentration.

**TABLE 2**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR APPENDIX IX+3 CONSTITUENTS**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**
**(Results are presented in dry weight parts per million, ppm)**

| Sample ID: / Sample Depth(Feet): / Parameter / Date Collected: | RAA13-C88 1-3 06/04/03 | RAA13-C88 6-8 06/04/03 | RAA13-C88 6-9 06/04/03 | RAA13-F91 1-3 06/04/03 | RAA13-F91 3-6 06/04/03 |
|---|---|---|---|---|---|
| **Volatile Organics** | | | | | |
| 1,4-Dioxane | ND(0.11) J | ND(0.16) J | NA | ND(0.12) J [ND(0.12) J] | NA |
| Acetone | ND(0.022) | 0.020 J | NA | ND(0.024) [ND(0.024)] | NA |
| Chlorobenzene | ND(0.0055) | ND(0.0078) | NA | 0.0061 [ND(0.0061)] | NA |
| Trichloroethene | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Xylenes (total) | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| **Semivolatile Organics** | | | | | |
| 1,2,4,5-Tetrachlorobenzene | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 1,2,4-Trichlorobenzene | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 1,2-Dichlorobenzene | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 1,3-Dichlorobenzene | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 1,4-Dichlorobenzene | ND(0.37) J | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 2-Methylnaphthalene | ND(0.37) | NA | ND(0.51) | ND(0.40) [0.22 J] | 1.0 |
| 2-Methylphenol | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 3&4-Methylphenol | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| Acenaphthene | ND(0.37) | NA | ND(0.51) | 0.38 J [0.55] | 1.3 |
| Acenaphthylene | ND(0.37) | NA | ND(0.51) | 0.32 J [0.35 J] | ND(0.40) |
| Aniline | ND(0.37) | NA | ND(0.51) | 0.26 J [0.18 J] | 0.20 J |
| Anthracene | ND(0.37) | NA | ND(0.51) | 1.6 J [0.94 J] | 1.1 |
| Benzo(a)anthracene | ND(0.37) | NA | ND(0.51) | 4.1 J [2.4 J] | 1.8 |
| Benzo(a)pyrene | ND(0.37) | NA | ND(0.51) | 2.7 [2.2] | 1.2 |
| Benzo(b)fluoranthene | ND(0.37) | NA | ND(0.51) | 3.7 [2.7] | 1.3 |
| Benzo(g,h,i)perylene | ND(0.37) | NA | ND(0.51) | 1.6 [1.4] | 0.43 |
| Benzo(k)fluoranthene | ND(0.37) | NA | ND(0.51) | 1.4 [1.1] | 0.57 |
| Chrysene | ND(0.37) | NA | ND(0.51) | 4.4 [2.7] | 1.7 |
| Dibenzo(a,h)anthracene | ND(0.37) | NA | ND(0.51) | 0.50 [0.43] | 0.18 J |
| Dibenzofuran | ND(0.37) | NA | ND(0.51) | 0.20 J [0.20 J] | 0.42 |
| Fluoranthene | ND(0.37) | NA | ND(0.51) | 9.0 [6.2] | 4.1 |
| Fluorene | ND(0.37) | NA | ND(0.51) | 0.38 J [0.36 J] | 0.62 |
| Indeno(1,2,3-cd)pyrene | ND(0.37) | NA | ND(0.51) | 1.4 [1.2] | 0.45 |
| Naphthalene | ND(0.37) | NA | ND(0.51) | 0.13 J [0.52 J] | 2.2 |
| N-Nitrosodiphenylamine | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Pentachlorobenzene | ND(0.37) J | NA | ND(0.51) J | ND(0.40) J [ND(0.41) J] | ND(0.40) J |
| Phenanthrene | ND(0.37) | NA | ND(0.51) | 7.4 J [3.7 J] | 4.2 |
| Phenol | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Pyrene | ND(0.37) J | NA | ND(0.51) | 8.0 [5.4] | 3.3 |
| **Furans** | | | | | |
| 2,3,7,8-TCDF | ND(0.0000033) XY | NA | NA | 0.0022 Y [0.00021 Y] | 0.000079 Y |
| TCDFs (total) | 0.0000029 | NA | NA | 0.0021 I [0.0018 I] | 0.0027 I |
| 1,2,3,7,8-PeCDF | ND(0.00000041) | NA | NA | 0.00011 [0.00015] | 0.000072 |
| 2,3,4,7,8-PeCDF | ND(0.00000035) | NA | NA | 0.00016 [0.00029] | 0.00013 |
| PeCDFs (total) | 0.0000022 | NA | NA | 0.0040 I [0.0047 I] | 0.0049 I |
| 1,2,3,4,7,8-HxCDF | ND(0.00000021) | NA | NA | 0.00066 I [0.0014 I] | 0.00079 |
| 1,2,3,6,7,8-HxCDF | ND(0.00000022) | NA | NA | 0.00029 I [0.00058 I] | 0.00056 I |
| 1,2,3,7,8,9-HxCDF | ND(0.00000021) | NA | NA | 0.000014 [0.000023] | 0.000019 |
| 2,3,4,6,7,8-HxCDF | ND(0.00000022) | NA | NA | 0.000098 [0.00014] | 0.000063 |
| HxCDFs (total) | ND(0.00000072) | NA | NA | 0.0037 I [0.0061 I] | 0.0037 I |
| 1,2,3,4,6,7,8-HpCDF | ND(0.0000010) X | NA | NA | 0.00066 [0.00079] | 0.00040 |
| 1,2,3,4,7,8,9-HpCDF | ND(0.00000025) | NA | NA | 0.00021 [0.00039] | 0.00027 |
| HpCDFs (total) | ND(0.0000015) | NA | NA | 0.0018 [0.0023] | 0.0012 |
| OCDF | ND(0.00000030) | NA | NA | 0.00072 [0.00063] | 0.00020 |

**TABLE 2**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR APPENDIX IX+3 CONSTITUENTS**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**
**(Results are presented in dry weight parts per million, ppm)**

| Parameter / Sample ID: / Sample Depth(Feet): / Date Collected: | RAA13-C88 1-3 06/04/03 | RAA13-C88 6-8 06/04/03 | RAA13-C88 6-9 06/04/03 | RAA13-F91 1-3 06/04/03 | RAA13-F91 3-6 06/04/03 |
|---|---|---|---|---|---|
| **Dioxins** | | | | | |
| 2,3,7,8-TCDD | ND(0.00000028) | NA | NA | 0.000072 [0.000080] | ND(0.00000079) |
| TCDDs (total) | ND(0.0000011) | NA | NA | 0.00014 [0.00014] | ND(0.0000059) |
| 1,2,3,7,8-PeCDD | ND(0.00000020) | NA | NA | ND(0.00000072) [ND(0.00000037)] | ND(0.0000011) |
| PeCDDs (total) | ND(0.0000016) | NA | NA | ND(0.000053) [ND(0.00000098) X] | ND(0.000015) X |
| 1,2,3,4,7,8-HxCDD | ND(0.0000039) X | NA | NA | 0.0000072 [0.000011] | ND(0.00000056) |
| 1,2,3,6,7,8-HxCDD | ND(0.00000045) | NA | NA | ND(0.0000036) [0.000018] | ND(0.0000048) X |
| 1,2,3,7,8,9-HxCDD | ND(0.00000044) | NA | NA | ND(0.0000034) [ND(0.000013) X] | ND(0.0000089) X |
| HxCDDs (total) | ND(0.00000092) | NA | NA | 0.000058 [0.00011] | ND(0.0000035) X |
| 1,2,3,4,6,7,8-HpCDD | ND(0.00000021) | NA | NA | 0.00037 [0.00034] | 0.000099 |
| HpCDDs (total) | ND(0.0000017) | NA | NA | 0.00064 [0.00088] | 0.00016 |
| OCDD | 0.0000050 | NA | NA | 0.0025 [0.0026] | 0.00067 |
| Total TEQs (WHO TEFs) | 0.00000079 | NA | NA | 0.00050 [0.00049] | 0.00023 |
| **Inorganics** | | | | | |
| Antimony | 2.60 B | NA | ND(6.00) | 6.80 [2.30 B] | 1.40 B |
| Arsenic | 8.70 | NA | 1.60 | 6.80 [6.40] | 7.20 |
| Barium | 48.0 | NA | 37.0 | 100 [100] | 190 |
| Beryllium | ND(0.50) | NA | 0.500 | ND(0.50) [ND(0.50)] | ND(0.50) |
| Cadmium | 0.300 B | NA | 0.410 B | 1.50 [1.50] | 3.10 |
| Chromium | 9.00 J | NA | 9.80 J | 960 J [13.0 J] | 12.0 J |
| Cobalt | 12.0 | NA | 7.60 | 7.60 [7.80] | 5.20 |
| Copper | 29.0 J | NA | 12.0 J | 760 J [190 J] | 520 J |
| Cyanide | ND(0.220) | NA | 0.0460 B | 0.180 [0.230] | 0.160 |
| Lead | 23.0 J | NA | 5.20 J | 7900 J [360 J] | 230 J |
| Mercury | 0.140 J | NA | 0.0510 J | 1.00 J [0.770 J] | 2.70 J |
| Nickel | 18.0 | NA | 12.0 | 19.0 [18.0] | 18.0 |
| Selenium | ND(1.00) | NA | ND(1.20) | ND(1.00) [ND(1.00)] | ND(1.00) |
| Silver | ND(1.00) | NA | ND(1.20) | ND(1.0) [ND(1.0)] | ND(1.00) |
| Sulfide | 46.0 J | NA | 17.0 J | 19.0 J [36.0 J] | 82.0 J |
| Thallium | ND(1.10) | NA | ND(1.50) | ND(1.20) [ND(1.20)] | ND(1.20) |
| Tin | ND(10) | NA | ND(12) | 120 [36.0] | 38.0 |
| Vanadium | 7.60 | NA | 11.0 | 14.0 [15.0] | 9.00 |
| Zinc | 54.0 | NA | 55.0 | 510 [330] | 640 |

**TABLE 2**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR APPENDIX IX+3 CONSTITUENTS**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**
**(Results are presented in dry weight parts per million, ppm)**

| Parameter / Sample ID: | RAA13-F91 | RAA13-G92 | RAA13-G92 | RAA13-G92 | RAA13-Z88 | SL0131 |
|---|---|---|---|---|---|---|
| Sample Depth(Feet): | 4-6 | 1-3 | 10-12 | 10-15 | 3-6 | 0-1 |
| Date Collected: | 06/04/03 | 06/04/03 | 06/04/03 | 06/04/03 | 06/04/03 | 06/04/03 |
| **Volatile Organics** | | | | | | |
| 1,4-Dioxane | 0.089 J | 0.075 J | ND(98) J | NA | NA | ND(0.11) J |
| Acetone | ND(0.023) | ND(0.025) | ND(49) | NA | NA | ND(0.023) |
| Chlorobenzene | ND(0.0057) | ND(0.0063) | 34 | NA | NA | ND(0.0057) |
| Trichloroethene | ND(0.0057) | 0.069 | ND(2.4) | NA | NA | ND(0.0057) |
| Xylenes (total) | ND(0.0057) | ND(0.0063) | 17 | NA | NA | ND(0.0057) |
| **Semivolatile Organics** | | | | | | |
| 1,2,4,5-Tetrachlorobenzene | NA | 0.50 | NA | ND(0.49) | ND(0.42) | NA |
| 1,2,4-Trichlorobenzene | NA | 8.2 | NA | ND(0.49) | 0.16 J | NA |
| 1,2-Dichlorobenzene | NA | 0.078 J | NA | ND(0.49) | ND(0.42) | NA |
| 1,3-Dichlorobenzene | NA | 0.085 J | NA | 0.24 J | ND(0.42) | NA |
| 1,4-Dichlorobenzene | NA | 0.11 J | NA | 1.3 | ND(0.42) | NA |
| 2-Methylnaphthalene | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 2-Methylphenol | NA | 0.15 J | NA | ND(0.49) | ND(0.42) | NA |
| 3&4-Methylphenol | NA | 0.14 J | NA | ND(0.98) | ND(0.83) | NA |
| Acenaphthene | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Acenaphthylene | NA | ND(0.42) | NA | ND(0.49) | 0.23 J | NA |
| Aniline | NA | 3.9 | NA | ND(0.49) | 0.42 | NA |
| Anthracene | NA | 0.18 J | NA | ND(0.49) | 0.19 J | NA |
| Benzo(a)anthracene | NA | 0.40 J | NA | ND(0.49) | 0.54 | NA |
| Benzo(a)pyrene | NA | 0.45 | NA | ND(0.49) | 0.53 | NA |
| Benzo(b)fluoranthene | NA | 0.86 | NA | ND(0.49) | 0.64 | NA |
| Benzo(g,h,i)perylene | NA | 0.50 | NA | ND(0.49) | 0.34 J | NA |
| Benzo(k)fluoranthene | NA | 0.32 J | NA | ND(0.49) | 0.24 J | NA |
| Chrysene | NA | 0.74 | NA | ND(0.49) | 0.51 | NA |
| Dibenzo(a,h)anthracene | NA | 0.13 J | NA | ND(0.49) | 0.11 J | NA |
| Dibenzofuran | NA | 0.24 J | NA | ND(0.49) | ND(0.42) | NA |
| Fluoranthene | NA | 1.5 | NA | ND(0.49) | 0.89 | NA |
| Fluorene | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Indeno(1,2,3-cd)pyrene | NA | 0.41 J | NA | ND(0.49) | 0.30 J | NA |
| Naphthalene | NA | 0.27 J | NA | 0.21 J | 0.14 J | NA |
| N-Nitrosodiphenylamine | NA | 0.18 J | NA | ND(0.49) | ND(0.42) | NA |
| Pentachlorobenzene | NA | 0.25 J | NA | ND(0.49) J | ND(0.42) J | NA |
| Phenanthrene | NA | 1.1 | NA | ND(0.49) | 0.58 | NA |
| Phenol | NA | 1.9 | NA | ND(0.49) | ND(0.42) | NA |
| Pyrene | NA | 1.0 | NA | ND(0.49) | 1.1 | NA |
| **Furans** | | | | | | |
| 2,3,7,8-TCDF | NA | 0.068 Y | NA | NA | 0.00071 Y | NA |
| TCDFs (total) | NA | 0.34 I | NA | NA | 0.012 | NA |
| 1,2,3,7,8-PeCDF | NA | 0.032 | NA | NA | 0.00059 | NA |
| 2,3,4,7,8-PeCDF | NA | 0.049 | NA | NA | 0.00064 | NA |
| PeCDFs (total) | NA | 0.38 I | NA | NA | 0.029 | NA |
| 1,2,3,4,7,8-HxCDF | NA | 0.094 I | NA | NA | 0.0020 | NA |
| 1,2,3,6,7,8-HxCDF | NA | 0.033 I | NA | NA | 0.0025 I | NA |
| 1,2,3,7,8,9-HxCDF | NA | 0.0011 | NA | NA | 0.000028 | NA |
| 2,3,4,6,7,8-HxCDF | NA | 0.013 | NA | NA | 0.00028 | NA |
| HxCDFs (total) | NA | 0.28 I | NA | NA | 0.018 | NA |
| 1,2,3,4,6,7,8-HpCDF | NA | 0.080 | NA | NA | 0.0029 | NA |
| 1,2,3,4,7,8,9-HpCDF | NA | 0.013 | NA | NA | 0.00044 | NA |
| HpCDFs (total) | NA | 0.13 | NA | NA | 0.0065 | NA |
| OCDF | NA | 0.058 | NA | NA | 0.0021 | NA |

**TABLE 2**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR APPENDIX IX+3 CONSTITUENTS**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**
**(Results are presented in dry weight parts per million, ppm)**

| Parameter / Sample ID: / Sample Depth(Feet): / Date Collected: | RAA13-F91 4-6 06/04/03 | RAA13-G92 1-3 06/04/03 | RAA13-G92 10-12 06/04/03 | RAA13-G92 10-15 06/04/03 | RAA13-Z88 3-6 06/04/03 | SL0131 0-1 06/04/03 |
|---|---|---|---|---|---|---|
| **Dioxins** | | | | | | |
| 2,3,7,8-TCDD | NA | 0.00033 | NA | NA | 0.000026 | NA |
| TCDDs (total) | NA | 0.016 | NA | NA | 0.00023 | NA |
| 1,2,3,7,8-PeCDD | NA | ND(0.00060) X | NA | NA | ND(0.00000069) | NA |
| PeCDDs (total) | NA | 0.0020 | NA | NA | ND(0.000047) X | NA |
| 1,2,3,4,7,8-HxCDD | NA | 0.00077 | NA | NA | 0.000020 | NA |
| 1,2,3,6,7,8-HxCDD | NA | 0.0015 | NA | NA | 0.000025 | NA |
| 1,2,3,7,8,9-HxCDD | NA | 0.0021 | NA | NA | 0.000038 | NA |
| HxCDDs (total) | NA | 0.015 | NA | NA | 0.00026 | NA |
| 1,2,3,4,6,7,8-HpCDD | NA | 0.0087 | NA | NA | 0.00019 | NA |
| HpCDDs (total) | NA | 0.017 | NA | NA | 0.00036 | NA |
| OCDD | NA | 0.015 | NA | NA | 0.00057 | NA |
| Total TEQs (WHO TEFs) | NA | 0.049 | NA | NA | 0.00097 | NA |
| **Inorganics** | | | | | | |
| Antimony | NA | 31.0 | NA | 1.00 B | 3.30 B | NA |
| Arsenic | NA | 15.0 | NA | 2.80 | 4.70 | NA |
| Barium | NA | 480 | NA | 51.0 | 77.0 | NA |
| Beryllium | NA | 1.20 | NA | ND(0.50) | ND(0.50) | NA |
| Cadmium | NA | 12.0 | NA | 0.190 B | 1.30 | NA |
| Chromium | NA | 200 J | NA | 8.00 J | 16.0 J | NA |
| Cobalt | NA | 18.0 | NA | 5.10 | 6.10 | NA |
| Copper | NA | 3100 J | NA | 12.0 J | 200 J | NA |
| Cyanide | NA | 1.00 | NA | 0.0800 B | 0.220 | NA |
| Lead | NA | 4400 J | NA | 8.60 J | 900 J | NA |
| Mercury | NA | 25.0 J | NA | 0.0660 J | 0.370 J | NA |
| Nickel | NA | 140 | NA | 10.0 | 11.0 | NA |
| Selenium | NA | 1.20 | NA | ND(1.10) | ND(1.00) | NA |
| Silver | NA | 13.0 | NA | ND(1.10) | ND(1.0) | NA |
| Sulfide | NA | 10.0 J | NA | 59.0 J | 16.0 J | NA |
| Thallium | NA | 14.0 | NA | ND(1.50) | ND(1.20) | NA |
| Tin | NA | 280 | NA | 5.10 B | 180 | NA |
| Vanadium | NA | 14.0 | NA | 8.70 | 7.90 | NA |
| Zinc | NA | 5900 | NA | 59.0 | 360 | NA |

**TABLE 2**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR APPENDIX IX+3 CONSTITUENTS**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**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 CT&E Environmental Services, Inc. for analysis of Appendix IX+3 constituents.
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan, General Electric Company, Pittsfield, Massachusetts, Blasland Bouck & Lee, Inc. (approved November 4, 2002 and resubmitted December 10, 2002).
3. NA - Not Analyzed.
4. ND - Analyte was not detected. The number in parentheses is the associated detection limit.
5. 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.
6. Field duplicate sample results are presented in brackets.
7. With the exception of dioxin/furans, only those constituents detected in one or more samples are summarized.

Data Qualifiers:

Organics (volatiles, semivolatiles, dioxin/furans)

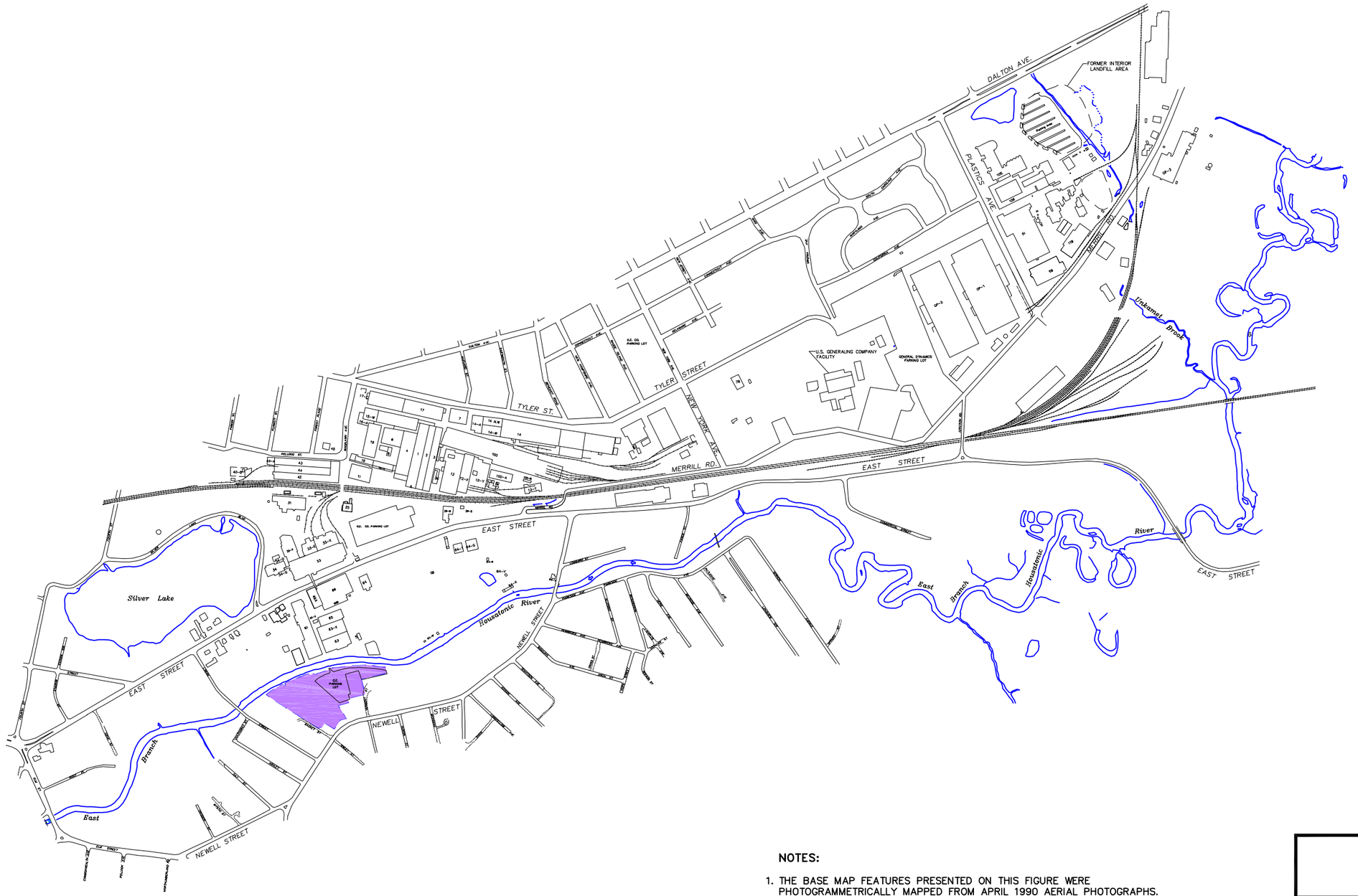
I - Polychlorinated Diphenyl Ether (PCDPE) Interference.
J - Indicates that the associated numerical value is an estimated concentration.
X - Estimated maximum possible concentration.
Y - 2,3,7,8-TCDF results have been confirmed on a DB-225 column.

Inorganics

B - Indicates an estimated value between the instrument detection limit (IDL) and practical quantitation limit (PQL).
J - Indicates that the associated numerical value is an estimated concentration.

# *Figures*

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




**LEGEND**

- APPROXIMATE RAA BOUNDARY
- NEWELL STREET AREA II

0 1000' 2000'

GRAPHIC SCALE

**NOTES:**

1. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE WERE PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS. ADDITIONALLY, CONSTRUCTION PLANS PROVIDED BY GENERAL ELECTRIC COMPANY WERE USED.
2. SITE BOUNDARIES ARE APPROXIMATE.
3. NOT ALL PHYSICAL FEATURES SHOWN.

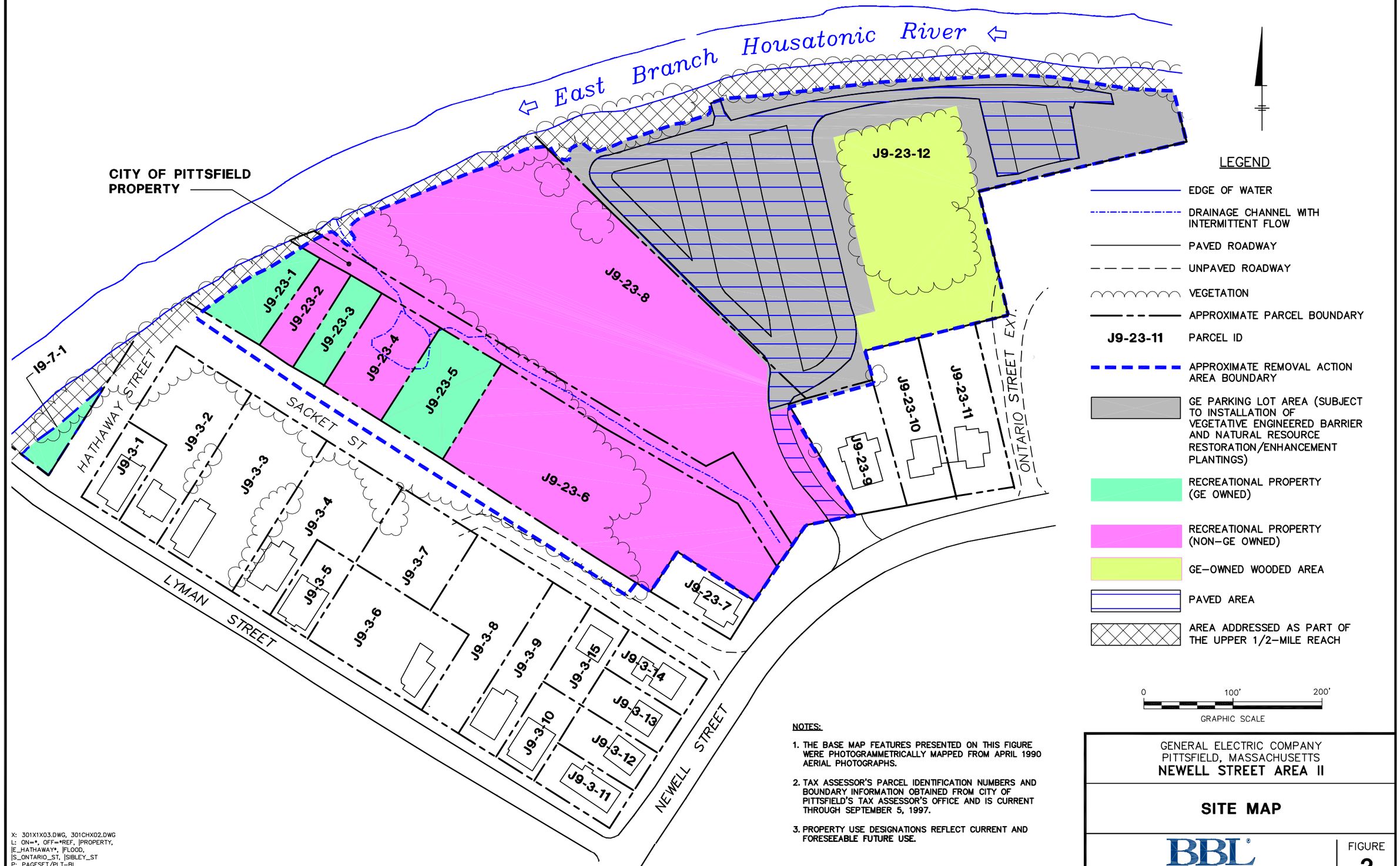
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
**NEWELL STREET AREA II**

# SITE LOCATION MAP

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

FIGURE
**1**

L: ON=*, OFF=REF*
P: PAGESET/PLT-BL
8/11/03 SYR-54-DMW SDL DJP
N/30193002/30193B01.DWG




NOTES:

1. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE WERE PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS.
2. TAX ASSESSOR'S PARCEL IDENTIFICATION NUMBERS AND BOUNDARY INFORMATION OBTAINED FROM CITY OF PITTSFIELD'S TAX ASSESSOR'S OFFICE AND IS CURRENT THROUGH SEPTEMBER 5, 1997.
3. PROPERTY USE DESIGNATIONS REFLECT CURRENT AND FORESEEABLE FUTURE USE.

X: 301X1X03.DWG, 301CHX02.DWG
L: ON=*, OFF=*REF, |PROPERTY, |E_HATHAWAY*, |FLOOD, |S_ONTARIO_ST, |SIBLEY_ST
P: PAGESET/PLT-BL
8/11/03 SYR-54-RLP SDL DJP
N/30193001/30193B35.DWG

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
**NEWELL STREET AREA II**

# SITE MAP

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

FIGURE
**2**


LEGEND

- APPROXIMATE EXISTING FENCE LOCATION
- APPROXIMATE PARCEL BOUNDARY
- UNPAVED ROADWAY
- J9-23-12 PARCEL ID
- APPROXIMATE RAA BOUNDARY
- 50-FOOT SURFACE SAMPLING GRID
- 100-FOOT SUBSURFACE SAMPLING GRID
- AREA PREVIOUSLY REMEDIATED
- AREA ADDRESSED AS PART OF THE UPPER 1/2-MILE REACH
- GE PARKING LOT (SUBJECT TO INSTALLATION OF VEGETATIVE ENGINEERED BARRIER AND NATURAL RESOURCE RESTORATION/ENHANCEMENT PLANTINGS)
- APPROXIMATE LOCATION OF 48-INCH SANITARY SEWER
- APPROXIMATE LOCATION OF 20-INCH SANITARY SEWER
- APPROXIMATE LOCATION OF BAND SURROUNDING SANITARY SEWER (25 FEET WIDE ON EACH SIDE OF SEWER LINE)
- ▲ SS-32 EXISTING SURFACE SOIL SAMPLE LOCATION (0- TO 1-FOOT SAMPLE DEPTH)
- ● SS-7 EXISTING SOIL BORING LOCATION (1-FOOT OR GREATER SAMPLE DEPTH)
- SL0105 BANK SOIL SAMPLE
- RAA13-C88 EXISTING SUPPLEMENTAL SOIL BORING LOCATION

NOTES:

1. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE WERE PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS.
2. CERTAIN SAMPLING LOCATIONS HAVE BEEN SURVEYED TO KNOWN PHYSICAL FEATURES BY BLASLAND, BOUCK & LEE, INC. AND HILL ENGINEERS, ARCHITECTS, PLANNERS, INC. ALL SAMPLING LOCATIONS SHOWN ON THIS MAPPING ARE APPROXIMATE. HOWEVER SURVEY DATA ARE AVAILABLE FOR CERTAIN OF THESE SAMPLING LOCATIONS TO IDENTIFY PRECISE LOCATIONS.
3. LIMITS OF BUILDINGS, PROPERTY BOUNDARIES, AND ROADS ARE APPROXIMATE.

0 60' 120'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

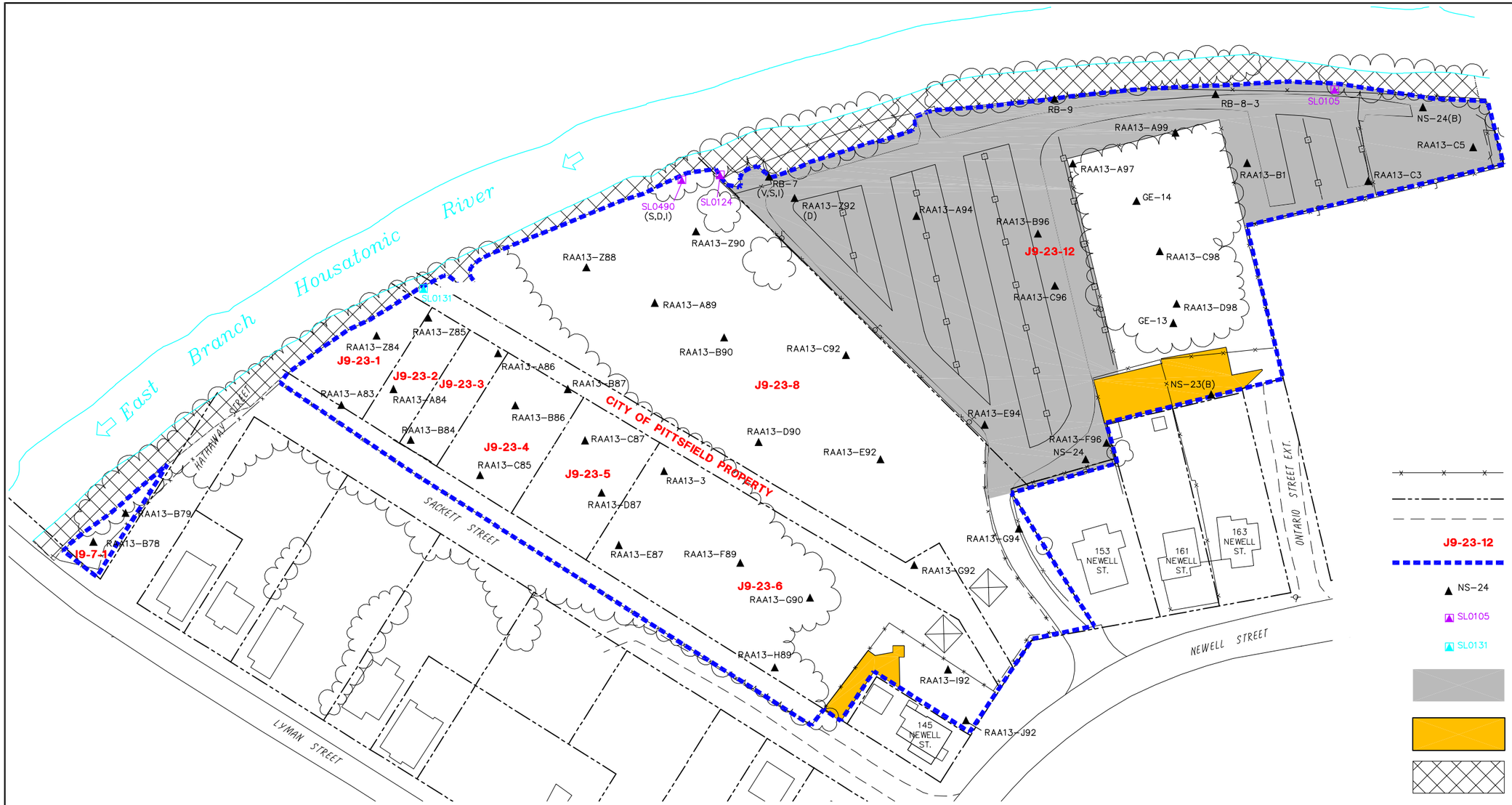
NEWELL STREET AREA II

# EXISTING PCB SOIL SAMPLE LOCATIONS

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

FIGURE 3

X: 30193X10.DWG
L: ON=*, OFF=REF
8/11/03 SYR-B5-DJP SDL DJP
N/30193001/30193B36.DWG




LEGEND

- APPROXIMATE EXISTING FENCE LOCATION
- APPROXIMATE PARCEL BOUNDARY
- UNPAVED ROADWAY
- J9-23-12 PARCEL ID
- APPROXIMATE RAA BOUNDARY
- ▲ NS-24 EXISTING SURFACE SOIL SAMPLE LOCATION (0- TO 1-FOOT DEPTH INCREMENT)
- ▲ SL0105 BANK SOIL SAMPLE
- ▲ SL0131 SUPPLEMENTAL SOIL SAMPLE LOCATION
- GE PARKING LOT AREA (SUBJECT TO INSTALLATION OF VEGETATIVE ENGINEERED BARRIER AND NATURAL RESOURCE RESTORATION/ENHANCEMENT PLANTINGS)
- AREA PREVIOUSLY REMEDIATED
- AREA ADDRESSED AS PART OF THE UPPER 1/2-MILE REACH

0 50' 100'
GRAPHIC SCALE

NOTES:

1. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE WERE PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS.
2. CERTAIN SAMPLING LOCATIONS HAVE BEEN SURVEYED TO KNOWN PHYSICAL FEATURES BY BLASLAND, BOUCK & LEE, INC. AND HILL ENGINEERS, ARCHITECTS, PLANNERS, INC. ALL SAMPLING LOCATIONS SHOWN ON THIS MAPPING ARE APPROXIMATE. HOWEVER SURVEY DATA ARE AVAILABLE FOR CERTAIN OF THESE SAMPLING LOCATIONS TO IDENTIFY PRECISE LOCATIONS.
3. LIMITS OF BUILDINGS, PROPERTY BOUNDARIES, AND ROADS ARE APPROXIMATE.
4. SOIL SAMPLES HAVE BEEN ANALYZED FOR ALL APPENDIX IX+3 CONSTITUENTS (EXCLUDING PESTICIDES AND HERBICIDES) UNLESS OTHERWISE INDICATED IN PARENTHESIS. THE CONSTITUENT GROUPS ARE:

   V = VOLATILE ORGANIC COMPOUNDS (VOCs)
   S = SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)
   D = POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORINATED DIBENZOFURANS (PCDFs)
   I = INORGANICS

5. (B) = DIFFERENTIATES BORING LOCATIONS WHERE SAMPLES WERE COLLECTED IN JUNE 1995 FROM IDENTICALLY IDENTIFIED SURFACE LOCATIONS WHERE SAMPLES WERE COLLECTED IN OCTOBER 1993.

X: 30193X10.DWG
L: ON=*, OFF=*REF*, *GRID*
P: PAGESET/PLT-DL
8/11/03 SYR-85-DJP SDL DJP
N/30193001/30193B37.DWG

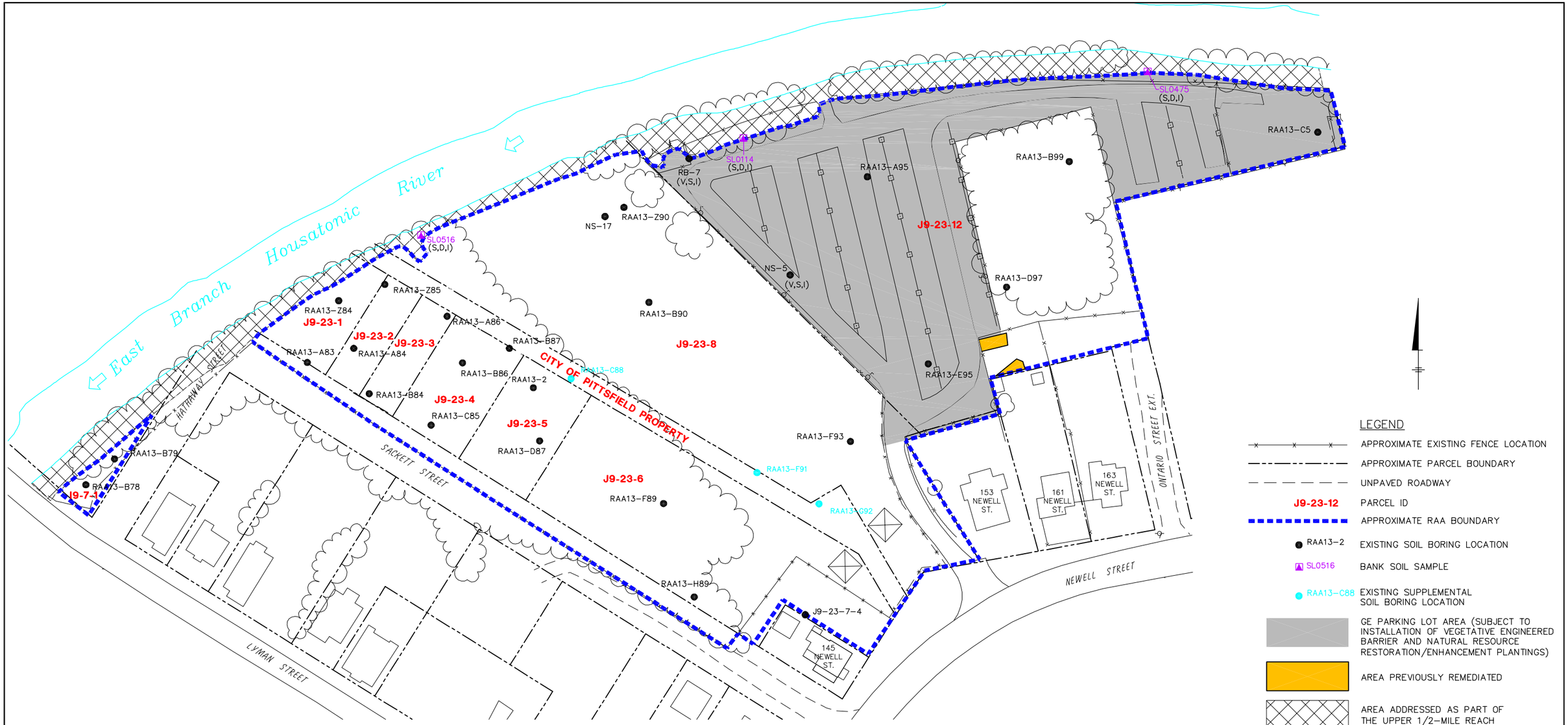
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

NEWELL STREET AREA II

# EXISTING APPENDIX IX+3 SOIL SAMPLE LOCATIONS (0- TO 1-FOOT DEPTH INCREMENT)

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

FIGURE
4




LEGEND

- APPROXIMATE EXISTING FENCE LOCATION
- APPROXIMATE PARCEL BOUNDARY
- UNPAVED ROADWAY
- J9-23-12 PARCEL ID
- APPROXIMATE RAA BOUNDARY
- RAA13-2 EXISTING SOIL BORING LOCATION
- SL0516 BANK SOIL SAMPLE
- RAA13-C88 EXISTING SUPPLEMENTAL SOIL BORING LOCATION
- GE PARKING LOT AREA (SUBJECT TO INSTALLATION OF VEGETATIVE ENGINEERED BARRIER AND NATURAL RESOURCE RESTORATION/ENHANCEMENT PLANTINGS)
- AREA PREVIOUSLY REMEDIATED
- AREA ADDRESSED AS PART OF THE UPPER 1/2-MILE REACH

0 50' 100'
GRAPHIC SCALE

NOTES:

1. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE WERE PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS.
2. CERTAIN SAMPLING LOCATIONS HAVE BEEN SURVEYED TO KNOWN PHYSICAL FEATURES BY BLASLAND, BOUCK & LEE, INC. AND HILL ENGINEERS, ARCHITECTS, PLANNERS, INC. ALL SAMPLING LOCATIONS SHOWN ON THIS MAPPING ARE APPROXIMATE. HOWEVER SURVEY DATA ARE AVAILABLE FOR CERTAIN OF THESE SAMPLING LOCATIONS TO IDENTIFY PRECISE LOCATIONS.
3. LIMITS OF BUILDINGS, PROPERTY BOUNDARIES, AND ROADS ARE APPROXIMATE.
4. SOIL SAMPLES HAVE BEEN ANALYZED FOR APPENDIX IX+3 CONSTITUENTS (EXCLUDING PESTICIDES AND HERBICIDES) UNLESS OTHERWISE INDICATED IN PARENTHESIS. THE CONSTITUENT GROUPS ARE:

   V = VOLATILE ORGANIC COMPOUNDS (VOCs)
   S = SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)
   D = POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORINATED DIBENZOFURANS (PCDFs)
   I = INORGANICS

X: 30193X10.DWG
L: ON=*, OFF=*REF*, *GRID*, !EXC, !EXC-PREV
P: PAGESET/PLT-DL
8/11/03 SYR-85-DJP SDL DJP
N/30193001/30193B38.DWG

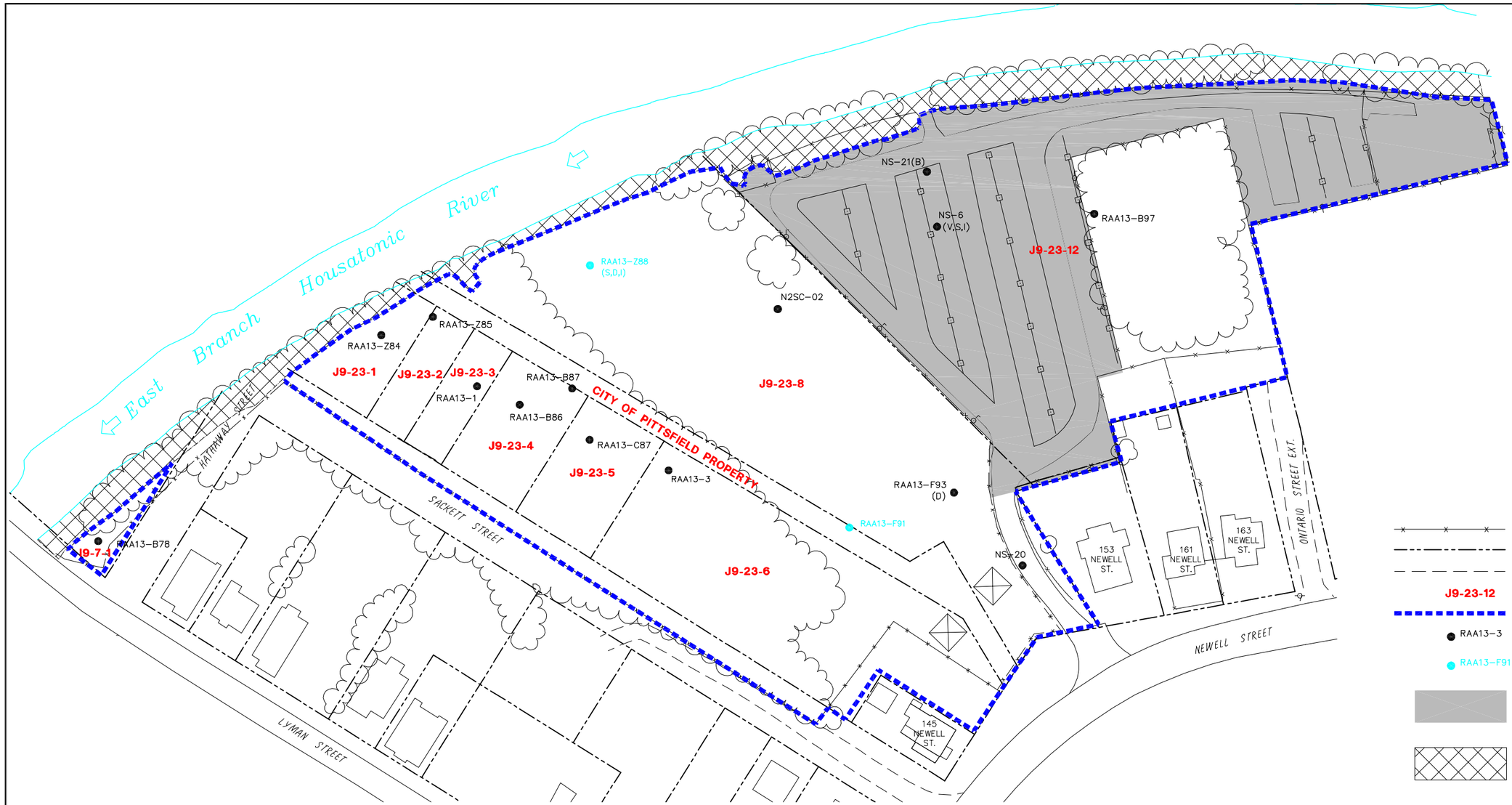
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

NEWELL STREET AREA II

# EXISTING APPENDIX IX+3 SOIL SAMPLE LOCATIONS (1- TO 3-FOOT DEPTH INCREMENT)

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

FIGURE 5




LEGEND

- APPROXIMATE EXISTING FENCE LOCATION
- APPROXIMATE PARCEL BOUNDARY
- UNPAVED ROADWAY
- J9-23-12 PARCEL ID
- APPROXIMATE RAA BOUNDARY
- RAA13-3 EXISTING SOIL BORING LOCATION
- RAA13-F91 EXISTING SUPPLEMENTAL SOIL SAMPLE LOCATION
- GE PARKING LOT AREA (SUBJECT TO INSTALLATION OF VEGETATIVE ENGINEERED BARRIER AND NATURAL RESOURCE RESTORATION/ENHANCEMENT PLANTINGS)
- AREA ADDRESSED AS PART OF THE UPPER 1/2-MILE REACH

0 50' 100'
GRAPHIC SCALE

NOTES:

1. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE WERE PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS.
2. CERTAIN SAMPLING LOCATIONS HAVE BEEN SURVEYED TO KNOWN PHYSICAL FEATURES BY BLASLAND, BOUCK & LEE, INC. AND HILL ENGINEERS, ARCHITECTS, PLANNERS, INC. ALL SAMPLING LOCATIONS SHOWN ON THIS MAPPING ARE APPROXIMATE. HOWEVER SURVEY DATA ARE AVAILABLE FOR CERTAIN OF THESE SAMPLING LOCATIONS TO IDENTIFY PRECISE LOCATIONS.
3. LIMITS OF BUILDINGS, PROPERTY BOUNDARIES, AND ROADS ARE APPROXIMATE.
4. SOIL SAMPLES HAVE BEEN ANALYZED FOR ALL APPENDIX IX+3 CONSTITUENTS (EXCLUDING PESTICIDES AND HERBICIDES) UNLESS OTHERWISE INDICATED IN PARENTHESIS. THE CONSTITUENT GROUPS ARE:

   V = VOLATILE ORGANIC COMPOUNDS (VOCs)
   S = SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)
   D = POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORINATED DIBENZOFURANS (PCDFs)
   I = INORGANICS
5. (B) = DIFFERENTIATES BORING LOCATIONS WHERE SAMPLES WERE COLLECTED IN JUNE 1995 FROM IDENTICALLY IDENTIFIED SURFACE LOCATIONS WHERE SAMPLES WERE COLLECTED IN OCTOBER 1993.

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

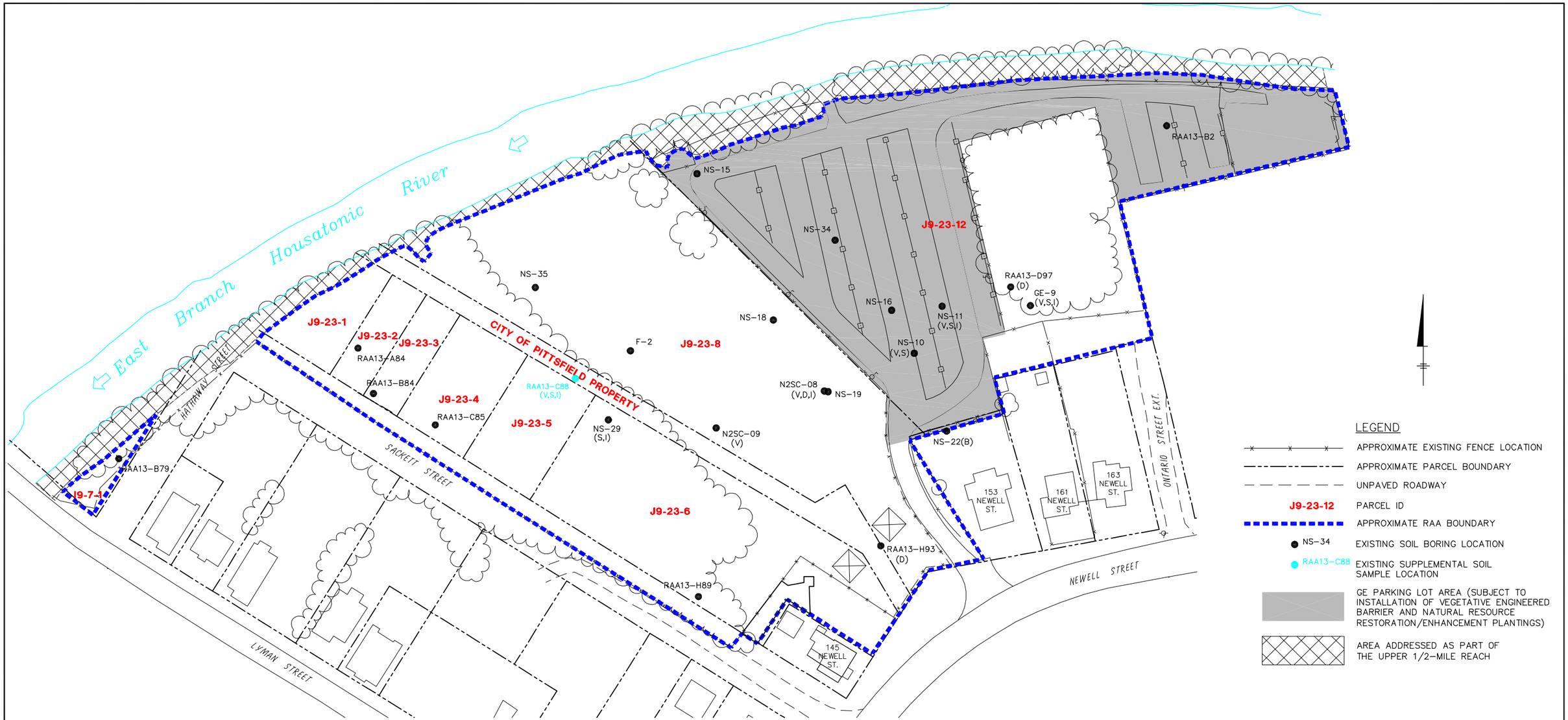
NEWELL STREET AREA II

# EXISTING APPENDIX IX+3 SOIL SAMPLE LOCATIONS (3- TO 6-FOOT DEPTH INCREMENT)

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

FIGURE 6

X: 30193X10.DWG
L: ON=*, OFF=*REF*, GRID*
|EXC, |EXC-PREV
P: PAGESET/PLT-DL
8/11/03 SYR-BS-DJP SDL DJP
N/30193001/30193B39.DWG




LEGEND

- APPROXIMATE EXISTING FENCE LOCATION
- APPROXIMATE PARCEL BOUNDARY
- UNPAVED ROADWAY
- J9-23-12 PARCEL ID
- APPROXIMATE RAA BOUNDARY
- NS-34 EXISTING SOIL BORING LOCATION
- RAA13-C88 EXISTING SUPPLEMENTAL SOIL SAMPLE LOCATION
- GE PARKING LOT AREA (SUBJECT TO INSTALLATION OF VEGETATIVE ENGINEERED BARRIER AND NATURAL RESOURCE RESTORATION/ENHANCEMENT PLANTINGS)
- AREA ADDRESSED AS PART OF THE UPPER 1/2-MILE REACH

0 50' 100'
GRAPHIC SCALE

NOTES:

1. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE WERE PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS.
2. CERTAIN SAMPLING LOCATIONS HAVE BEEN SURVEYED TO KNOWN PHYSICAL FEATURES BY BLASLAND, BOUCK & LEE, INC. AND HILL ENGINEERS, ARCHITECTS, PLANNERS, INC. ALL SAMPLING LOCATIONS SHOWN ON THIS MAPPING ARE APPROXIMATE. HOWEVER SURVEY DATA ARE AVAILABLE FOR CERTAIN OF THESE SAMPLING LOCATIONS TO IDENTIFY PRECISE LOCATIONS.
3. LIMITS OF BUILDINGS, PROPERTY BOUNDARIES, AND ROADS ARE APPROXIMATE.
4. SOIL SAMPLES HAVE BEEN ANALYZED FOR ALL APPENDIX IX+3 CONSTITUENTS (EXCLUDING PESTICIDES AND HERBICIDES) UNLESS OTHERWISE INDICATED IN PARENTHESIS. THE CONSTITUENT GROUPS ARE:

   V = VOLATILE ORGANIC COMPOUNDS (VOCs)
   S = SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)
   D = POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORINATED DIBENZOFURANS (PCDFs)
   I = INORGANICS

5. (B) = DIFFERENTIATES BORING LOCATIONS WHERE SAMPLES WERE COLLECTED IN JUNE 1995 FROM IDENTICALLY IDENTIFIED SURFACE LOCATIONS WHERE SAMPLES WERE COLLECTED IN OCTOBER 1993.

X: 30193X10.DWG
L: ON=*, OFF=REF*, *GRID, |EXC, |EXC-PREV
P: PAGESET/PLT-DL
8/11/03 SYR-85-DJP SDL DJP
N/30193001/30193B40.DWG

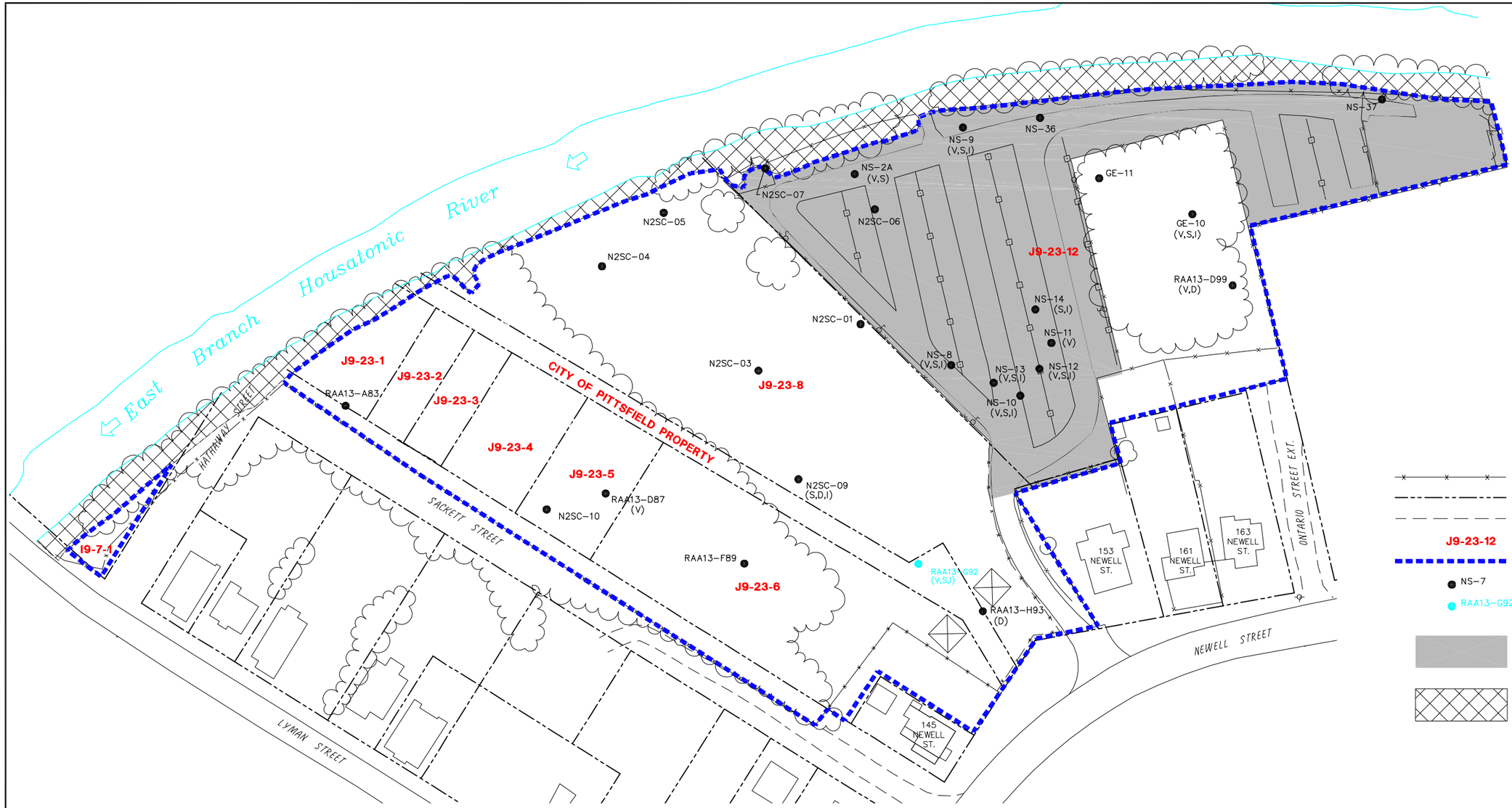
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

NEWELL STREET AREA II

# EXISTING APPENDIX IX+3 SOIL SAMPLE LOCATIONS (6- TO 10-FOOT DEPTH INCREMENT)

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

FIGURE 7




LEGEND

- APPROXIMATE EXISTING FENCE LOCATION
- APPROXIMATE PARCEL BOUNDARY
- UNPAVED ROADWAY
- J9-23-12 PARCEL ID
- APPROXIMATE RAA BOUNDARY
- NS-7 EXISTING SOIL BORING LOCATION
- RAA13-G92 EXISTING SUPPLEMENTAL SOIL SAMPLE LOCATION
- GE PARKING LOT AREA (SUBJECT TO INSTALLATION OF VEGETATIVE ENGINEERED BARRIER AND NATURAL RESOURCE RESTORATION/ENHANCEMENT PLANTINGS)
- AREA ADDRESSED AS PART OF THE UPPER 1/2-MILE REACH

0 50' 100'
GRAPHIC SCALE

NOTES:

1. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE WERE PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS.
2. CERTAIN SAMPLING LOCATIONS HAVE BEEN SURVEYED TO KNOWN PHYSICAL FEATURES BY BLASLAND, BOUCK & LEE, INC. AND HILL ENGINEERS, ARCHITECTS, PLANNERS, INC. ALL SAMPLING LOCATIONS SHOWN ON THIS MAPPING ARE APPROXIMATE. HOWEVER SURVEY DATA ARE AVAILABLE FOR CERTAIN OF THESE SAMPLING LOCATIONS TO IDENTIFY PRECISE LOCATIONS.
3. LIMITS OF BUILDINGS, PROPERTY BOUNDARIES, AND ROADS ARE APPROXIMATE.
4. SOIL SAMPLES HAVE BEEN ANALYZED FOR ALL APPENDIX IX+3 CONSTITUENTS (EXCLUDING PESTICIDES AND HERBICIDES) UNLESS OTHERWISE INDICATED IN PARENTHESIS. THE CONSTITUENT GROUPS ARE:

   V = VOLATILE ORGANIC COMPOUNDS (VOCs)
   S = SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)
   D = POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORINATED DIBENZOFURANS (PCDFs)
   I = INORGANICS

X: 30193X10.DWG
L: ON=*, OFF=*REF*, *GRID, |EXC, |EXC-PREV
P: PAGESET/PLT-DL
8/11/03 SYR-85-DJP SDL DJP
N/30193001/30193B41.DWG

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

NEWELL STREET AREA II

# EXISTING APPENDIX IX+3 SOIL SAMPLE LOCATIONS (10- TO 15-FOOT DEPTH INCREMENT)

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

FIGURE 8

# *Attachments*

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

# *Attachment A*

## Soil Boring Logs

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

**Date Start/Finish:** 6/8/03
**Drilling Company:** BBL
**Driller's Name:** JJB
**Drilling Method:** Direct Push
**Auger Size:** NA
**Rig Type:** Tractor-mounted Power Probe
**Sample Method:** 4' Macrocore

**Northing:** 532491.22
**Easting:** 131468.73
**Casing Elevation:** NA

**Borehole Depth:** 9' below grade
**Surface Elevation:** 979.7

**Descriptions By:** JAB

**Boring ID:** RAA13-C88

**Client:** General Electric Company

**Location:** Newell Street Area II

| DEPTH / ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Geologic Column | Stratigraphic Description | Boring Construction |
|---|---|---|---|---|---|---|---|
| 980 / 0 | | | | | | | |
| | 1 | 0-1 | | 0.0 | | Dark brown fine SAND and SILT, little Organic Matter. | |
| | | | | | | Dark gray-brown fine to medium SAND, some Silt and fine to medium Gravel. | Borehole backfilled with Bentonite. |
| | 2 | 1-3 | 3.1 | 0.0 | | | |
| | 3 | 3-4 | | 0.0 | | | |
| 975 / 5 | 4 | 4-6 | | 0.0 | | Gray-brown SILT, some fine Sand, trace Organic Matter, wet. | |
| | 5 | 6-8 | 3.8 | 0.0 | | | |
| | 6 | 8-9 | 0.8 | 0.0 | | | |
| 970 / 10 | | | | | | | |
| 965 / 15 | | | | | | | |

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

**Remarks:** Analyses: 1-3': PCBs, VOCs, SVOCS, Inorganics, PCDD/PCDF;
3-6': PCBs; 6-9': PCBs, VOCs (6-8'), SVOCs, Inorganics;
MS/MSD collected (PCBs, VOCs, SVOCs, Inorganics, PCDD/PCDF).

| | | |
|---|---|---|
| **Date Start/Finish:** 6/8/03<br>**Drilling Company:** BBL<br>**Driller's Name:** JJB<br>**Drilling Method:** Direct Push<br>**Auger Size:** NA<br>**Rig Type:** Tractor-mounted Power Probe<br>**Sample Method:** 4' Macrocore | **Northing:** 532395.99<br>**Easting:** 131658.37<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 6' below grade<br>**Surface Elevation:** 983.7<br><br>**Descriptions By:** JAB | **Boring ID:** RAA13-F91<br><br>**Client:** General Electric Company<br><br>**Location:** Newell Street Area II |

| DEPTH / ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Geologic Column | Stratigraphic Description | Boring Construction |
|---|---|---|---|---|---|---|---|
| 985 | | | | | | | |
| 0 | 1 | 0-1 | | 0.0 | | Dark brown fine SAND and SILT, trace Organic Matter. | Borehole backfilled with Bentonite. |
| | | | | | | Dark brown SILT, some fine Sand and Organic Matter. | |
| | 2 | 1-3 | | 0.0 | | | |
| 980 | | 3-4 | | 0.0 | | | |
| 5 | | 4-6 | 1.4 | 0.0 | × × × × | Dark brown SILT, trace fine Sand and Insulation Material. [FILL] | |
| 975 | | | | | | | |
| 10 | | | | | | | |
| 970 | | | | | | | |

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

**Remarks:** Analyses: 1-3': VOCs, SVOCS, Inorganics, PCDD/PCDF;
3-6': VOCs (4-6'), SVOCs, Inorganics, PCDD/PCDF.
Duplicate sample ID: RAA13-Dup-1 (VOCs, SVOCs, Inorganics, PCDD/PCDF; 1-3'),

| | | |
|---|---|---|
| **Date Start/Finish:** 6/8/03<br>**Drilling Company:** BBL<br>**Driller's Name:** JJB<br>**Drilling Method:** Direct Push<br>**Auger Size:** NA<br>**Rig Type:** Tractor-mounted Power Probe<br>**Sample Method:** 4' Macrocore | **Northing:** 532362.45<br>**Easting:** 131720.61<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 15' below grade<br>**Surface Elevation:** 983.9<br><br>**Descriptions By:** JAB | **Boring ID:** RAA13-G92<br><br>**Client:** General Electric Company<br><br>**Location:** Newell Street Area II |

| DEPTH / ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Geologic Column | Stratigraphic Description | Boring Construction |
|---|---|---|---|---|---|---|---|
| 985 | | | | | | | |
| 0 | 1 | 0-1 | 2.1 | 0.9 | | Dark brown fine SAND and SILT, trace Organic Matter. | Borehole backfilled with Bentonite. |
| | | | | | | Dark brown fine SAND, some Silt, fine to medium Gravel and Coal/Ash. [FILL] | |
| | 2 | 1-3 | | 0.4 | | | |
| | 3 | 3-4 | | 0.2 | | | |
| 980 | | | | | | | |
| 5 | 4 | 4-6 | 2.9 | 0.2 | | Gray-brown SILT, some fine Sand, trace Organic Matter, wet. | |
| | | 6-8 | | 0.0 | | | |
| 975 | 6 | 8-10 | 3.0 | 10.6 | | Same as above, slight petroleum odor. | |
| 10 | 7 | 10-12 | | 28.6 | | Dark brown SILT, trace Organic Matter, strong petroleum odor. | |
| | 8 | 12-14 | 3.0 | | | Gray fine SAND and SILT, slight petroleum odor. | |
| 970 | 9 | 14-15 | | 14.3 | | Gray fine to coarse SAND, wet, slight petroleum odor. | |
| 15 | | | | | | | |

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

**Remarks:** Analyses: 1-3': VOCs, SVOCS, Inorganics, PCDD/PCDF;
10-15': VOCs (10-12'), SVOCs, Inorganics.

| | | |
|---|---|---|
| **Date Start/Finish:** 6/8/03<br>**Drilling Company:** BBL<br>**Driller's Name:** JJB<br>**Drilling Method:** Direct Push<br>**Auger Size:** NA<br>**Rig Type:** Tractor-mounted Power Probe<br>**Sample Method:** 4' Macrocore | **Northing:** 532632.83<br>**Easting:** 131422.98<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 6' below grade<br>**Surface Elevation:** 979.0<br><br>**Descriptions By:** JAB | **Boring ID:** RAA13-Z88<br><br>**Client:** General Electric Company<br><br>**Location:** Newell Street Area II |

| DEPTH / ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Geologic Column | Stratigraphic Description | Boring Construction |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | | |
| | | 0-1 | | | | Grey-brown fine SAND, some Silt, medium Sand and fine to medium Gravel. | Borehole backfilled with Bentonite. |
| | | 1-3 | 3.3 | 1.2 | | | |
| 975 | | 3-4 | | 0.0 | | Dark brown fine SAND. | |
| 5 | | 4-6 | 2.0 | 0.0 | | | |
| 970 | | | | | | | |
| 10 | | | | | | | |
| 965 | | | | | | | |
| 15 | | | | | | | |

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

**Remarks:** Analyses: 3-6': SVOCS, Inorganics, PCDD/PCDF.

| | | |
|---|---|---|
| **Date Start/Finish:** 6/8/03<br>**Drilling Company:** BBL<br>**Driller's Name:** JJB<br>**Drilling Method:** Direct Push<br>**Auger Size:** NA<br>**Rig Type:** Tractor-mounted Power Probe<br>**Sample Method:** 4' Macrocore | **Northing:** 532655.44<br>**Easting:** 131522.59<br>**Casing Elevation:** NA<br><br>**Borehole Depth:** 15' below grade<br>**Surface Elevation:** 983.2<br><br>**Descriptions By:** JAB | **Boring ID:** RAA13-Z90<br><br>**Client:** General Electric Company<br><br>**Location:** Newell Street Area II |

| DEPTH / ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Geologic Column | Stratigraphic Description | Boring Construction |
|---|---|---|---|---|---|---|---|
| 985 | | | | | | | |
| 0 | | 0-1 | 2.8 | 0.0 | | Dark brown fine SAND and SILT, trace Organic Matter, Coal/Ash. [FILL] | Borehole backfilled with Bentonite. |
| | | 1-3 | | 0.0 | | | |
| | | 3-4 | | 0.0 | | Brown fine SAND and SILT, moist. | |
| 980 | 4 | 4-6 | 3.6 | 0.0 | | Light brown fine to medium SAND, moist. | |
| | 5 | 6-8 | | 0.0 | | | |
| | 6 | 8-10 | 3.7 | 0.0 | | Orange-brown fine SAND, moist.<br>Wet below 8' bgs. | |
| 975 | | | | | | | |
| 10 | | 10-12 | | 0.0 | | Gray fine to medium SAND, trace Silt, wet. | |
| | | 12-14 | 2.7 | 0.0 | | Gray-brown fine to coarse SAND, wet. | |
| 970 | 9 | 14-15 | | 0.0 | | | |
| 15 | | | | | | | |

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

**Remarks:** Analyses: 1-3': PCBs; 3-6': PCBs; 6-10': PCBs; 10-15': PCBs.
Duplicate sample ID: RAA13-Dup-2 (PCBs, 1-3').

**Date Start/Finish:** 6/8/03
**Drilling Company:** BBL
**Driller's Name:** JJB
**Drilling Method:** Direct Push
**Auger Size:** NA
**Rig Type:** Tractor-mounted Power Probe
**Sample Method:** 4' Macrocore

**Northing:** 532613.81
**Easting:** 131275.10
**Casing Elevation:** NA

**Borehole Depth:** 1' below grade
**Surface Elevation:** NA

**Descriptions By:** JAB

**Boring ID:** SL0131

**Client:** General Electric Company

**Location:** Newell Street Area II

| DEPTH ELEVATION | Sample Run Number | Sample/Int/Type | Recovery (feet) | PID Headspace (ppm) | Geologic Column | Stratigraphic Description | Boring Construction |
|---|---|---|---|---|---|---|---|
| 0 0 | 1 | 0-1 | | 0.0 | | Light brown fine SAND and SILT, little Organic Matter. | Borehole backfilled with Bentonite. |
| 5 | | | | | | | |
| 10 10 | | | | | | | |
| 15 15 | | | | | | | |

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

**Remarks:** Analyses: 0-1': VOCs.

# *Attachment B*

## Soil Analytical Results

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

**TABLE B-1**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR APPENDIX IX+3 ANALYTICAL RESULTS**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**
**(Results are presented in dry weight parts per million, ppm)**

| Parameter | Sample ID: / Sample Depth(Feet): / Date Collected: | RAA13-C88 1-3 06/04/03 | RAA13-C88 6-8 06/04/03 | RAA13-C88 6-9 06/04/03 | RAA13-F91 1-3 06/04/03 | RAA13-F91 3-6 06/04/03 |
|---|---|---|---|---|---|---|
| **Volatile Organics** | | | | | | |
| 1,1,1,2-Tetrachloroethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| 1,1,1-Trichloroethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| 1,1,2,2-Tetrachloroethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| 1,1,2-Trichloroethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| 1,1-Dichloroethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| 1,1-Dichloroethene | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| 1,2,3-Trichloropropane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| 1,2-Dibromo-3-chloropropane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| 1,2-Dibromoethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| 1,2-Dichloroethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| 1,2-Dichloropropane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| 1,4-Dioxane | | ND(0.11) J | ND(0.16) J | NA | ND(0.12) J [ND(0.12) J] | NA |
| 2-Butanone | | ND(0.011) | ND(0.016) | NA | ND(0.012) [ND(0.012)] | NA |
| 2-Chloro-1,3-butadiene | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| 2-Chloroethylvinylether | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| 2-Hexanone | | ND(0.011) | ND(0.016) | NA | ND(0.012) [ND(0.012)] | NA |
| 3-Chloropropene | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| 4-Methyl-2-pentanone | | ND(0.011) | ND(0.016) | NA | ND(0.012) [ND(0.012)] | NA |
| Acetone | | ND(0.022) | 0.020 J | NA | ND(0.024) [ND(0.024)] | NA |
| Acetonitrile | | ND(0.11) J | ND(0.16) J | NA | ND(0.12) J [ND(0.12) J] | NA |
| Acrolein | | ND(0.11) J | ND(0.16) J | NA | ND(0.12) J [ND(0.12) J] | NA |
| Acrylonitrile | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Benzene | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Bromodichloromethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Bromoform | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Bromomethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Carbon Disulfide | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Carbon Tetrachloride | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Chlorobenzene | | ND(0.0055) | ND(0.0078) | NA | 0.0061 [ND(0.0061)] | NA |
| Chloroethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Chloroform | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Chloromethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| cis-1,3-Dichloropropene | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Dibromochloromethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Dibromomethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Dichlorodifluoromethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Ethyl Methacrylate | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Ethylbenzene | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Iodomethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Isobutanol | | ND(0.11) J | ND(0.16) J | NA | ND(0.12) J [ND(0.12) J] | NA |
| Methacrylonitrile | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Methyl Methacrylate | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Methylene Chloride | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Propionitrile | | ND(0.011) | ND(0.016) | NA | ND(0.012) [ND(0.012)] | NA |
| Styrene | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Tetrachloroethene | | ND(0.0055) J | ND(0.0078) J | NA | ND(0.0060) J [ND(0.0061) J] | NA |
| Toluene | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| trans-1,2-Dichloroethene | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| trans-1,3-Dichloropropene | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| trans-1,4-Dichloro-2-butene | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Trichloroethene | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Trichlorofluoromethane | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Vinyl Acetate | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Vinyl Chloride | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |
| Xylenes (total) | | ND(0.0055) | ND(0.0078) | NA | ND(0.0060) [ND(0.0061)] | NA |

**TABLE B-1**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR APPENDIX IX+3 ANALYTICAL RESULTS**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**
**(Results are presented in dry weight parts per million, ppm)**

| Sample ID: / Sample Depth(Feet): / Parameter / Date Collected: | RAA13-C88 1-3 06/04/03 | RAA13-C88 6-8 06/04/03 | RAA13-C88 6-9 06/04/03 | RAA13-F91 1-3 06/04/03 | RAA13-F91 3-6 06/04/03 |
|---|---|---|---|---|---|
| **Semivolatile Organics** | | | | | |
| 1,2,4,5-Tetrachlorobenzene | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 1,2,4-Trichlorobenzene | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 1,2-Dichlorobenzene | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 1,2-Diphenylhydrazine | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 1,3,5-Trinitrobenzene | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 1,3-Dichlorobenzene | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 1,3-Dinitrobenzene | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| 1,4-Dichlorobenzene | ND(0.37) J | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 1,4-Naphthoquinone | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| 1-Naphthylamine | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| 2,3,4,6-Tetrachlorophenol | ND(0.37) J | NA | ND(0.51) J | ND(0.40) J [ND(0.41) J] | ND(0.40) J |
| 2,4,5-Trichlorophenol | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 2,4,6-Trichlorophenol | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 2,4-Dichlorophenol | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 2,4-Dimethylphenol | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 2,4-Dinitrophenol | ND(1.9) J | NA | ND(2.6) J | ND(2.0) J [ND(2.1) J] | ND(2.0) J |
| 2,4-Dinitrotoluene | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 2,6-Dichlorophenol | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 2,6-Dinitrotoluene | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 2-Acetylaminofluorene | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| 2-Chloronaphthalene | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 2-Chlorophenol | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 2-Methylnaphthalene | ND(0.37) | NA | ND(0.51) | ND(0.40) [0.22 J] | 1.0 |
| 2-Methylphenol | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 2-Naphthylamine | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| 2-Nitroaniline | ND(1.9) J | NA | ND(2.6) J | ND(2.0) J [ND(2.1) J] | ND(2.0) J |
| 2-Nitrophenol | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| 2-Picoline | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 3&4-Methylphenol | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| 3,3'-Dichlorobenzidine | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| 3,3'-Dimethylbenzidine | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 3-Methylcholanthrene | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| 3-Nitroaniline | ND(1.9) | NA | ND(2.6) | ND(2.0) [ND(2.1)] | ND(2.0) |
| 4,6-Dinitro-2-methylphenol | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 4-Aminobiphenyl | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| 4-Bromophenyl-phenylether | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 4-Chloro-3-Methylphenol | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 4-Chloroaniline | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 4-Chlorobenzilate | ND(0.74) J | NA | ND(1.0) J | ND(0.80) J [ND(0.82) J] | ND(0.79) J |
| 4-Chlorophenyl-phenylether | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| 4-Nitroaniline | ND(1.9) | NA | ND(2.6) | ND(2.0) [ND(2.1)] | ND(2.0) |
| 4-Nitrophenol | ND(1.9) J | NA | ND(2.6) J | ND(2.0) J [ND(2.1) J] | ND(2.0) J |
| 4-Nitroquinoline-1-oxide | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| 4-Phenylenediamine | ND(0.74) J | NA | ND(1.0) J | ND(0.80) J [ND(0.82) J] | ND(0.79) J |
| 5-Nitro-o-toluidine | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| 7,12-Dimethylbenz(a)anthracene | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| a,a'-Dimethylphenethylamine | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| Acenaphthene | ND(0.37) | NA | ND(0.51) | 0.38 J [0.55] | 1.3 |
| Acenaphthylene | ND(0.37) | NA | ND(0.51) | 0.32 J [0.35 J] | ND(0.40) |
| Acetophenone | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Aniline | ND(0.37) | NA | ND(0.51) | 0.26 J [0.18 J] | 0.20 J |
| Anthracene | ND(0.37) | NA | ND(0.51) | 1.6 J [0.94 J] | 1.1 |
| Aramite | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| Benzidine | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| Benzo(a)anthracene | ND(0.37) | NA | ND(0.51) | 4.1 J [2.4 J] | 1.8 |
| Benzo(a)pyrene | ND(0.37) | NA | ND(0.51) | 2.7 [2.2] | 1.2 |
| Benzo(b)fluoranthene | ND(0.37) | NA | ND(0.51) | 3.7 [2.7] | 1.3 |
| Benzo(g,h,i)perylene | ND(0.37) | NA | ND(0.51) | 1.6 [1.4] | 0.43 |

**TABLE B-1**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR APPENDIX IX+3 ANALYTICAL RESULTS**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**
**(Results are presented in dry weight parts per million, ppm)**

| Parameter | Sample ID: / Sample Depth(Feet): / Date Collected: | RAA13-C88 1-3 06/04/03 | RAA13-C88 6-8 06/04/03 | RAA13-C88 6-9 06/04/03 | RAA13-F91 1-3 06/04/03 | RAA13-F91 3-6 06/04/03 |
|---|---|---|---|---|---|---|
| **Semivolatile Organics (continued)** | | | | | | |
| Benzo(k)fluoranthene | | ND(0.37) | NA | ND(0.51) | 1.4 [1.1] | 0.57 |
| Benzyl Alcohol | | ND(0.74) J | NA | ND(1.0) J | ND(0.80) J [ND(0.82) J] | ND(0.79) J |
| bis(2-Chloroethoxy)methane | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| bis(2-Chloroethyl)ether | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| bis(2-Chloroisopropyl)ether | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| bis(2-Ethylhexyl)phthalate | | ND(0.36) | NA | ND(0.51) | ND(0.39) [ND(0.40)] | ND(0.39) |
| Butylbenzylphthalate | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Chrysene | | ND(0.37) | NA | ND(0.51) | 4.4 [2.7] | 1.7 |
| Diallate | | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| Dibenzo(a,h)anthracene | | ND(0.37) | NA | ND(0.51) | 0.50 [0.43] | 0.18 J |
| Dibenzofuran | | ND(0.37) | NA | ND(0.51) | 0.20 J [0.20 J] | 0.42 |
| Diethylphthalate | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Dimethylphthalate | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Di-n-Butylphthalate | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Di-n-Octylphthalate | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Diphenylamine | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Ethyl Methanesulfonate | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Fluoranthene | | ND(0.37) | NA | ND(0.51) | 9.0 [6.2] | 4.1 |
| Fluorene | | ND(0.37) | NA | ND(0.51) | 0.38 J [0.36 J] | 0.62 |
| Hexachlorobenzene | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Hexachlorobutadiene | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Hexachlorocyclopentadiene | | ND(0.37) J | NA | ND(0.51) J | ND(0.40) J [ND(0.41) J] | ND(0.40) J |
| Hexachloroethane | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Hexachlorophene | | ND(0.74) J | NA | ND(1.0) J | ND(0.80) J [ND(0.82) J] | ND(0.79) J |
| Hexachloropropene | | ND(0.37) J | NA | ND(0.51) J | ND(0.40) J [ND(0.41) J] | ND(0.40) J |
| Indeno(1,2,3-cd)pyrene | | ND(0.37) | NA | ND(0.51) | 1.4 [1.2] | 0.45 |
| Isodrin | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Isophorone | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Isosafrole | | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| Methapyrilene | | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| Methyl Methanesulfonate | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Naphthalene | | ND(0.37) | NA | ND(0.51) | 0.13 J [0.52 J] | 2.2 |
| Nitrobenzene | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| N-Nitrosodiethylamine | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| N-Nitrosodimethylamine | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| N-Nitroso-di-n-butylamine | | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| N-Nitroso-di-n-propylamine | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| N-Nitrosodiphenylamine | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| N-Nitrosomethylethylamine | | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| N-Nitrosomorpholine | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| N-Nitrosopiperidine | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| N-Nitrosopyrrolidine | | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| o,o,o-Triethylphosphorothioate | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| o-Toluidine | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| p-Dimethylaminoazobenzene | | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| Pentachlorobenzene | | ND(0.37) J | NA | ND(0.51) J | ND(0.40) J [ND(0.41) J] | ND(0.40) J |
| Pentachloroethane | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Pentachloronitrobenzene | | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| Pentachlorophenol | | ND(1.9) J | NA | ND(2.6) | ND(2.0) [ND(2.1)] | ND(2.0) |
| Phenacetin | | ND(0.74) | NA | ND(1.0) | ND(0.80) [ND(0.82)] | ND(0.79) |
| Phenanthrene | | ND(0.37) | NA | ND(0.51) | 7.4 J [3.7 J] | 4.2 |
| Phenol | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Pronamide | | ND(0.37) J | NA | ND(0.51) J | ND(0.40) J [ND(0.41) J] | ND(0.40) J |
| Pyrene | | ND(0.37) J | NA | ND(0.51) | 8.0 [5.4] | 3.3 |
| Pyridine | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Safrole | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |
| Thionazin | | ND(0.37) | NA | ND(0.51) | ND(0.40) [ND(0.41)] | ND(0.40) |

**TABLE B-1**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR APPENDIX IX+3 ANALYTICAL RESULTS**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**
**(Results are presented in dry weight parts per million, ppm)**

| Parameter | Sample ID: / Sample Depth(Feet): / Date Collected: | RAA13-C88 1-3 06/04/03 | RAA13-C88 6-8 06/04/03 | RAA13-C88 6-9 06/04/03 | RAA13-F91 1-3 06/04/03 | RAA13-F91 3-6 06/04/03 |
|---|---|---|---|---|---|---|
| **Furans** | | | | | | |
| 2,3,7,8-TCDF | | ND(0.0000033) XY | NA | NA | 0.0022 Y [0.00021 Y] | 0.000079 Y |
| TCDFs (total) | | 0.0000029 | NA | NA | 0.0021 I [0.0018 I] | 0.0027 I |
| 1,2,3,7,8-PeCDF | | ND(0.00000041) | NA | NA | 0.00011 [0.00015] | 0.000072 |
| 2,3,4,7,8-PeCDF | | ND(0.00000035) | NA | NA | 0.00016 [0.00029] | 0.00013 |
| PeCDFs (total) | | 0.0000022 | NA | NA | 0.0040 I [0.0047 I] | 0.0049 I |
| 1,2,3,4,7,8-HxCDF | | ND(0.00000021) | NA | NA | 0.00066 I [0.0014 I] | 0.00079 |
| 1,2,3,6,7,8-HxCDF | | ND(0.00000022) | NA | NA | 0.00029 I [0.00058 I] | 0.00056 I |
| 1,2,3,7,8,9-HxCDF | | ND(0.00000021) | NA | NA | 0.000014 [0.000023] | 0.000019 |
| 2,3,4,6,7,8-HxCDF | | ND(0.00000022) | NA | NA | 0.000098 [0.00014] | 0.000063 |
| HxCDFs (total) | | ND(0.00000072) | NA | NA | 0.0037 I [0.0061 I] | 0.0037 I |
| 1,2,3,4,6,7,8-HpCDF | | ND(0.0000010) X | NA | NA | 0.00066 [0.00079] | 0.00040 |
| 1,2,3,4,7,8,9-HpCDF | | ND(0.00000025) | NA | NA | 0.00021 [0.00039] | 0.00027 |
| HpCDFs (total) | | ND(0.0000015) | NA | NA | 0.0018 [0.0023] | 0.0012 |
| OCDF | | ND(0.00000030) | NA | NA | 0.00072 [0.00063] | 0.00020 |
| **Dioxins** | | | | | | |
| 2,3,7,8-TCDD | | ND(0.00000028) | NA | NA | 0.000072 [0.000080] | ND(0.00000079) |
| TCDDs (total) | | ND(0.0000011) | NA | NA | 0.00014 [0.00014] | ND(0.0000059) |
| 1,2,3,7,8-PeCDD | | ND(0.00000020) | NA | NA | ND(0.00000072) [ND(0.00000037)] | ND(0.0000011) |
| PeCDDs (total) | | ND(0.0000016) | NA | NA | ND(0.000053) [ND(0.00000098) X] | ND(0.000015) X |
| 1,2,3,4,7,8-HxCDD | | ND(0.0000039) X | NA | NA | 0.0000072 [0.000011] | ND(0.00000056) |
| 1,2,3,6,7,8-HxCDD | | ND(0.00000045) | NA | NA | ND(0.0000036) [0.000018] | ND(0.0000048) X |
| 1,2,3,7,8,9-HxCDD | | ND(0.00000044) | NA | NA | ND(0.0000034) [ND(0.000013) X] | ND(0.0000089) X |
| HxCDDs (total) | | ND(0.00000092) | NA | NA | 0.000058 [0.00011] | ND(0.0000035) X |
| 1,2,3,4,6,7,8-HpCDD | | ND(0.00000021) | NA | NA | 0.00037 [0.00034] | 0.000099 |
| HpCDDs (total) | | ND(0.0000017) | NA | NA | 0.00064 [0.00088] | 0.00016 |
| OCDD | | 0.0000050 | NA | NA | 0.0025 [0.0026] | 0.00067 |
| Total TEQs (WHO TEFs) | | 0.00000079 | NA | NA | 0.00050 [0.00049] | 0.00023 |
| **Inorganics** | | | | | | |
| Antimony | | 2.60 B | NA | ND(6.00) | 6.80 [2.30 B] | 1.40 B |
| Arsenic | | 8.70 | NA | 1.60 | 6.80 [6.40] | 7.20 |
| Barium | | 48.0 | NA | 37.0 | 100 [100] | 190 |
| Beryllium | | ND(0.50) | NA | 0.500 | ND(0.50) [ND(0.50)] | ND(0.50) |
| Cadmium | | 0.300 B | NA | 0.410 B | 1.50 [1.50] | 3.10 |
| Chromium | | 9.00 J | NA | 9.80 J | 960 J [13.0 J] | 12.0 J |
| Cobalt | | 12.0 | NA | 7.60 | 7.60 [7.80] | 5.20 |
| Copper | | 29.0 J | NA | 12.0 J | 760 J [190 J] | 520 J |
| Cyanide | | ND(0.220) | NA | 0.0460 B | 0.180 [0.230] | 0.160 |
| Lead | | 23.0 J | NA | 5.20 J | 7900 J [360 J] | 230 J |
| Mercury | | 0.140 J | NA | 0.0510 J | 1.00 J [0.770 J] | 2.70 J |
| Nickel | | 18.0 | NA | 12.0 | 19.0 [18.0] | 18.0 |
| Selenium | | ND(1.00) | NA | ND(1.20) | ND(1.00) [ND(1.00)] | ND(1.00) |
| Silver | | ND(1.00) | NA | ND(1.20) | ND(1.0) [ND(1.0)] | ND(1.00) |
| Sulfide | | 46.0 J | NA | 17.0 J | 19.0 J [36.0 J] | 82.0 J |
| Thallium | | ND(1.10) | NA | ND(1.50) | ND(1.20) [ND(1.20)] | ND(1.20) |
| Tin | | ND(10) | NA | ND(12) | 120 [36.0] | 38.0 |
| Vanadium | | 7.60 | NA | 11.0 | 14.0 [15.0] | 9.00 |
| Zinc | | 54.0 | NA | 55.0 | 510 [330] | 640 |

**TABLE B-1**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR APPENDIX IX+3 ANALYTICAL RESULTS**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**
**(Results are presented in dry weight parts per million, ppm)**

| Sample ID: / Sample Depth(Feet): / Parameter / Date Collected: | RAA13-F91 4-6 06/04/03 | RAA13-G92 1-3 06/04/03 | RAA13-G92 10-12 06/04/03 | RAA13-G92 10-15 06/04/03 | RAA13-Z88 3-6 06/04/03 | SL0131 0-1 06/04/03 |
|---|---|---|---|---|---|---|
| **Volatile Organics** | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| 1,1,1-Trichloroethane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| 1,1,2,2-Tetrachloroethane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| 1,1,2-Trichloroethane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| 1,1-Dichloroethane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| 1,1-Dichloroethene | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| 1,2,3-Trichloropropane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| 1,2-Dibromo-3-chloropropane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| 1,2-Dibromoethane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| 1,2-Dichloroethane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| 1,2-Dichloropropane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| 1,4-Dioxane | 0.089 J | 0.075 J | ND(98) J | NA | NA | ND(0.11) J |
| 2-Butanone | ND(0.011) | ND(0.013) | ND(49) | NA | NA | ND(0.011) |
| 2-Chloro-1,3-butadiene | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| 2-Chloroethylvinylether | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| 2-Hexanone | ND(0.011) | ND(0.013) | ND(4.9) | NA | NA | ND(0.011) |
| 3-Chloropropene | ND(0.0057) | ND(0.0063) | ND(4.9) | NA | NA | ND(0.0057) |
| 4-Methyl-2-pentanone | ND(0.011) | ND(0.013) | ND(4.9) | NA | NA | ND(0.011) |
| Acetone | ND(0.023) | ND(0.025) | ND(49) | NA | NA | ND(0.023) |
| Acetonitrile | ND(0.11) J | ND(0.13) J | ND(49) J | NA | NA | ND(0.11) J |
| Acrolein | ND(0.11) J | ND(0.13) J | ND(49) J | NA | NA | ND(0.11) J |
| Acrylonitrile | ND(0.0057) | ND(0.0063) | ND(4.9) | NA | NA | ND(0.0057) |
| Benzene | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| Bromodichloromethane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| Bromoform | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| Bromomethane | ND(0.0057) | ND(0.0063) | ND(4.9) | NA | NA | ND(0.0057) |
| Carbon Disulfide | ND(0.0057) | ND(0.0063) | ND(4.9) | NA | NA | ND(0.0057) |
| Carbon Tetrachloride | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| Chlorobenzene | ND(0.0057) | ND(0.0063) | 34 | NA | NA | ND(0.0057) |
| Chloroethane | ND(0.0057) | ND(0.0063) | ND(4.9) | NA | NA | ND(0.0057) |
| Chloroform | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| Chloromethane | ND(0.0057) | ND(0.0063) | ND(4.9) | NA | NA | ND(0.0057) |
| cis-1,3-Dichloropropene | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| Dibromochloromethane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| Dibromomethane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| Dichlorodifluoromethane | ND(0.0057) | ND(0.0063) | ND(4.9) | NA | NA | ND(0.0057) |
| Ethyl Methacrylate | ND(0.0057) | ND(0.0063) | ND(4.9) | NA | NA | ND(0.0057) |
| Ethylbenzene | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| Iodomethane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| Isobutanol | ND(0.11) J | ND(0.13) J | ND(98) J | NA | NA | ND(0.11) J |
| Methacrylonitrile | ND(0.0057) | ND(0.0063) | ND(4.9) | NA | NA | ND(0.0057) |
| Methyl Methacrylate | ND(0.0057) | ND(0.0063) | ND(4.9) | NA | NA | ND(0.0057) |
| Methylene Chloride | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| Propionitrile | ND(0.011) | ND(0.013) | ND(24) | NA | NA | ND(0.011) |
| Styrene | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| Tetrachloroethene | ND(0.0057) J | ND(0.0063) J | ND(2.4) J | NA | NA | ND(0.0057) J |
| Toluene | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| trans-1,2-Dichloroethene | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| trans-1,3-Dichloropropene | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| trans-1,4-Dichloro-2-butene | ND(0.0057) | ND(0.0063) | ND(4.9) | NA | NA | ND(0.0057) |
| Trichloroethene | ND(0.0057) | 0.069 | ND(2.4) | NA | NA | ND(0.0057) |
| Trichlorofluoromethane | ND(0.0057) | ND(0.0063) | ND(2.4) | NA | NA | ND(0.0057) |
| Vinyl Acetate | ND(0.0057) | ND(0.0063) | ND(4.9) | NA | NA | ND(0.0057) |
| Vinyl Chloride | ND(0.0057) | ND(0.0063) | ND(4.9) | NA | NA | ND(0.0057) |
| Xylenes (total) | ND(0.0057) | ND(0.0063) | 17 | NA | NA | ND(0.0057) |

**TABLE B-1**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR APPENDIX IX+3 ANALYTICAL RESULTS**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**
**(Results are presented in dry weight parts per million, ppm)**

| Parameter / Sample ID: | RAA13-F91 | RAA13-G92 | RAA13-G92 | RAA13-G92 | RAA13-Z88 | SL0131 |
|---|---|---|---|---|---|---|
| Sample Depth(Feet): | 4-6 | 1-3 | 10-12 | 10-15 | 3-6 | 0-1 |
| Date Collected: | 06/04/03 | 06/04/03 | 06/04/03 | 06/04/03 | 06/04/03 | 06/04/03 |
| **Semivolatile Organics** | | | | | | |
| 1,2,4,5-Tetrachlorobenzene | NA | 0.50 | NA | ND(0.49) | ND(0.42) | NA |
| 1,2,4-Trichlorobenzene | NA | 8.2 | NA | ND(0.49) | 0.16 J | NA |
| 1,2-Dichlorobenzene | NA | 0.078 J | NA | ND(0.49) | ND(0.42) | NA |
| 1,2-Diphenylhydrazine | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 1,3,5-Trinitrobenzene | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 1,3-Dichlorobenzene | NA | 0.085 J | NA | 0.24 J | ND(0.42) | NA |
| 1,3-Dinitrobenzene | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| 1,4-Dichlorobenzene | NA | 0.11 J | NA | 1.3 | ND(0.42) | NA |
| 1,4-Naphthoquinone | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| 1-Naphthylamine | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| 2,3,4,6-Tetrachlorophenol | NA | ND(0.42) J | NA | ND(0.49) J | ND(0.42) J | NA |
| 2,4,5-Trichlorophenol | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 2,4,6-Trichlorophenol | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 2,4-Dichlorophenol | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 2,4-Dimethylphenol | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 2,4-Dinitrophenol | NA | ND(2.1) J | NA | ND(2.5) J | ND(2.1) J | NA |
| 2,4-Dinitrotoluene | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 2,6-Dichlorophenol | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 2,6-Dinitrotoluene | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 2-Acetylaminofluorene | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| 2-Chloronaphthalene | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 2-Chlorophenol | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 2-Methylnaphthalene | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 2-Methylphenol | NA | 0.15 J | NA | ND(0.49) | ND(0.42) | NA |
| 2-Naphthylamine | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| 2-Nitroaniline | NA | ND(2.1) J | NA | ND(2.5) J | ND(2.1) J | NA |
| 2-Nitrophenol | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| 2-Picoline | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 3&4-Methylphenol | NA | 0.14 J | NA | ND(0.98) | ND(0.83) | NA |
| 3,3'-Dichlorobenzidine | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| 3,3'-Dimethylbenzidine | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 3-Methylcholanthrene | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| 3-Nitroaniline | NA | ND(2.1) | NA | ND(2.5) | ND(2.1) | NA |
| 4,6-Dinitro-2-methylphenol | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 4-Aminobiphenyl | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| 4-Bromophenyl-phenylether | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 4-Chloro-3-Methylphenol | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 4-Chloroaniline | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 4-Chlorobenzilate | NA | ND(0.85) J | NA | ND(0.98) J | ND(0.83) J | NA |
| 4-Chlorophenyl-phenylether | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| 4-Nitroaniline | NA | ND(2.1) | NA | ND(2.5) | ND(2.1) | NA |
| 4-Nitrophenol | NA | ND(2.1) J | NA | ND(2.5) J | ND(2.1) J | NA |
| 4-Nitroquinoline-1-oxide | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| 4-Phenylenediamine | NA | ND(0.85) J | NA | ND(0.98) J | ND(0.83) J | NA |
| 5-Nitro-o-toluidine | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| 7,12-Dimethylbenz(a)anthracene | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| a,a'-Dimethylphenethylamine | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| Acenaphthene | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Acenaphthylene | NA | ND(0.42) | NA | ND(0.49) | 0.23 J | NA |
| Acetophenone | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Aniline | NA | 3.9 | NA | ND(0.49) | 0.42 | NA |
| Anthracene | NA | 0.18 J | NA | ND(0.49) | 0.19 J | NA |
| Aramite | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| Benzidine | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| Benzo(a)anthracene | NA | 0.40 J | NA | ND(0.49) | 0.54 | NA |
| Benzo(a)pyrene | NA | 0.45 | NA | ND(0.49) | 0.53 | NA |
| Benzo(b)fluoranthene | NA | 0.86 | NA | ND(0.49) | 0.64 | NA |
| Benzo(g,h,i)perylene | NA | 0.50 | NA | ND(0.49) | 0.34 J | NA |

**TABLE B-1**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR APPENDIX IX+3 ANALYTICAL RESULTS**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**
**(Results are presented in dry weight parts per million, ppm)**

| Parameter / Sample ID: | RAA13-F91 | RAA13-G92 | RAA13-G92 | RAA13-G92 | RAA13-Z88 | SL0131 |
|---|---|---|---|---|---|---|
| Sample Depth(Feet): | 4-6 | 1-3 | 10-12 | 10-15 | 3-6 | 0-1 |
| Date Collected: | 06/04/03 | 06/04/03 | 06/04/03 | 06/04/03 | 06/04/03 | 06/04/03 |
| **Semivolatile Organics (continued)** | | | | | | |
| Benzo(k)fluoranthene | NA | 0.32 J | NA | ND(0.49) | 0.24 J | NA |
| Benzyl Alcohol | NA | ND(0.85) J | NA | ND(0.98) J | ND(0.83) J | NA |
| bis(2-Chloroethoxy)methane | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| bis(2-Chloroethyl)ether | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| bis(2-Chloroisopropyl)ether | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| bis(2-Ethylhexyl)phthalate | NA | ND(0.42) | NA | ND(0.48) | ND(0.41) | NA |
| Butylbenzylphthalate | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Chrysene | NA | 0.74 | NA | ND(0.49) | 0.51 | NA |
| Diallate | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| Dibenzo(a,h)anthracene | NA | 0.13 J | NA | ND(0.49) | 0.11 J | NA |
| Dibenzofuran | NA | 0.24 J | NA | ND(0.49) | ND(0.42) | NA |
| Diethylphthalate | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Dimethylphthalate | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Di-n-Butylphthalate | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Di-n-Octylphthalate | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Diphenylamine | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Ethyl Methanesulfonate | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Fluoranthene | NA | 1.5 | NA | ND(0.49) | 0.89 | NA |
| Fluorene | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Hexachlorobenzene | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Hexachlorobutadiene | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Hexachlorocyclopentadiene | NA | ND(0.42) J | NA | ND(0.49) J | ND(0.42) J | NA |
| Hexachloroethane | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Hexachlorophene | NA | ND(0.85) J | NA | ND(0.98) J | ND(0.83) J | NA |
| Hexachloropropene | NA | ND(0.42) J | NA | ND(0.49) J | ND(0.42) J | NA |
| Indeno(1,2,3-cd)pyrene | NA | 0.41 J | NA | ND(0.49) | 0.30 J | NA |
| Isodrin | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Isophorone | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Isosafrole | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| Methapyrilene | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| Methyl Methanesulfonate | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Naphthalene | NA | 0.27 J | NA | 0.21 J | 0.14 J | NA |
| Nitrobenzene | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| N-Nitrosodiethylamine | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| N-Nitrosodimethylamine | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| N-Nitroso-di-n-butylamine | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| N-Nitroso-di-n-propylamine | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| N-Nitrosodiphenylamine | NA | 0.18 J | NA | ND(0.49) | ND(0.42) | NA |
| N-Nitrosomethylethylamine | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| N-Nitrosomorpholine | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| N-Nitrosopiperidine | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| N-Nitrosopyrrolidine | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| o,o,o-Triethylphosphorothioate | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| o-Toluidine | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| p-Dimethylaminoazobenzene | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| Pentachlorobenzene | NA | 0.25 J | NA | ND(0.49) J | ND(0.42) J | NA |
| Pentachloroethane | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Pentachloronitrobenzene | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| Pentachlorophenol | NA | ND(2.1) | NA | ND(2.5) | ND(2.1) | NA |
| Phenacetin | NA | ND(0.85) | NA | ND(0.98) | ND(0.83) | NA |
| Phenanthrene | NA | 1.1 | NA | ND(0.49) | 0.58 | NA |
| Phenol | NA | 1.9 | NA | ND(0.49) | ND(0.42) | NA |
| Pronamide | NA | ND(0.42) J | NA | ND(0.49) J | ND(0.42) J | NA |
| Pyrene | NA | 1.0 | NA | ND(0.49) | 1.1 | NA |
| Pyridine | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Safrole | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |
| Thionazin | NA | ND(0.42) | NA | ND(0.49) | ND(0.42) | NA |

**TABLE B-1**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR APPENDIX IX+3 ANALYTICAL RESULTS**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS**
**(Results are presented in dry weight parts per million, ppm)**

| Parameter / Sample ID: / Sample Depth(Feet): / Date Collected: | RAA13-F91 4-6 06/04/03 | RAA13-G92 1-3 06/04/03 | RAA13-G92 10-12 06/04/03 | RAA13-G92 10-15 06/04/03 | RAA13-Z88 3-6 06/04/03 | SL0131 0-1 06/04/03 |
|---|---|---|---|---|---|---|
| **Furans** | | | | | | |
| 2,3,7,8-TCDF | NA | 0.068 Y | NA | NA | 0.00071 Y | NA |
| TCDFs (total) | NA | 0.34 I | NA | NA | 0.012 | NA |
| 1,2,3,7,8-PeCDF | NA | 0.032 | NA | NA | 0.00059 | NA |
| 2,3,4,7,8-PeCDF | NA | 0.049 | NA | NA | 0.00064 | NA |
| PeCDFs (total) | NA | 0.38 I | NA | NA | 0.029 | NA |
| 1,2,3,4,7,8-HxCDF | NA | 0.094 I | NA | NA | 0.0020 | NA |
| 1,2,3,6,7,8-HxCDF | NA | 0.033 I | NA | NA | 0.0025 I | NA |
| 1,2,3,7,8,9-HxCDF | NA | 0.0011 | NA | NA | 0.000028 | NA |
| 2,3,4,6,7,8-HxCDF | NA | 0.013 | NA | NA | 0.00028 | NA |
| HxCDFs (total) | NA | 0.28 I | NA | NA | 0.018 | NA |
| 1,2,3,4,6,7,8-HpCDF | NA | 0.080 | NA | NA | 0.0029 | NA |
| 1,2,3,4,7,8,9-HpCDF | NA | 0.013 | NA | NA | 0.00044 | NA |
| HpCDFs (total) | NA | 0.13 | NA | NA | 0.0065 | NA |
| OCDF | NA | 0.058 | NA | NA | 0.0021 | NA |
| **Dioxins** | | | | | | |
| 2,3,7,8-TCDD | NA | 0.00033 | NA | NA | 0.000026 | NA |
| TCDDs (total) | NA | 0.016 | NA | NA | 0.00023 | NA |
| 1,2,3,7,8-PeCDD | NA | ND(0.00060) X | NA | NA | ND(0.00000069) | NA |
| PeCDDs (total) | NA | 0.0020 | NA | NA | ND(0.000047) X | NA |
| 1,2,3,4,7,8-HxCDD | NA | 0.00077 | NA | NA | 0.000020 | NA |
| 1,2,3,6,7,8-HxCDD | NA | 0.0015 | NA | NA | 0.000025 | NA |
| 1,2,3,7,8,9-HxCDD | NA | 0.0021 | NA | NA | 0.000038 | NA |
| HxCDDs (total) | NA | 0.015 | NA | NA | 0.00026 | NA |
| 1,2,3,4,6,7,8-HpCDD | NA | 0.0087 | NA | NA | 0.00019 | NA |
| HpCDDs (total) | NA | 0.017 | NA | NA | 0.00036 | NA |
| OCDD | NA | 0.015 | NA | NA | 0.00057 | NA |
| Total TEQs (WHO TEFs) | NA | 0.049 | NA | NA | 0.00097 | NA |
| **Inorganics** | | | | | | |
| Antimony | NA | 31.0 | NA | 1.00 B | 3.30 B | NA |
| Arsenic | NA | 15.0 | NA | 2.80 | 4.70 | NA |
| Barium | NA | 480 | NA | 51.0 | 77.0 | NA |
| Beryllium | NA | 1.20 | NA | ND(0.50) | ND(0.50) | NA |
| Cadmium | NA | 12.0 | NA | 0.190 B | 1.30 | NA |
| Chromium | NA | 200 J | NA | 8.00 J | 16.0 J | NA |
| Cobalt | NA | 18.0 | NA | 5.10 | 6.10 | NA |
| Copper | NA | 3100 J | NA | 12.0 J | 200 J | NA |
| Cyanide | NA | 1.00 | NA | 0.0800 B | 0.220 | NA |
| Lead | NA | 4400 J | NA | 8.60 J | 900 J | NA |
| Mercury | NA | 25.0 J | NA | 0.0660 J | 0.370 J | NA |
| Nickel | NA | 140 | NA | 10.0 | 11.0 | NA |
| Selenium | NA | 1.20 | NA | ND(1.10) | ND(1.00) | NA |
| Silver | NA | 13.0 | NA | ND(1.10) | ND(1.0) | NA |
| Sulfide | NA | 10.0 J | NA | 59.0 J | 16.0 J | NA |
| Thallium | NA | 14.0 | NA | ND(1.50) | ND(1.20) | NA |
| Tin | NA | 280 | NA | 5.10 B | 180 | NA |
| Vanadium | NA | 14.0 | NA | 8.70 | 7.90 | NA |
| Zinc | NA | 5900 | NA | 59.0 | 360 | NA |

**TABLE B-1**
**SUPPLEMENTAL PRE-DESIGN SOIL INVESTIGATION SAMPLING DATA FOR APPENDIX IX+3 ANALYTICAL RESULTS**

**SUPPLEMENTAL PRE-DESIGN INVESTIGATION REPORT FOR NEWELL STREET AREA II REMOVAL ACTION**
**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 CT&E Environmental Services, Inc. for analysis of Appendix IX+3 constituents.
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan, General Electric Company, Pittsfield, Massachusetts, Blasland Bouck & Lee, Inc. (approved November 4, 2002 and resubmitted December 10, 2002).
3. NA - Not Analyzed.
4. ND - Analyte was not detected. The number in parentheses is the associated detection limit.
5. 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.
6. Field duplicate sample results are presented in brackets.

Data Qualifiers:

Organics (volatiles, semivolatiles, dioxin/furans)

I - Polychlorinated Diphenyl Ether (PCDPE) Interference.
J - Indicates that the associated numerical value is an estimated concentration.
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 practical quantitation limit (PQL).
J - Indicates that the associated numerical value is an estimated concentration.

# *Attachment C*

# Soil Sampling Data Validation Report

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

**ATTACHMENT C**

**GENERAL ELECTRIC COMPANY**
**PITTSFIELD, MASSACHUSETTS**

**AREA REMOVAL ACTION PRE-DESIGN INVESTIGATION**

**SOIL SAMPLING DATA VALIDATION REPORT**

## 1.0 General

This Attachment summarizes the Tier I and Tier II data reviews performed for soil samples collected during the supplemental pre-design investigation activities at Newell Street Area II, located in Pittsfield, Massachusetts. The samples were analyzed for various constituents listed in Appendix IX of 40 CFR Part 264, plus three additional constituents -- benzidine, 2-chloroethyl vinyl ether, and 1,2-diphenylhydrazine (hereafter referred to as Appendix IX+3), excluding pesticides and herbicides, by CT&E Environmental Services, Inc. of Charleston. Data validation was performed for 9 polychlorinated biphenyl (PCB) samples, 10 volatile organic compound (VOC) samples, 9 semi-volatile organic compound (SVOC) samples, 6 polychlorinated dibenzo-p-dioxin (PCDD)/polychlorinated dibenzofuran (PCDF) samples, 9 metals samples, and 9 cyanide/sulfide 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 guidelines presented in the following documents:

- *Field Sampling Plan/Quality Assurance Project Plan, General Electric Company, Pittsfield, Massachusetts*, Blasland, Bouck & Lee, Inc. ([BBL]; FSP/QAPP, approved October 17, 2000);
- *Region I Tiered Organic and Inorganic Data Validation Guidelines*, USEPA Region I (July 1, 1993);
- *Region I Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses,* USEPA Region I (June 13, 1988) (Modified February 1989);
- *Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses,* USEPA Region I (February 1, 1988) (Modified November 1, 1988);
- *Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses,* USEPA Region I (Draft, December 1996); and
- *National Functional Guidelines for Dioxin/Furan Data Validation, USEPA (Draft, January 1996).*

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

The following data qualifiers have been used in this data evaluation.

J The compound or analyte 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 or analyte is detected at an estimated concentration less than the Practical Quantitation Limit (PQL).

U The compound or analyte 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-detected sample results are presented as ND(PQL) within this report and in Table C-1 for consistency with previous documents prepared for this investigation.

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

## 3.0 Data Validation Procedures

The FSP/QAPP requires (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. A tabulated summary of the samples subjected to Tier I and Tier II data evaluation is presented below.

**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 | 0 | 0 | 0 | 7 | 1 | 1 | 9 |
| VOCs | 0 | 0 | 0 | 7 | 1 | 1 | 9 |
| SVOCs | 0 | 0 | 0 | 7 | 1 | 2 | 10 |
| PCDDs/PCDFs | 0 | 0 | 0 | 5 | 1 | 0 | 6 |
| Metals | 0 | 0 | 0 | 7 | 1 | 1 | 9 |
| Cyanide/Sulfide | 0 | 0 | 0 | 7 | 1 | 1 | 9 |
| **Total** | **0** | **0** | **0** | **40** | **6** | **6** | **52** |

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 USEPA Region I Tier I data completeness requirements.

As specified in the FSP/QAPP, 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. The Tier II review resulted in the qualification of data for several samples due to minor QA/QC deficiencies.

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

Initial calibration criterion for organic analyses requires that the average Relative Response Factor (RRF) has a value greater than 0.05. Sample results were qualified as estimated (J) when this criterion was exceeded. The compounds that exceeded initial calibration criterion and the number of samples qualified are presented below.

**Analysis Qualified Due to Initial Calibration Deviations**

| Analysis | Compound | Number of Affected Samples | Qualification |
|---|---|---|---|
| VOCs | 1,4-Dioxane | 8 | J |
| | 2-Chloroethylvinylether | 2 | J |
| | Acetonitrile | 10 | J |
| | Acrolein | 10 | J |
| | Isobutanol | 10 | J |
| | Propionitrile | 2 | J |
| SVOCs | Hexachlorophene | 9 | J |

Continuing calibration criterion for organic analyses requires that the continuing calibration RRF have a value greater than 0.05. Sample results were qualified as estimated (J) when this criterion was exceeded. The compound that exceeded continuing calibration criterion and the number of samples qualified are presented below.

**Analysis Qualified Due to Continuing Calibration RRF Deviations**

| Analysis | Compound | Number of Affected Samples | Qualification |
|---|---|---|---|
| VOCs | 2-Butanone | 2 | J |

Several of the organic compounds (including the compounds presented in the above tables detailing RRF deviations) exhibit instrument Response Factors (RFs) below the USEPA Region I minimum value of 0.05, but meet the analytical method criterion which does not specify minimum RFs for these compounds. These compounds were analyzed by the laboratory at a higher concentration than the compounds that normally exhibit RFs greater than the USEPA Region I minimum value of 0.05 in an effort to demonstrate acceptable response. USEPA Region I guidelines state that non-detected compound results associated with a RF less than the minimum value of 0.05 are to be rejected (R). However, in the case of these select organic compounds, the RF is an inherent problem with the current analytical methodology; therefore, the non-detected sample results were qualified as estimated (J).

Initial calibration criterion for SVOCs requires that the percent relative standard deviation (%RSD) must be less than or equal to 30%. Sample data for detected and non-detected compounds with %RSD values greater than 30% were qualified as estimated (J). The compounds that exceeded initial calibration criterion and the number of samples qualified due those exceeded are identified below.

**Compounds Qualified Due to Initial Calibration %RSD Deviations**

| Analysis | Compound | Number of Affected Samples | Qualification |
|---|---|---|---|
| SVOCs | 2,4-Dinitrophenol | 9 | J |
| | 4-Nitrophenol | 9 | J |
| | Hexachlorocyclopentadiene | 9 | J |

The continuing calibration criterion requires that the percent difference (%D) between the initial calibration RRF and the continuing calibration RRF for VOCs and SVOCs be less than 25%. Sample data for detected and non-detected compounds with %D values that exceeded the continuing calibration criterion were qualified as estimated (J). A summary of the compounds that exceeded continuing calibration criterion and the number of samples qualified due to those deviations are identified below.

**Compounds Qualified Due to Continuing Calibration of %D Values**

| Analysis | Compound | Number of Affected Samples | Qualification |
|---|---|---|---|
| VOCs | Tetrachloroethene | 8 | J |
| SVOCs | 2,3,4,6-Tetrachlorophenol | 9 | J |
| | 2-Nitroaniline | 9 | J |
| | 4-Chlorobenzilate | 9 | J |
| | 4-Phenylenediamine | 9 | J |
| | Benzyl Alcohol | 9 | J |
| | Hexachloropropene | 9 | J |
| | Pentachlorobenzene | 9 | J |
| | Pronamide | 9 | J |

Field, laboratory, and method blanks were analyzed to evaluate whether field sampling equipment or laboratory background contamination may have contributed to the reported sample results. When detected analytes were identified in a blank sample, blank action levels were calculated at five times the blank concentration for all other detected analytes. Detected sample results that were below the blank action level were qualified as "U." The analytes detected in the method blanks and which resulted in qualification of sample data are presented below.

**Analytes Qualified Due to Blank Deviations**

| Analysis | Compound | Number of Affected Samples | Qualification |
|---|---|---|---|
| Inorganics | Beryllium | 6 | U |
| | Silver | 3 | U |
| | Tin | 2 | U |

Matrix spike (MS) sample analysis recovery criteria for inorganics require that spike recoveries be between 75 and 125%. Inorganic sample results that exceeded these limits were qualified as estimated (J). Analytes that did not meet MS recovery criteria and the samples qualified due to those deviations are presented below.

**Analytes Qualified Due to Matrix Spike Recovery Deviations**

| Analysis | Analyte | Number of Affected Samples | Qualification |
|---|---|---|---|
| Inorganics | Mercury | 8 | J |

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

**Compounds Qualified Due to Matrix Spike RPD Deviations**

| Analysis | Compounds | Number of Affected Samples | Qualification |
|---|---|---|---|
| SVOCs | 1,4-Dichlorobenzene | 1 | J |
| | 4-Nitrophenol | 1 | J |
| | Pentachlorophenol | 1 | J |
| | Pyrene | 1 | J |

Field duplicate samples were analyzed to evaluate the overall precision of laboratory and field procedures. The RPD between duplicate samples is required to be less than 50% for soil sample values greater than five times the PQL. Sample results for analytes that exceeded these limits were qualified as estimated (J). The analytes/compounds that did not meet field duplicate RPD requirements and the number of samples qualified due to those deviations are presented below.

**Analytes/Compounds Qualified Due to Field Duplicate Deviations**

| Analysis | Analytes/Compounds | Number of Affected Samples | Qualification |
|---|---|---|---|
| Inorganics | Chromium | 8 | J |
| | Copper | 8 | J |
| | Lead | 8 | J |
| SVOCs | Anthracene | 2 | J |
| | Benzo(a)anthracene | 2 | J |
| | Naphthalene | 2 | J |
| Conventional | Sulfide | 8 | 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 determined to be usable during the data validation process. Data completeness with respect to usability was calculated separately for inorganic and each of the organic analyses. The percent usability calculation included analyses evaluated under both the Tier I and Tier II data validation reviews. 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 below.

**Data Usability**

| Parameter | Percent Usability | Rejected Data |
|---|---|---|
| Inorganics | 100 | None |
| Cyanide and Sulfide | 100 | None |
| VOCs | 100 | None |
| SVOCs | 100 | None |
| PCBs | 100 | None |
| PCDDs/PCDFs | 100 | None |

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 laboratory duplicates, field duplicates, MS/MSD samples, and ICP serial dilution samples. For this analytical program, 0.20% of the data required qualification MS/MSD RPD deviations and 2.0% of the data required qualification field duplicate RPD deviations. None of the data required qualification for ICP serial dilution deviations or laboratory 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, internal standards, Laboratory Control Standards (LCSs), MS/MSD samples, CRDL samples, and surrogate compound recoveries. For this analytical program, 8.1% of the data required qualification for calibration deviations and 0.40% required qualification for MS/MSD recoveries. None of the data required qualification for CRDL standard recovery deviations, surrogate compound standard recovery deviations, internal standard recovery deviations, or LCS 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 Agency-approved work plans and by following the procedures for sample collection/analyses described in the FSP/QAPP. Additionally, the analytical program used procedures that were 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 for holding time analysis 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

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

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 (i.e., sample extraction/preparation, instrument calibration, QA/QC procedures, etc.). 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 for individual analytical parameters and overall usability of this data set is 100.0%.

**TABLE C-1**
**NEWELL STREET AREA II PDI SAMPLES**

**ANALYTICAL DATA VALIDATION SUMMARY**
**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** | | | | | | | | | | | |
| 3F0P100 | RAA13-C88 (1 - 3) | 6/4/03 | Soil | Tier II | No | | | | | | |
| 3F0P100 | RAA13-C88 (3 - 6) | 6/4/03 | Soil | Tier II | No | | | | | | |
| 3F0P100 | RAA13-C88 (6 - 9) | 6/4/03 | Soil | Tier II | No | | | | | | |
| 3F0P100 | RAA13-DUP-2 (1 - 3) | 6/4/03 | Soil | Tier II | No | | | | | | RAA13-Z90 |
| 3F0P100 | RAA13-Z90 (1 - 3) | 6/4/03 | Soil | Tier II | No | | | | | | |
| 3F0P100 | RAA13-Z90 (10 - 15) | 6/4/03 | Soil | Tier II | No | | | | | | |
| 3F0P100 | RAA13-Z90 (3 - 6) | 6/4/03 | Soil | Tier II | No | | | | | | |
| 3F0P100 | RAA13-Z90 (6 - 10) | 6/4/03 | Soil | Tier II | No | | | | | | |
| 3F0P100 | RB-060403-1 (0 - 0) | 6/4/03 | Water | Tier II | No | | | | | | |
| **Metals** | | | | | | | | | | | |
| 3F0P100 | RAA13-C88 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | Beryllium | Method Blank | - | - | ND(0.50) | |
| | | | | | | Chromium | Field Duplicate RPD (Soil) | 194.7% | <50% | 9.00 J | |
| | | | | | | Copper | Field Duplicate RPD (Soil) | 120.0% | <50% | 29.0 J | |
| | | | | | | Lead | Field Duplicate RPD (Soil) | 182.6% | <50% | 23.0 J | |
| | | | | | | Mercury | MS %R | 126.0% | 80% to 120% | 0.140 J | |
| | | | | | | Tin | Method Blank | - | - | ND(10) | |
| 3F0P100 | RAA13-C88 (6 - 9) | 6/4/2003 | Soil | Tier II | Yes | Chromium | Field Duplicate RPD (Soil) | 194.7% | <50% | 9.80 J | |
| | | | | | | Copper | Field Duplicate RPD (Soil) | 120.0% | <50% | 12.0 J | |
| | | | | | | Lead | Field Duplicate RPD (Soil) | 182.6% | <50% | 5.20 J | |
| | | | | | | Mercury | MS %R | 126.0% | 80% to 120% | 0.0510 J | |
| | | | | | | Tin | Method Blank | - | - | ND(12) | |
| 3F0P100 | RAA13-DUP-1 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | Beryllium | Method Blank | - | - | ND(0.50) | RAA13-F91 |
| | | | | | | Chromium | Field Duplicate RPD (Soil) | 194.7% | <50% | 13.0 J | |
| | | | | | | Copper | Field Duplicate RPD (Soil) | 120.0% | <50% | 190 J | |
| | | | | | | Lead | Field Duplicate RPD (Soil) | 182.6% | <50% | 360 J | |
| | | | | | | Mercury | MS %R | 126.0% | 80% to 120% | 0.770 J | |
| | | | | | | Silver | Method Blank | - | - | ND(1.0) | |
| 3F0P100 | RAA13-F91 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | Beryllium | Method Blank | - | - | ND(0.50) | |
| | | | | | | Chromium | Field Duplicate RPD (Soil) | 194.7% | <50% | 960 J | |
| | | | | | | Copper | Field Duplicate RPD (Soil) | 120.0% | <50% | 760 J | |
| | | | | | | Lead | Field Duplicate RPD (Soil) | 182.6% | <50% | 7900 J | |
| | | | | | | Mercury | MS %R | 126.0% | 80% to 120% | 1.00 J | |
| | | | | | | Silver | Method Blank | - | - | ND(1.0) | |
| 3F0P100 | RAA13-F91 (3 - 6) | 6/4/2003 | Soil | Tier II | Yes | Beryllium | Method Blank | - | - | ND(0.50) | |
| | | | | | | Chromium | Field Duplicate RPD (Soil) | 194.7% | <50% | 12.0 J | |
| | | | | | | Copper | Field Duplicate RPD (Soil) | 120.0% | <50% | 520 J | |
| | | | | | | Lead | Field Duplicate RPD (Soil) | 182.6% | <50% | 230 J | |
| | | | | | | Mercury | MS %R | 126.0% | 80% to 120% | 2.70 J | |
| 3F0P100 | RAA13-G92 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | Chromium | Field Duplicate RPD (Soil) | 194.7% | <50% | 200 J | |
| | | | | | | Copper | Field Duplicate RPD (Soil) | 120.0% | <50% | 3100 J | |
| | | | | | | Lead | Field Duplicate RPD (Soil) | 182.6% | <50% | 4400 J | |
| | | | | | | Mercury | MS %R | 126.0% | 80% to 120% | 25.0 J | |

**TABLE C-1**
**NEWELL STREET AREA II PDI SAMPLES**

**ANALYTICAL DATA VALIDATION SUMMARY**
**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals (cont'd)** | | | | | | | | | | | |
| 3F0P100 | RAA13-G92 (10 - 15) | 6/4/2003 | Soil | Tier II | Yes | Beryllium | Method Blank | - | - | ND(0.50) | |
| | | | | | | Chromium | Field Duplicate RPD (Soil) | 194.7% | <50% | 8.00 J | |
| | | | | | | Copper | Field Duplicate RPD (Soil) | 120.0% | <50% | 12.0 J | |
| | | | | | | Lead | Field Duplicate RPD (Soil) | 182.6% | <50% | 8.60 J | |
| | | | | | | Mercury | MS %R | 126.0% | 80% to 120% | 0.0660 J | |
| 3F0P100 | RAA13-Z88 (3 - 6) | 6/4/2003 | Soil | Tier II | Yes | Beryllium | Method Blank | - | - | ND(0.50) | |
| | | | | | | Chromium | Field Duplicate RPD (Soil) | 194.7% | <50% | 16.0 J | |
| | | | | | | Copper | Field Duplicate RPD (Soil) | 120.0% | <50% | 200 J | |
| | | | | | | Lead | Field Duplicate RPD (Soil) | 182.6% | <50% | 900 J | |
| | | | | | | Mercury | MS %R | 126.0% | 80% to 120% | 0.370 J | |
| | | | | | | Silver | Method Blank | - | - | ND(1.0) | |
| 3F0P100 | RB-060403-1 (0 - 0) | 6/4/2003 | Water | Tier II | No | | | | | | |
| **VOCs** | | | | | | | | | | | |
| 3F0P100 | RAA13-C88 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | 1,4-Dioxane | ICAL RRF | 0.010 | >0.05 | ND(0.11) J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.041 | >0.05 | ND(0.11) J | |
| | | | | | | Acrolein | ICAL RRF | 0.005 | >0.06 | ND(0.11) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.004 | >0.07 | ND(0.11) J | |
| | | | | | | Tetrachloroethene | CCAL %D | 26.8% | <25% | ND(0.0055) J | |
| 3F0P100 | RAA13-C88 (6 - 8) | 6/4/2003 | Soil | Tier II | Yes | 1,4-Dioxane | ICAL RRF | 0.010 | >0.05 | ND(0.16) J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.041 | >0.05 | ND(0.16) J | |
| | | | | | | Acrolein | ICAL RRF | 0.005 | >0.05 | ND(0.16) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.004 | >0.05 | ND(0.16) J | |
| | | | | | | Tetrachloroethene | CCAL %D | 26.8% | <25% | ND(0.0078) J | |
| 3F0P100 | RAA13-DUP-1 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | 1,4-Dioxane | ICAL RRF | 0.010 | >0.05 | ND(0.12) J | RAA13-F91 |
| | | | | | | Acetonitrile | ICAL RRF | 0.041 | >0.05 | ND(0.12) J | |
| | | | | | | Acrolein | ICAL RRF | 0.005 | >0.05 | ND(0.12) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.004 | >0.05 | ND(0.12) J | |
| | | | | | | Tetrachloroethene | CCAL %D | 26.8% | <25% | ND(0.0061) J | |
| 3F0P100 | RAA13-F91 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | 1,4-Dioxane | ICAL RRF | 0.010 | >0.05 | ND(0.12) J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.041 | >0.05 | ND(0.12) J | |
| | | | | | | Acrolein | ICAL RRF | 0.005 | >0.05 | ND(0.12) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.004 | >0.05 | ND(0.12) J | |
| | | | | | | Tetrachloroethene | CCAL %D | 26.8% | <25% | ND(0.0060) J | |
| 3F0P100 | RAA13-F91 (4 - 6) | 6/4/2003 | Soil | Tier II | Yes | 1,4-Dioxane | ICAL RRF | 0.010 | >0.05 | 0.089 J J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.041 | >0.05 | ND(0.11) J | |
| | | | | | | Acrolein | ICAL RRF | 0.005 | >0.05 | ND(0.11) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.004 | >0.05 | ND(0.11) J | |
| | | | | | | Tetrachloroethene | CCAL %D | 26.8% | <25% | ND(0.0057) J | |
| 3F0P100 | RAA13-G92 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | 1,4-Dioxane | ICAL RRF | 0.010 | >0.05 | 0.075 J J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.041 | >0.05 | ND(0.13) J | |
| | | | | | | Acrolein | ICAL RRF | 0.005 | >0.05 | ND(0.13) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.004 | >0.05 | ND(0.13) J | |
| | | | | | | Tetrachloroethene | CCAL %D | 26.8% | <25% | ND(0.0063) J | |
| 3F0P100 | RAA13-G92 (10 - 12) | 6/4/2003 | Soil | Tier II | Yes | 1,4-Dioxane | ICAL RRF | 0.010 | >0.05 | ND(98) J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.041 | >0.05 | ND(49) J | |
| | | | | | | Acrolein | ICAL RRF | 0.005 | >0.05 | ND(49) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.004 | >0.05 | ND(98) J | |
| | | | | | | Tetrachloroethene | CCAL %D | 26.8% | <25% | ND(2.4) J | |
| 3F0P100 | RB-060403-1 | 6/4/2003 | Water | Tier II | Yes | 2-Butanone | CCAL RRF | 0.049 | >0.05 | ND(0.010) J | |
| | | | | | | 2-Chloroethylvinylether | ICAL RRF | 0.046 | >0.05 | ND(0.0050) J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.048 | >0.05 | ND(0.10) J | |
| | | | | | | Acrolein | ICAL RRF | 0.001 | >0.05 | ND(0.10) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.015 | >0.05 | ND(0.10) J | |
| | | | | | | Propionitrile | ICAL RRF | 0.014 | >0.05 | ND(0.010) J | |

**TABLE C-1**
**NEWELL STREET AREA II PDI SAMPLES**

**ANALYTICAL DATA VALIDATION SUMMARY**
**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOCs (cont'd)** | | | | | | | | | | | |
| 3F0P100 | TRIP BLANK | 6/4/2003 | Water | Tier II | Yes | 2-Butanone | CCAL RRF | 0.049 | >0.05 | ND(0.010) J | |
| | | | | | | 2-Chloroethylvinylether | ICAL RRF | 0.046 | >0.05 | ND(0.0050) J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.048 | >0.05 | ND(0.10) J | |
| | | | | | | Acrolein | ICAL RRF | 0.001 | >0.05 | ND(0.10) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.015 | >0.05 | ND(0.10) J | |
| | | | | | | Propionitrile | ICAL RRF | 0.014 | >0.05 | ND(0.010) J | |
| 3F0P100 | SL0131 (0 - 1) | 6/4/2003 | Soil | Tier II | Yes | 1,4-Dioxane | ICAL RRF | 0.010 | >0.05 | ND(0.11) J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.041 | >0.05 | ND(0.11) J | |
| | | | | | | Acrolein | ICAL RRF | 0.005 | >0.05 | ND(0.11) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.004 | >0.05 | ND(0.11) J | |
| | | | | | | Tetrachloroethene | CCAL %D | 26.8% | <25% | ND(0.0057) J | |
| **SVOCs** | | | | | | | | | | | |
| 3F0P100 | RAA13-C88 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | 1,4-Dichlorobenzene | MS/MSD RPD | 36.0% | <27% | ND(0.37) J | |
| | | | | | | 2,3,4,6-Tetrachlorophenol | CCAL %D | 41.6% | <25% | ND(0.37) J | |
| | | | | | | 2,4-Dinitrophenol | ICAL %RSD | 31.5% | <30% | ND(1.9) J | |
| | | | | | | 2-Nitroaniline | CCAL %D | 28.3% | <25% | ND(1.9) J | |
| | | | | | | 4-Chlorobenzilate | CCAL %D | 38.4% | <25% | ND(0.74) J | |
| | | | | | | 4-Nitrophenol | ICAL %RSD | 42.3% | <30% | ND(1.9) J | |
| | | | | | | 4-Nitrophenol | MS/MSD RPD | 102.0% | <50% | ND(1.9) J | |
| | | | | | | 4-Phenylenediamine | CCAL %D | 37.2% | <25% | ND(0.74) J | |
| | | | | | | Benzyl Alcohol | CCAL %D | 35.8% | <25% | ND(0.74) J | |
| | | | | | | Hexachlorocyclopentadiene | ICAL %RSD | 34.7% | <30% | ND(0.37) J | |
| | | | | | | Hexachlorophene | ICAL RRF | 0.029 | >0.05 | ND(0.74) J | |
| | | | | | | Hexachloropropene | CCAL %D | 75.4% | <25% | ND(0.37) J | |
| | | | | | | Pentachlorobenzene | CCAL %D | 33.2% | <25% | ND(0.37) J | |
| | | | | | | Pentachlorophenol | MS/MSD RPD | 62.0% | <62% | ND(1.9) J | |
| | | | | | | Pronamide | CCAL %D | 26.9% | <25% | ND(0.37) J | |
| | | | | | | Pyrene | MS/MSD RPD | 46.0% | <36% | ND(0.37) J | |
| 3F0P100 | RAA13-C88 (6 - 9) | 6/4/2003 | Soil | Tier II | Yes | 2,3,4,6-Tetrachlorophenol | CCAL %D | 41.6% | <25% | ND(0.51) J | |
| | | | | | | 2,4-Dinitrophenol | ICAL %RSD | 31.5% | <30% | ND(2.6) J | |
| | | | | | | 2-Nitroaniline | CCAL %D | 28.3% | <25% | ND(2.6) J | |
| | | | | | | 4-Chlorobenzilate | CCAL %D | 38.4% | <25% | ND(1.0) J | |
| | | | | | | 4-Nitrophenol | ICAL %RSD | 42.3% | <30% | ND(2.6) J | |
| | | | | | | 4-Phenylenediamine | CCAL %D | 37.2% | <25% | ND(1.0) J | |
| | | | | | | Benzyl Alcohol | CCAL %D | 35.8% | <25% | ND(1.0) J | |
| | | | | | | Hexachlorocyclopentadiene | ICAL %RSD | 34.7% | <30% | ND(0.51) J | |
| | | | | | | Hexachlorophene | ICAL RRF | 0.029 | >0.05 | ND(1.0) J | |
| | | | | | | Hexachloropropene | CCAL %D | 75.4% | <25% | ND(0.51) J | |
| | | | | | | Pentachlorobenzene | CCAL %D | 33.2% | <25% | ND(0.51) J | |
| | | | | | | Pronamide | CCAL %D | 26.9% | <25% | ND(0.51) J | |
| 3F0P100 | RAA13-DUP-1 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | 2,3,4,6-Tetrachlorophenol | CCAL %D | 41.6% | <25% | ND(0.41) J | RAA13-F91 |
| | | | | | | 2,4-Dinitrophenol | ICAL %RSD | 31.5% | <30% | ND(2.1) J | |
| | | | | | | 2-Nitroaniline | CCAL %D | 28.3% | <25% | ND(2.1) J | |
| | | | | | | 4-Chlorobenzilate | CCAL %D | 38.4% | <25% | ND(0.82) J | |
| | | | | | | 4-Nitrophenol | ICAL %RSD | 42.3% | <30% | ND(2.1) J | |
| | | | | | | 4-Phenylenediamine | CCAL %D | 37.2% | <25% | ND(0.82) J | |
| | | | | | | Anthracene | Field Duplicate RPD (Soil) | 52.0% | <50% | 0.94 J | |
| | | | | | | Benzo(a)anthracene | Field Duplicate RPD (Soil) | 52.3% | <50% | 2.4 J | |
| | | | | | | Benzyl Alcohol | CCAL %D | 35.8% | <25% | ND(0.82) J | |
| | | | | | | Hexachlorocyclopentadiene | ICAL %RSD | 34.7% | <30% | ND(0.41) J | |
| | | | | | | Hexachlorophene | ICAL RRF | 0.029 | >0.05 | ND(0.82) J | |
| | | | | | | Hexachloropropene | CCAL %D | 75.4% | <25% | ND(0.41) J | |
| | | | | | | Naphthalene | Field Duplicate RPD (Soil) | 120.0% | <50% | 0.52 J | |
| | | | | | | Pentachlorobenzene | CCAL %D | 33.2% | <25% | ND(0.41) J | |
| | | | | | | Phenanthrene | Field Duplicate RPD (Soil) | 66.7% | <50% | 3.7 J | |
| | | | | | | Pronamide | CCAL %D | 26.9% | <25% | ND(0.41) J | |

**TABLE C-1**
**NEWELL STREET AREA II PDI SAMPLES**

**ANALYTICAL DATA VALIDATION SUMMARY**
**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SVOCs (cont'd)** | | | | | | | | | | | |
| 3F0P100 | RAA13-F91 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | 2,3,4,6-Tetrachlorophenol | CCAL %D | 41.6% | <25% | ND(0.40) J | |
| | | | | | | 2,4-Dinitrophenol | ICAL %RSD | 31.5% | <30% | ND(2.0) J | |
| | | | | | | 2-Nitroaniline | CCAL %D | 28.3% | <25% | ND(2.0) J | |
| | | | | | | 4-Chlorobenzilate | CCAL %D | 38.4% | <25% | ND(0.80) J | |
| | | | | | | 4-Nitrophenol | ICAL %RSD | 42.3% | <30% | ND(2.0) J | |
| | | | | | | 4-Phenylenediamine | CCAL %D | 37.2% | <25% | ND(0.80) J | |
| | | | | | | Anthracene | Field Duplicate RPD (Soil) | 52.0% | <50% | 1.6 J | |
| | | | | | | Benzo(a)anthracene | Field Duplicate RPD (Soil) | 52.3% | <50% | 4.1 J | |
| | | | | | | Benzyl Alcohol | CCAL %D | 35.8% | <25% | ND(0.80) J | |
| | | | | | | Hexachlorocyclopentadiene | ICAL %RSD | 34.7% | <30% | ND(0.40) J | |
| | | | | | | Hexachlorophene | ICAL RRF | 0.029 | >0.05 | ND(0.80) J | |
| | | | | | | Hexachloropropene | CCAL %D | 75.4% | <25% | ND(0.40) J | |
| | | | | | | Naphthalene | Field Duplicate RPD (Soil) | 120.0% | <50% | 0.13 J J | |
| | | | | | | Pentachlorobenzene | CCAL %D | 33.2% | <25% | ND(0.40) J | |
| | | | | | | Phenanthrene | Field Duplicate RPD (Soil) | 66.7% | <50% | 7.4 J | |
| | | | | | | Pronamide | CCAL %D | 26.9% | <25% | ND(0.40) J | |
| 3F0P100 | RAA13-F91 (3 - 6) | 6/4/2003 | Soil | Tier II | Yes | 2,3,4,6-Tetrachlorophenol | CCAL %D | 41.6% | <25% | ND(0.40) J | |
| | | | | | | 2,4-Dinitrophenol | ICAL %RSD | 31.5% | <30% | ND(2.0) J | |
| | | | | | | 2-Nitroaniline | CCAL %D | 28.3% | <25% | ND(2.0) J | |
| | | | | | | 4-Chlorobenzilate | CCAL %D | 38.4% | <25% | ND(0.79) J | |
| | | | | | | 4-Nitrophenol | ICAL %RSD | 42.3% | <30% | ND(2.0) J | |
| | | | | | | 4-Phenylenediamine | CCAL %D | 37.2% | <25% | ND(0.79) J | |
| | | | | | | Benzyl Alcohol | CCAL %D | 35.8% | <25% | ND(0.79) J | |
| | | | | | | Hexachlorocyclopentadiene | ICAL %RSD | 34.7% | <30% | ND(0.40) J | |
| | | | | | | Hexachlorophene | ICAL RRF | 0.029 | >0.05 | ND(0.79) J | |
| | | | | | | Hexachloropropene | CCAL %D | 75.4% | <25% | ND(0.40) J | |
| | | | | | | Pentachlorobenzene | CCAL %D | 33.2% | <25% | ND(0.40) J | |
| | | | | | | Pronamide | CCAL %D | 26.9% | <25% | ND(0.40) J | |
| 3F0P100 | RAA13-G92 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | 2,3,4,6-Tetrachlorophenol | CCAL %D | 41.6% | <25% | ND(0.42) J | |
| | | | | | | 2,4-Dinitrophenol | ICAL %RSD | 31.5% | <30% | ND(2.1) J | |
| | | | | | | 2-Nitroaniline | CCAL %D | 28.3% | <25% | ND(2.1) J | |
| | | | | | | 4-Chlorobenzilate | CCAL %D | 38.4% | <25% | ND(0.85) J | |
| | | | | | | 4-Nitrophenol | ICAL %RSD | 42.3% | <30% | ND(2.1) J | |
| | | | | | | 4-Phenylenediamine | CCAL %D | 37.2% | <25% | ND(0.85) J | |
| | | | | | | Benzyl Alcohol | CCAL %D | 35.8% | <25% | ND(0.85) J | |
| | | | | | | Hexachlorocyclopentadiene | ICAL %RSD | 34.7% | <30% | ND(0.42) J | |
| | | | | | | Hexachlorophene | ICAL RRF | 0.029 | >0.05 | ND(0.85) J | |
| | | | | | | Hexachloropropene | CCAL %D | 75.4% | <25% | ND(0.42) J | |
| | | | | | | Pentachlorobenzene | CCAL %D | 33.2% | <25% | 0.25 J J | |
| | | | | | | Pronamide | CCAL %D | 26.9% | <25% | ND(0.42) J | |
| 3F0P100 | RAA13-G92 (10 - 15) | 6/4/2003 | Soil | Tier II | Yes | 2,3,4,6-Tetrachlorophenol | CCAL %D | 41.6% | <25% | ND(0.49) J | |
| | | | | | | 2,4-Dinitrophenol | ICAL %RSD | 31.5% | <30% | ND(2.5) J | |
| | | | | | | 2-Nitroaniline | CCAL %D | 28.3% | <25% | ND(2.5) J | |
| | | | | | | 4-Chlorobenzilate | CCAL %D | 38.4% | <25% | ND(0.98) J | |
| | | | | | | 4-Nitrophenol | ICAL %RSD | 42.3% | <30% | ND(2.5) J | |
| | | | | | | 4-Phenylenediamine | CCAL %D | 37.2% | <25% | ND(0.98) J | |
| | | | | | | Benzyl Alcohol | CCAL %D | 35.8% | <25% | ND(0.98) J | |
| | | | | | | Hexachlorocyclopentadiene | ICAL %RSD | 34.7% | <30% | ND(0.49) J | |
| | | | | | | Hexachlorophene | ICAL RRF | 0.029 | >0.05 | ND(0.98) J | |
| | | | | | | Hexachloropropene | CCAL %D | 75.4% | <25% | ND(0.49) J | |
| | | | | | | Pentachlorobenzene | CCAL %D | 33.2% | <25% | ND(0.49) J | |
| | | | | | | Pronamide | CCAL %D | 26.9% | <25% | ND(0.49) J | |

**TABLE C-1**
**NEWELL STREET AREA II PDI SAMPLES**

**ANALYTICAL DATA VALIDATION SUMMARY**
**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **SVOCs (cont'd)** | | | | | | | | | | | |
| 3F0P100 | RAA13-Z88 (3 - 6) | 6/4/2003 | Soil | Tier II | Yes | 2,3,4,6-Tetrachlorophenol | CCAL %D | 41.6% | <25% | ND(0.42) J | |
| | | | | | | 2,4-Dinitrophenol | ICAL %RSD | 31.5% | <30% | ND(2.1) J | |
| | | | | | | 2-Nitroaniline | CCAL %D | 28.3% | <25% | ND(2.1) J | |
| | | | | | | 4-Chlorobenzilate | CCAL %D | 38.4% | <25% | ND(0.83) J | |
| | | | | | | 4-Nitrophenol | ICAL %RSD | 42.3% | <30% | ND(2.1) J | |
| | | | | | | 4-Phenylenediamine | CCAL %D | 37.2% | <25% | ND(0.83) J | |
| | | | | | | Benzyl Alcohol | CCAL %D | 35.8% | <25% | ND(0.83) J | |
| | | | | | | Hexachlorocyclopentadiene | ICAL %RSD | 34.7% | <30% | ND(0.42) J | |
| | | | | | | Hexachlorophene | ICAL RRF | 0.029 | >0.05 | ND(0.83) J | |
| | | | | | | Hexachloropropene | CCAL %D | 75.4% | <25% | ND(0.42) J | |
| | | | | | | Pentachlorobenzene | CCAL %D | 33.2% | <25% | ND(0.42) J | |
| | | | | | | Pronamide | CCAL %D | 26.9% | <25% | ND(0.42) J | |
| 3F0P100 | RB-060403-1 (0 - 0) | 6/4/2003 | Water | Tier II | Yes | 2,3,4,6-Tetrachlorophenol | CCAL %D | 41.6% | <25% | ND(0.010) J | |
| | | | | | | 2,4-Dinitrophenol | ICAL %RSD | 31.5% | <30% | ND(0.050) J | |
| | | | | | | 2-Nitroaniline | CCAL %D | 28.3% | <25% | ND(0.050) J | |
| | | | | | | 4-Chlorobenzilate | CCAL %D | 38.4% | <25% | ND(0.010) J | |
| | | | | | | 4-Nitrophenol | ICAL %RSD | 42.3% | <30% | ND(0.050) J | |
| | | | | | | 4-Phenylenediamine | CCAL %D | 37.2% | <25% | ND(0.010) J | |
| | | | | | | Benzyl Alcohol | CCAL %D | 35.8% | <25% | ND(0.020) J | |
| | | | | | | Hexachlorocyclopentadiene | ICAL %RSD | 34.7% | <30% | ND(0.010) J | |
| | | | | | | Hexachlorophene | ICAL RRF | 0.029 | >0.05 | ND(0.020) J | |
| | | | | | | Hexachloropropene | CCAL %D | 75.4% | <25% | ND(0.010) J | |
| | | | | | | Pentachlorobenzene | CCAL %D | 33.2% | <25% | ND(0.010) J | |
| | | | | | | Pronamide | CCAL %D | 26.9% | <25% | ND(0.010) J | |
| **PCDDs/PCDFs** | | | | | | | | | | | |
| 3F0P100 | RAA13-C88 (1 - 3) | 6/4/2003 | Soil | Tier II | No | | | | | | |
| 3F0P100 | RAA13-DUP-1 (1 - 3) | 6/4/2003 | Soil | Tier II | No | | | | | | RAA13-F91 |
| 3F0P100 | RAA13-F91 (1 - 3) | 6/4/2003 | Soil | Tier II | No | | | | | | |
| 3F0P100 | RAA13-F91 (3 - 6) | 6/4/2003 | Soil | Tier II | No | | | | | | |
| 3F0P100 | RAA13-G92 (1 - 3) | 6/4/2003 | Soil | Tier II | No | | | | | | |
| 3F0P100 | RAA13-Z88 (3 - 6) | 6/4/2003 | Soil | Tier II | No | | | | | | |
| **Sulfide and Cyanide** | | | | | | | | | | | |
| 3F0P100 | RAA13-C88 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | Sulfide | Field Duplicate RPD (Soil) | 61.8% | <50% | 46.0 J | |
| 3F0P100 | RAA13-C88 (6 - 9) | 6/4/2003 | Soil | Tier II | Yes | Sulfide | Field Duplicate RPD (Soil) | 61.8% | <50% | 17.0 J | |
| 3F0P100 | RAA13-DUP-1 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | Sulfide | Field Duplicate RPD (Soil) | 61.8% | <50% | 36.0 J | RAA13-F91 |
| 3F0P100 | RAA13-F91 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | Sulfide | Field Duplicate RPD (Soil) | 61.8% | <50% | 19.0 J | |
| 3F0P100 | RAA13-F91 (3 - 6) | 6/4/2003 | Soil | Tier II | Yes | Sulfide | Field Duplicate RPD (Soil) | 61.8% | <50% | 82.0 J | |
| 3F0P100 | RAA13-G92 (1 - 3) | 6/4/2003 | Soil | Tier II | Yes | Sulfide | Field Duplicate RPD (Soil) | 61.8% | <50% | 10.0 J | |
| 3F0P100 | RAA13-G92 (10 - 15) | 6/4/2003 | Soil | Tier II | Yes | Sulfide | Field Duplicate RPD (Soil) | 61.8% | <50% | 59.0 J | |
| 3F0P100 | RAA13-Z88 (3 - 6) | 6/4/2003 | Soil | Tier II | Yes | Sulfide | Field Duplicate RPD (Soil) | 61.8% | <50% | 16.0 J | |
| 3F0P100 | RB-060403-1 (0 - 0) | 6/4/2003 | Water | Tier II | No | | | | | | |