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February 27, 2007

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

**Re: GE-Pittsfield/Housatonic River Site
Groundwater Management Area 3 (GEC330)
Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007**

Dear Mr. Hull:

Enclosed is a report entitled *Groundwater Management Area 3 Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007* (Fall 2007 GMA 3 Report). This report summarizes activities performed at Groundwater Management Area (GMA) 3 (also known as the Plant Site 2 GMA) between July and December 2007, including the results of the fall 2007 round of sampling and analysis of groundwater for GMA 3 and the results of GE's non-aqueous phase liquid (NAPL) monitoring and recovery program in this area. In addition, this report summarizes the results of building inspections and subsurface soil gas and indoor air monitoring conducted beneath and within Buildings 51 and 59 in October 2007 and provides a discussion of upcoming interim groundwater quality monitoring activities to be conducted at GMA 3 in 2008, which will continue until such time as all required soil-related Removal Actions are completed within this GMA and a comprehensive long-term monitoring program may be developed.

Please contact me if you have any questions or comments.

Sincerely,

A handwritten signature in blue ink that reads "Richard W. Gates / RWD for".

Richard W. Gates
Remediation Project Manager

Enclosure

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**General Electric Company
Pittsfield, Massachusetts**

**Groundwater Management Area 3
Groundwater Quality and NAPL
Monitoring Interim Report
For Fall 2007**

February 2008

ARCADIS

**Groundwater Management
Area 3 – Groundwater Quality
and NAPL Monitoring Interim
Report for Fall 2007
(Fall 2007 GMA 3 Report)**

General Electric Company
Pittsfield, Massachusetts

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1. Introduction

1.1 General

On October 27, 2000, a Consent Decree (CD) executed in 1999 by the General Electric Company (GE), the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (MDEP), and several other government agencies was entered by the United States District Court for the District of Massachusetts. The CD governs (among other things) the performance of response actions to address polychlorinated biphenyls (PCBs) and other hazardous constituents in soils, sediment, and groundwater in several Removal Action Areas (RAAs) located in or near Pittsfield, Massachusetts, that collectively comprise the GE-Pittsfield/Housatonic River Site (the Site). For groundwater and non-aqueous-phase liquid (NAPL), the areas at and near the GE Pittsfield facility have been divided into five Groundwater Management Areas (GMAs), which are illustrated on Figure 1. These GMAs are described, together with the Performance Standards established for the response actions at and related to them in Section 2.7 of the *Statement of Work for Removal Actions Outside the River (SOW)* (Appendix E to the CD), with further details presented in Attachment H to the SOW (Groundwater/NAPL Monitoring, Assessment, and Response Programs). This report relates to the Plant Site 2 GMA, also known and referred to herein as GMA 3. GMA 3 encompasses a portion of the Unkamet Brook RAA.

On April 24, 2001, GE submitted a *Baseline Monitoring Program Proposal for Plant Site 2 Groundwater Management Area (GMA 3 Baseline Monitoring Proposal)*. The GMA 3 Baseline Monitoring Proposal summarized the hydrogeologic information available at that time for GMA 3 and proposed groundwater and NAPL monitoring activities (incorporating as appropriate those activities currently in place at that time) for the baseline monitoring period at this GMA. EPA provided conditional approval of the GMA 3 Baseline Monitoring Proposal by letter dated November 21, 2001. Thereafter, certain modifications were made to the GMA 3 baseline monitoring program as a result of EPA approval conditions and/or findings during field reconnaissance of the selected monitoring locations and, subsequently, during implementation of the baseline monitoring program.

As part of the baseline program, GE was required to submit reports on a semi-annual basis to summarize the groundwater and NAPL monitoring and recovery results and, as appropriate, propose modification to the monitoring program. With regard to GMA 3, GE deferred the 2002 and 2003 sampling rounds (with EPA approval) because certain property access issues could not be resolved prior to the scheduled performance of those sampling events. However, GE continued to perform NAPL and groundwater elevation monitoring on an interim basis at all locations for which access was available and collected groundwater samples from one well (78B-R) on a semi-annual basis for analysis of volatile organic compounds (VOCs) and, until fall 2003, PCBs.

The final property access issues were resolved in February 2004, and, beginning with the spring 2004 sampling event, GE commenced the full semi-annual baseline groundwater quality sampling program at GMA 3. The baseline monitoring program consisted of four semi-annual groundwater quality sampling events (with annual sampling conducted at select wells), quarterly groundwater elevation monitoring, and NAPL monitoring and recovery activities, followed by preparation and submittal of semi-annual reports summarizing the groundwater/NAPL monitoring results, comparing the groundwater results with applicable Performance Standards, and, as appropriate, proposing modifications to the monitoring program. The full monitoring program included sampling and analysis of PCBs, certain non-PCB constituents listed in Appendix IX of 40 CFR Part 264, plus three additional constituents -- benzidine, 2-chloroethylvinyl ether, and 1,2-diphenylhydrazine (Appendix IX+3) -- and/or certain constituents (i.e., natural attenuation parameters) to assess intrinsic and natural processes that may be influencing VOC concentrations in groundwater. The fourth baseline monitoring report for GMA 3, titled *Groundwater Management Area 3 Baseline Groundwater Quality and NAPL Monitoring Interim Report for Fall 2005* (Fall 2005 GMA 3 Report), was submitted to EPA on February 26, 2006.

Section 6.1.3 of Attachment H to the SOW provides that if the two-year baseline period ends prior to the completion of soil-related response actions at all the RAAs within a GMA, GE may make a proposal to EPA to modify and/or extend the Baseline Monitoring Program based on the results of the initial assessment and the estimated timing of future response actions at the RAAs in the GMA. The approved GMA 3 Baseline Monitoring Proposal also allows GE to propose a modification and/or extension of the baseline monitoring program based on the results of the initial assessment and the estimated timing of future response actions.

Therefore, as the soil-related Removal Actions at the Unkamet Brook RAA within GMA 3 were not yet complete, the Fall 2005 GMA 3 Groundwater Quality Report contained a proposal to modify and extend baseline groundwater quality monitoring activities at GMA 3 (under a program referred to as the interim monitoring program) until such time as the soil-related Removal Actions at the Unkamet Brook RAA are completed and the specific components of a long-term groundwater quality monitoring program are determined.

EPA approved the interim monitoring program prior to the spring 2006 sampling event, which was conducted in April 2006. Since that time, both GE and EPA have continually re-evaluated the locations included in the interim monitoring program and have made modifications to the program (e.g., additional sampling locations, optimization of GE's recovery activities for light non-aqueous liquids (LNAPL), and evaluation of soil gas and indoor air associated with buildings located within NAPL areas), as appropriate.

As part of the overall interim monitoring program for GMA 3, GE is required to submit reports after each groundwater sampling event to summarize the groundwater/NAPL monitoring results and related activities and, as appropriate, propose modifications to the monitoring program. This *Groundwater Management Area 3 Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007* (Fall 2007 GMA 3 Report) presents the results of groundwater quality and NAPL monitoring activities performed at this GMA during October and November 2007, as well as other routine groundwater elevation and NAPL monitoring/recovery activities performed between July and December 2007 (henceforth referred to as Fall 2007). This report also summarizes the results of building inspections and subsurface soil gas and indoor air monitoring conducted beneath and within Buildings 51 and 59 in October 2007.

The GMA 3 groundwater quality monitoring program and the groundwater elevation/NAPL monitoring program are summarized in Tables 1 and 2, respectively. This report also describes the upcoming groundwater quality and NAPL monitoring activities for GMA 3 and presents the schedule for their performance.

1.2 Background Information

1.2.1 GMA Description

GMA 3 encompasses the portion of the Unkamet Brook RAA (as defined in the CD and SOW) located to the east of Plastics Avenue, and occupies an area of approximately 103 acres (as shown on Figures 1 and 2). This area includes the eastern portion of GE's Pittsfield facility, which is generally bounded by Dalton Avenue to the north, Merrill Road to the south, Plastics Avenue to the west, and railroad tracks to the east. GMA 3 also contains commercial/recreational properties located between Merrill Road and the Housatonic River to the southeast of the facility. Unkamet Brook extends from northwest to southeast through the interior of this GMA, although a portion of the brook in the center of the area flows through underground culverts. The GE-owned portion of this GMA located west of Unkamet Brook is mostly paved and covered with large buildings. The GE-owned portion to the east of Unkamet Brook, as well as much of the land between Merrill Road and the Housatonic River, is undeveloped except for the area associated with Building OP-3 and the commercial area along Merrill Road.

Several well pairs or closely-spaced shallow and deep well clusters have been installed within GMA 3. The approximate depth of a well in a cluster can be identified by the letter contained in the well name (e.g., cluster 39 contains wells 39A, 39B-R, 39D-R and 39E) which represents the well series, specifically:

- A-series wells are generally screened approximately 45 to 50 feet below ground surface (bgs)
- B-series wells are generally screened at or near the water table, approximately 15 to 25 feet bgs
- C-series wells are generally screened approximately 95 to 100 feet bgs
- D-series wells are generally screened approximately 70 to 75 feet bgs
- E-series wells are generally screened at depths greater than 150 feet bgs

Most of the GMA 3 well clusters consist of an A-series well paired with a B-series well, and sometimes one or more of the deeper series wells. In addition, there are individual wells installed at the RAA which were completed based on proposals by GE or EPA conditional approval letters. The specifications of the wells monitored at GMA 3 in fall 2007 are listed in Table 3. Prior monitoring data from the well clusters has indicated that the vertical component of the hydraulic gradient is variable at GMA 3. In general, groundwater flows downward in the northern part of the GMA, moves laterally across the central areas, and rises to the south, near the Housatonic River.

Groundwater at GMA 3 generally flows in a southeasterly direction toward the Housatonic River, usually with a pattern that mimics the existing topography. However, localized variations in the flow direction exist due to fill materials used beneath building foundations in the GE Plastics area and the presence of Unkamet Brook. The subsurface conditions across GMA 3 are illustrated on cross-sections A-A' and B-B', presented as Figures 3 and 4, respectively. The locations of these cross-sections are provided on Figure 2. Figure 5 illustrates groundwater elevations and flow direction using data collected during the fall 2007 monitoring round. The horizontal hydraulic gradients are somewhat variable within GMA 3, but generally decrease toward the Housatonic River, corresponding to a flattening in the ground surface topography.

The presence of NAPL in this area has been documented in prior GE reports. NAPL has been observed near Building 59 in coarse gravel that was assumed to be fill material for the foundation of that building. NAPL also has been observed in the vicinity of Building 51 that may have originated from the leakage of underground storage tanks (USTs) located on the northeast side of that building. Previous investigations have identified the NAPL as an LNAPL in the soil at and above the groundwater table interface. The LNAPL observed east of Building 51 has been analyzed and determined to be composed of multiple constituents, including PCBs, polynuclear aromatic hydrocarbons (PAHs), ethylbenzene, xylenes, 1,2,4-trichlorobenzene and 1,4-dichlorobenzene, among other constituents.

Distribution of the LNAPL has been confined to the vicinity of Buildings 51 and 59, along the western boundary of the GMA, due primarily to: (a) the generally low hydraulic gradients in this area; (b) the difference in grain size between the coarse fill materials near and beneath the buildings and the grain size of the surrounding native soils; (c) an apparent groundwater mound present between Buildings 59 and 119, to the south of the NAPL area; and (d) the ongoing LNAPL recovery efforts (both automated and manual) conducted by GE. Dense non-aqueous phase liquid (DNAPL) has not been encountered within any of the monitoring wells within GMA 3 except for one occurrence during spring 2007 in a single monitoring well located to the south of the former interior landfill. Locations where NAPL has been previously documented are shown on Figure 6. The extent of NAPL observed in fall 2007 is illustrated on Figure 7. A discussion of the current extent of NAPL and the results of NAPL monitoring and recovery activities is provided in Section 3.3.

1.2.2 Interim Monitoring Program

As discussed in Section 1.1, the CD and the SOW provide the framework for the performance of groundwater-related activities at a number of GMAs, including the implementation of groundwater monitoring, assessment and recovery programs. In general, these programs consist of a baseline monitoring program conducted over a period of at least two years to establish existing groundwater conditions, and a long-term monitoring program performed to assess groundwater conditions over time and to verify the attainment of the Performance Standards for groundwater. The baseline monitoring program was to be initiated at GMA 3 in the spring of 2002, but, as discussed above, access issues prevented performance of the full baseline monitoring program until spring 2004. The fall 2005 sampling event constituted the fourth baseline sampling event at the majority of the wells in GMA 3. The baseline sampling program was concluded with the spring 2006 sampling event. Beginning in spring 2006, as approved by EPA, an interim groundwater quality monitoring program was initiated, consisting of annual sampling (in the spring season) for the analysis of VOCs and natural attenuation parameters at 22 monitoring wells, plus annual sampling (alternating between the spring and fall seasons) for the analysis of VOCs at one additional well (Well 6B-R). In addition, as noted above, GE's re-evaluation of the data performed following the spring 2006 sampling event and EPA conditions in its December 7, 2006 conditional approval letter led to the addition of four locations to the interim monitoring program. Specifically, the interim program now also includes well 51-14 for VOC analysis, and wells 82B-R, 114A and 114B-R for PCB analysis. The components of the interim groundwater quality monitoring program at GMA 3 as approved by EPA are summarized in Table 1.

1.2.3 NAPL Monitoring Program

In addition to the wells that were sampled during the baseline monitoring period (each of which continues to be monitored for groundwater elevations on a semi-annual basis during the interim monitoring period), 27 monitoring wells are routinely monitored for groundwater elevation and the presence of NAPL on an established weekly, monthly or quarterly schedule. The groundwater elevation/NAPL monitoring schedule for GMA 3 is summarized in Table 2. The well locations are shown on Figure 2.

1.2.4 Format of Document

The remainder of this report is presented in four sections. Section 2 describes the groundwater- and NAPL-related activities performed at GMA 3 in fall 2007. Section 3 presents the analytical results obtained during the fall 2007 sampling event. Section 4 provides a summary of the applicable groundwater quality and NAPL-related Performance Standards under the CD and SOW, an assessment of the groundwater quality results from fall 2007, including comparisons to the currently applicable groundwater quality Performance Standards and to the Upper Concentration Limits (UCLs) for groundwater, and an evaluation of the NAPL monitoring/recovery results. Section 5 proposes certain modifications to the current NAPL monitoring programs. Finally, Section 6 summarizes the schedule for future field and reporting activities related to groundwater quality and NAPL presence at GMA 3, including upcoming modifications to the groundwater and NAPL monitoring programs.

2. Field and Analytical Procedures

2.1 General

In addition to the fall 2007 interim monitoring event, activities conducted at GMA 3 during the fall 2007 included routine measurement of groundwater/NAPL levels, removal of LNAPL, additional assessment activities related to the soil gas investigation performed within and in the vicinity of Buildings 51 and 59, and installation of a new LNAPL recovery well. Monitoring and recovery of LNAPL (if present) were routinely performed at the monitoring wells that are included in the NAPL monitoring program. All wells that were gauged for groundwater elevations and/or monitored for LNAPL during fall 2007 are identified in Table 2, and a site plan showing the groundwater monitoring/sampling locations described in this report is presented on Figure 2. This section discusses the field procedures used to conduct those field activities and the methods used to analyze the groundwater samples. All activities were performed in general accordance with GE's approved Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP).

2.2 Well Installation and Development

In its July 17, 2007 *Groundwater Management Area 3 LNAPL Recovery Assessment*, GE proposed to install one new LNAPL recovery well adjacent to Building 59, in the vicinity of existing monitoring well 59-3R. That proposal was approved by EPA in a September 12, 2007 letter to GE, and on October 22, 2007, GE installed recovery well GMA3-17. The location of this new well is shown on Figure 2. Table 3 shows the survey data and well construction detail for this new well, along with the other existing wells utilized in the GMA 3 monitoring program. The well log for well GMA3-17 is presented in Appendix A.

Following installation, the new recovery well was developed to remove fine materials (e.g., fine sand, silt, and clay) that may have accumulated in the filter pack and to ensure that the well screen was transmitting groundwater representative of the surrounding formation. Development was performed by surging the saturated portion of the well screen and removing groundwater with a submersible pump. Development of the well was continued until the purged groundwater was relatively free of sediment.

2.3 Groundwater Elevation Monitoring

The fall 2007 semi-annual groundwater elevation monitoring event was performed on October 31 and November 1, 2007. This activity involved the collection of groundwater level data at the locations listed in Table 3. Groundwater levels and NAPL thicknesses (where NAPL is present) were measured in accordance with the procedures specified in GE's approved FSP/QAPP. The groundwater elevation data presented in Table 4 from wells screened across or near the water table were used to prepare a groundwater

elevation contour map for fall 2007 (Figure 5). A summary of all groundwater elevation data collected in fall 2007 is provided in Table 5 and the monitoring data are included in Appendix B.

Groundwater elevations were, on average, approximately 0.62 foot lower than the elevations measured during the respective prior seasonal monitoring event in fall 2006 at water table monitoring locations measured during both monitoring events. Consistent with prior data, groundwater was found to generally flow toward the Housatonic River. Groundwater elevation data from wells 51-12, GMA3-6 and GMA3-9 were found to be anomalous and were not utilized in the preparation of the groundwater elevation contour maps for that report. These wells are located within clean fill materials beneath developed areas and have occasionally produced erratic groundwater elevation data in the past.

2.4 LNAPL Monitoring and Recovery

This section describes the results of the LNAPL monitoring and recovery activities performed by GE within GMA 3 from July through December 2007, including the October/November 2007 semi-annual monitoring event and other routine and non-routine monitoring/recovery activities conducted during that period. These activities primarily include the operation of the automated LNAPL recovery system at well 51-21, the routine measurement of groundwater elevations and NAPL thickness (if present), and the manual removal of NAPL if sufficient thickness is present. All activities were performed in accordance with GE's approved FSP/QAPP.

As part of the monthly monitoring activities conducted prior to the semi-annual monitoring event, GE performed a bailing round involving the monitoring of all wells where the presence of NAPL was noted during the prior year and manual removal of any NAPL which was present. The purpose of these bailing rounds is to ensure that any NAPL present in a well is also present in the surrounding formation and not remnant oil which may have been trapped in the well since the prior removal event. These bailing round activities provide a consistent basis to compare the current presence and thickness of NAPL between wells that may otherwise be subject to varying NAPL removal schedules.

Routine NAPL monitoring was conducted at the monitoring wells listed in Table 2 on a semi-annual, quarterly, monthly and/or weekly basis. Table 5 summarizes the fall 2007 NAPL removal data on a well-by-well basis, and Table B-1 (Appendix B) presents a summary of all of the fall 2007 NAPL measurements and removal quantities (when performed) for each well at GMA 3. Approximately 144.96 gallons of LNAPL were recovered between July and December 2007 at GMA 3. Approximately 92% of this total (133.2 gallons) was removed by the automated skimmer system at well 51-21, and the remainder was manually recovered during routine monitoring events. Since 1997, approximately 1,414 gallons of LNAPL have been removed from GMA 3 as part of GE's

NAPL monitoring and recovery program. During the spring 2007 monitoring event, DNAPL was observed for the first time at this GMA, in monitoring well GMA3-16. However, no DNAPL was observed in this well, or any other wells within GMA 3, during the fall 2007 monitoring event or since that initial and isolated observation at well GMA3-16.

Figure 6 depicts the historical maximum extent of NAPL observed at GMA 3. That figure represents a compilation of past investigations and shows the maximum lateral extent of NAPL that has been observed and documented in prior GE reports, and is not indicative of current conditions. Figure 7 indicates the extent of NAPL observed during the semi-annual monitoring event conducted at GMA 3 in fall 2007. As shown on Figures 6 and 7, the northern (upgradient) extent of LNAPL has decreased since the onset of the periodic LNAPL monitoring and recovery activities conducted in this area. No new observations of NAPL were observed at GMA 3 in fall 2007. However, two wells with observed NAPL in spring 2007 (51-5 and 59-1) did not contain NAPL during the fall 2007 monitoring period. Both wells were monitored monthly from July 2007 through December 2007. It should be noted that monitoring well 59-1 was dry during each of the six gauging events, which precludes a definitive conclusion that NAPL is not present in the area of that well.

2.5 Groundwater Sampling and Analysis

The fall 2007 interim sampling event was performed on November 1 and 2, 2007. Low-flow sampling techniques using either a bladder or peristaltic pump were utilized for the purging and collection of groundwater samples during this sampling event. The specific sampling method utilized, as well as a summary of any deviations from the low-flow sampling method specified in the FSP/QAPP, are listed on the field sampling records included in Appendix C. Each monitoring well was purged until field parameters (including temperature, pH, specific conductivity, oxidation-reduction potential, dissolved oxygen and turbidity) stabilized or until the well was pumped dry. The field parameters were measured during purging and immediately prior to sampling at all monitoring wells. The stabilized field parameter data are summarized in Table 6. A general summary of the fall 2007 field measurement results, collected just prior to sampling, for the monitoring event is provided below:

Parameter	Units	Range
Turbidity	NTUs	1 – 11
pH	pH units	6.21 – 8.27
Specific Conductivity	millisiemens per centimeter (mS/cm)	0.28 – 3.38
Oxidation-Reduction Potential	millivolts (mV)	-211 – 67.5
Dissolved Oxygen	milligrams per liter (mg/L)	0.59 – 6.44
Temperature	degrees Celsius (°C)	10.75 – 14.46

As shown above and in Table 6 for this sampling event, none of the groundwater samples extracted from the monitoring wells had turbidity levels greater than the target level of 50 NTU upon stabilization. These results indicate that the sampling and measurement procedures utilized during this sampling event were effective in obtaining groundwater samples with low turbidity.

The collected groundwater samples were submitted to SGS Environmental Services, Inc. (SGS) of Wilmington, North Carolina for laboratory analysis. For the groundwater samples that were monitored for compliance with the GW-3 standards, the samples were submitted for analysis of one or more of the following constituents using the associated EPA methods:

Constituent	EPA Method
VOCs	8260B
PCBs (Filtered Samples)	8082

For the groundwater sample collected from the well (51-14) that was monitored solely for compliance with the GW-2 standards, the sample was submitted for analysis of the VOCs listed in GE’s FSP/QAPP. The VOCs were analyzed using EPA Method 8260B in accordance with a letter from GE to EPA dated September 28, 2001.

Following receipt of the analytical data from the laboratory, the preliminary results were reviewed for completeness and compared to the MCP Method 1 GW-2 and GW-3 standards, and to the MCP Upper Concentration Limits (UCLs) for groundwater, as applicable. The preliminary analytical results were presented in the next monthly report on overall activities at the GE-Pittsfield/Housatonic River Site. Finally, the data were validated in accordance with the FSP/QAPP and the validated results were utilized in the preparation of this report. The data validation report is provided in Appendix D. As discussed in the data validation report, 100% of the fall 2007 groundwater quality data are considered to be useable. The validated analytical results are summarized in Section 3 and discussed in Section 4 below.

2.6 Soil Gas/Indoor Air Investigations

On October 11, 2007, GE conducted sub-slab soil gas and indoor air sampling within Buildings 51 and 59. GE collected three sub-slab soil gas samples and three indoor air samples from beneath and within each of those buildings using the same procedures (i.e., the SUMMA[®] canister method) that were used to perform the previous sampling round in fall 2006. The samples were collected to provide further information regarding the potential migration of VOCs and certain semi-volatile organic compounds (SVOCs) from the subsurface LNAPL toward and into Buildings 51 and 59.

Prior to the sampling activities, GE performed a visual assessment within each building to identify readily apparent materials and/or products that could contain chemicals that represent a potential source of volatile constituents in indoor air and that are common to the target constituents identified in the groundwater or LNAPL.

Results of the sub-slab soil gas and indoor sampling activities, including the results of the building products and materials inventories, are provided as Appendix E.

3. Groundwater Analytical Results

3.1 General

This section presents a description of the fall 2007 groundwater analytical results. A summary of the full validated fall 2007 data set is provided in Appendix F, while the data validation report on these results is presented in Appendix D. Tables 7, 8, and 9 summarize the validated results for detected constituents in groundwater relative to the MCP Method 1 GW-2 and GW-3 standards and the MCP UCLs for groundwater, respectively. An assessment of these results relative to those groundwater quality standards and UCLs is provided in Section 4.

3.2 Groundwater Quality Results

3.2.1 VOC Results

Groundwater samples from 2 monitoring wells (6B-R and 51-14) were analyzed for VOCs during the fall 2007 sampling event. The VOC analytical results are summarized in Table 9 (for constituents detected in one or more groundwater sample) and Appendix F (for all constituents analyzed). One or more VOCs were detected above laboratory detection limits in each of the two groundwater samples (four VOCs in 6B-R and six VOCs in 51-14). Total VOC concentrations ranged from an estimated concentrations of 0.0074 parts per million (ppm) in monitoring well 51-14 to an estimated concentration of 21 ppm in monitoring well 6B-R.

3.2.2 PCB Results

Filtered groundwater samples from three monitoring wells were analyzed for PCBs as part of the fall 2007 sampling event. The PCB analytical results are summarized in Table F-1 of Appendix F. PCBs were not detected in any of the three groundwater samples.

4. Assessment of Results

4.1 General

This section discusses the groundwater quality Performance Standards, NAPL-related Performance Standards and the results of the interim groundwater sampling event and NAPL monitoring and recovery program at GMA 3 in fall 2007. In general, groundwater analytical results indicate the presence of the same volatile organic constituents observed historically within GMA 3 (no PCBs were detected in fall 2007), and provide further indication that ongoing NAPL recovery operations at GMA 3 have proven effective in removing LNAPL from the subsurface and in preventing LNAPL migration. A comparison of groundwater data to the applicable Performance Standards is presented in Tables 7 through 9. A summary of the NAPL monitoring results is provided in Table 5.

4.2 Performance Standards

4.2.1 Groundwater Quality Performance Standards

The Performance Standards applicable to response actions for groundwater at GMA 3 are set forth in Section 2.7 and Attachment H (Section 4.1) of the SOW. In general; the Performance Standards for groundwater quality are based on the groundwater classification categories designated in the MCP. The MCP identifies three potential groundwater categories that may be applicable to a given site. One of these, GW-1 groundwater, applies to groundwater that is a current or potential source of potable drinking water. None of the groundwater at any of the GMAs at the Site is classified as GW-1. However, the remaining MCP groundwater categories are applicable to GMA 3 and are described below:

- GW-2 groundwater is defined as groundwater that is a potential source of vapors to the indoor air of buildings. Groundwater is classified as GW-2 if it is located within 30 feet of an existing occupied building and has an average annual depth below ground surface of 15 feet or less. Under the MCP, volatile constituents present within GW-2 groundwater represent a potential source of organic vapors to the indoor air of the overlying and nearby occupied structures.
- GW-3 groundwater is defined as groundwater that discharges to surface water. By MCP definition, all groundwater at a site is classified as GW-3 since it is considered to be ultimately discharged to surface water. In accordance with the CD and SOW, all groundwater at GMA 3 is considered as GW-3.

The CD and the SOW allow for the establishment of standards for GW-2 and GW-3 groundwater at the GMAs through use of one of three methods, as generally described in the MCP. The first, known as Method 1, consists of the application of pre-established numerical "Method 1" standards set forth in the MCP for both GW-2 and GW-3 groundwater (310 CMR 40.0974). These "default" standards have been developed to be conservative and will serve as the initial basis for evaluating groundwater at GMA 3. The current MCP Method 1 GW-2 and GW-3 standards for the constituents detected in the fall 2007 sampling event are listed in Tables 7 and 8, respectively. (In the event of any discrepancy between the standards listed in these tables and those published in the MCP, the latter will be controlling.) For constituents for which Method 1 standards do not exist, the MCP provides procedures, known as Method 2, for developing such standards (Method 2 standards) for both GW-2 (310 CMR 40.0983(2)) and GW-3 (310 CMR 40.0983(4)) groundwater. For such constituents that are detected in groundwater during the baseline monitoring program, Attachment H to the SOW states that in the Baseline Monitoring Program Final Report, GE must propose to develop Method 2 standards using the MCP procedures or alternate procedures approved by EPA, or provide a rationale for why such standards need not be developed. For constituents whose concentrations exceed the applicable Method 1 (or Method 2) standards, GE may develop and propose to EPA alternative GW-2 and/or GW-3 standards based on a site-specific risk assessment. This procedure is known as Method 3 in the MCP. Upon EPA approval, these alternative risk-based GW-2 and/or GW-3 standards may be used in lieu of the Method 1 (or Method 2) standards. Of course, whichever method is used to establish such groundwater standards, GW-2 standards will be applied to GW-2 groundwater and GW-3 standards will be applied to GW-3 groundwater.

Based on consideration of the above points, the specific groundwater quality Performance Standards for GMA 3 consist of the following:

1. At monitoring wells designated as compliance points to assess GW-2 groundwater (i.e., groundwater located at an average depth of 15 feet or less from the ground surface and within 30 feet of an existing occupied building), groundwater quality shall achieve any of the following:
 - (a) the Method 1 GW-2 groundwater standards set forth in the MCP (or, for constituents for which no such standards exist, Method 2 GW-2 standards once developed, unless GE provides and EPA approves a rationale for not developing such Method 2 standards); or
 - (b) alternative risk-based GW-2 standards developed by GE and approved by EPA as protective against unacceptable risks due to volatilization and transport of volatile chemicals from groundwater to the indoor air of nearby occupied buildings; or

- (c) a condition, based on a demonstration approved by EPA, in which constituents in the groundwater do not pose an unacceptable risk to occupants of nearby occupied buildings via volatilization and transport to the indoor air of such buildings.
2. Groundwater quality shall ultimately achieve the following standards at the perimeter monitoring wells designated as compliance points for GW-3 standards:
- (a) the Method 1 GW-3 groundwater standards set forth in the MCP (or, for constituents for which no such standards exist, Method 2 GW-3 standards once developed, unless GE provides and EPA approves a rationale for not developing such Method 2 standards); or
 - (b) alternative risk-based GW-3 standards proposed by GE and approved by EPA as protective against unacceptable risks in surface water due to potential migration of constituents in groundwater.

These Performance Standards are to be applied to the results of the individual monitoring wells included in the monitoring program. Several monitoring wells have been designated as the compliance points for attainment of the Performance Standards identified above. In addition, at GMA 3, a number of wells are designated as natural attenuation monitoring wells, which are used to evaluate natural attenuation mechanisms in groundwater. The GW-2, GW-3, and natural attenuation monitoring wells at this GMA were identified in the GMA 3 Baseline Monitoring Proposal Addendum and are listed in Table 1.

4.2.2 NAPL-Related Performance Standards

Under the CD and SOW, GE is required to perform monitoring, recovery, assessment and other response activities related to NAPL until the applicable NAPL-related Performance Standards are ultimately achieved. The NAPL-related Performance Standards are set forth in Section 2.7 and Attachment H (Section 4.0) of the SOW. They consist of the following:

1. Containment, defined as no discharge of NAPL to surface waters and/or sediments, which shall include no sheens on surface water and no bank seeps of NAPL.
2. For areas near surface waters in which there is no physical containment barrier between the wells and the surface water, elimination of measurable NAPL (i.e., detectable with an oil/water interface probe) in wells near the surface water bank that could potentially discharge NAPL into the surface water, in order to prevent such discharge and assist in achieving groundwater quality Performance Standards.

3. For areas adjacent to physical containment barriers, prevention of any measurable LNAPL migration around the ends of the physical containment barriers.
4. For NAPL areas not located adjacent to surface waters, reduction in the amount of measurable NAPL to levels which eliminate the potential for NAPL migration toward surface water discharge areas or beyond GMA boundaries, and which assist in achieving groundwater quality Performance Standards.
5. For NAPL detected in wells designed to assess GW-2 groundwater (i.e., located at average depths of 15 feet or less from the ground surface and within a horizontal distance of 30 feet from an existing occupied building), a demonstration that constituents in the NAPL do not pose an unacceptable risk to occupants of such building via volatilization and transport to the indoor air of such building. Such demonstration may include assessment activities such as: NAPL sampling, soil gas sampling, desk-top modeling of potential volatilization of chemicals from the NAPL (or associated groundwater) to the indoor air of the nearby occupied buildings, or sampling of the indoor air of such buildings. If necessary, GE shall propose corrective actions, including, but not limited to, containment, recovery or treatment of NAPL and impacted groundwater.

In addition to these Performance Standards, GE has developed and implemented site-wide criteria for NAPL monitoring and manual recovery requirements, standard procedures for assessment of new NAPL occurrences, and the feasibility of the installation of new recovery systems. In response, GE proposed several NAPL monitoring program guidelines in the Fall 2001 NAPL Monitoring Report for GMA 1 (conditionally approved by EPA on August 29, 2002) and subsequently implemented the approved guidelines across all GMAs. Those guidelines were incorporated into GE's FSP/QAPP.

4.3 Groundwater Quality

The analytical results from the fall 2007 groundwater sampling event were compared to the applicable MCP Method 1 GW-2 and GW-3 standards and to the UCLs for groundwater. These comparisons are summarized in Tables 7, 8, and 9 (for the GW-2 standards, GW-3 standards and UCLs, respectively) and are discussed in the following subsections.

4.3.1 Groundwater Results Relative to GW-2 Performance Standards

Groundwater samples were collected from one designated GW-2 monitoring well (51-14) in fall 2007. The fall 2007 groundwater analytical results for all detected constituents subject to MCP Method 1 GW-2 standards and a comparison of those results with the applicable MCP Method 1 GW-2 standards are presented in Table 7. None of the fall 2007 sample results from GW-2 monitoring well 51-14 exceeded the GW-2 standards and total VOC

concentrations were well below 5 ppm (the level specified in the SOW as a notification level for GW-2 wells within 30 feet of a school or occupied residential structure and as a trigger level for the proposal of interim response actions).

4.3.2 Groundwater Results Relative to GW-3 Performance Standards

A total of three monitoring wells at GMA 3 designated as GW-3 monitoring wells (6B-R, 82B-R and 114B-R) were sampled in fall 2007. The fall 2007 groundwater analytical results for all detected constituents and a comparison of those results with the applicable MCP Method 1 GW-3 standards are presented in Table 8. As shown in Table 8, the concentrations of benzene (15 ppm) and chlorobenzene (5.3 ppm) in monitoring well 6B-R exceeded the GW-3 standards of 10 ppm and 1 ppm, respectively, for these substances

The SOW requires that interim response actions must be proposed for baseline sampling results which exceed Method 1 GW-3 standards at downgradient perimeter monitoring wells, in which: (a) such an exceedance had not previously been detected, or (b) there was a previous exceedance of the Method 1 GW-3 standard and the groundwater concentration is greater than or equal to 100 times the GW-3 standard (if the exceedance was not previously addressed). These interim response actions may include: (1) further assessment activities, such as resampling, increasing the sampling frequency to quarterly, additional well installation and/or continuing the baseline monitoring program; (2) active response actions; and/or (3) the conduct of a site-specific risk evaluation and proposal of alternative risk-based GW-3 Performance Standards.

For well 6B-R, where the Method 1 GW-3 standards for benzene and chlorobenzene were exceeded, historical chlorobenzene data has shown prior exceedances of the GW-3 standard at higher concentrations than those detected prior to fall 2007. However, the fall 2007 results represent the first exceedance of the GW-3 standard for benzene concentrations that have been seen at this location since sampling was initiated in 1979. Neither constituent concentration was detected at a level greater than 100 times its respective GW-3 standard. In addition, this well is located in the vicinity of a known chlorobenzene plume. Therefore, GE's proposed response action to address these exceedances is to continue the interim monitoring program, as discussed further in Section 5 below.

4.3.3 Groundwater Results Relative to Upper Concentration Limits

In addition to comparing the fall 2007 groundwater analytical results with applicable MCP Method 1 GW-2 and GW-3 standards, all detected constituents have also been compared with the groundwater UCLs specified in the MCP (310 CMR 40.0996(7)), as presented in Table 9. The results shown on Table 9 indicate that no constituents were detected at levels above the applicable UCL.

4.4 Overall Assessment of Analytical Results

Graphs illustrating historical concentrations of total VOCs and total PCBs, including the fall 2007 concentrations, are provided in Appendix G for all wells sampled in fall 2007 that have been previously sampled and analyzed for those constituents. In addition, Appendix G contains graphs of historical concentrations of individual constituents (i.e., benzene and chlorobenzene) that exceeded the applicable MCP Method 1 GW-3 standards or UCLs at monitoring wells during any of the prior baseline monitoring program sampling events that were analyzed for those constituents in fall 2007.

Based on a review of the Concentration vs. Time graphs presented in Appendix G, it appears that concentrations of total VOCs have decreased in comparison to historical high levels in many of the wells downgradient of the former Waste Stabilization Basin (i.e., the area known to contain the highest VOC concentrations) where several years of prior data are available. Total VOCs were slightly increased, however, on a seasonal basis at well 6B/6B-R for the past several years. Specifically, VOC concentrations during the fall monitoring periods have trended upward since baseline monitoring was initiated in 2004, but remained at relatively low levels during the spring monitoring periods. To a lesser extent, the same trend is evident in the benzene and chlorobenzene concentrations at this well, although the chlorobenzene concentrations have decreased significantly from the historical high levels observed prior to the start of the baseline monitoring program. No trends are evident in the total VOC concentrations at well 51-14, as the concentrations have remained at low levels during all monitoring events. For PCBs, no trends are evident on the historical concentration graphs in Appendix G. Well 82B-R contained PCB concentrations at or near the GW-3 standard during three monitoring events between spring 2005 and 2006, but no PCBs were detected in the well prior to that time or in the fall 2007 samples. At well 114B-R, the GW-3 standard was exceeded in the samples analyzed in spring 2006, but no PCBs have been detected in filtered samples analyzed during any other round and unfiltered samples only contained trace PCB concentrations on two other occasions. Based on a review of the data from this well, the spring 2006 result is likely anomalous.

4.5 Evaluation of NAPL Monitoring and Recovery Activities

4.5.1 Extent of NAPL

The historical maximum extent of measurable LNAPL at GMA 3 is illustrated on Figure 6. That figure and the associated groundwater elevation table include, in addition to the GMA 3 wells, several wells outside of GMA 3. Specifically, GE has monitored well GMA4-3, located in GMA 4 across Plastics Avenue from GMA 3. NAPL has never been detected in that well. Moreover, in EPA's December 7, 2006 conditional approval letter, EPA required GE to include GMA 4 wells 60B-R and RF-14 in the groundwater elevation table and contour map for GMA 3. Accordingly, GE has included those wells in this report. The

extent of LNAPL observed during the fall 2007 semi-annual monitoring event is shown on Figure 7. These figures show a continuing significant decrease in the extent of measurable LNAPL observed in fall 2007 compared to the known maximum extent, particularly along the northern edge of the LNAPL area. This reduction in LNAPL extent on the northern portion of the LNAPL plume is likely attributable to GE's active NAPL recovery program, which includes an automatic skimmer system in well 51-21 and routine manual recovery of LNAPL at surrounding locations.

The extent of LNAPL has also decreased in two other areas of the historical plume. NAPL was not detected during the fall 2007 monitoring period in monitoring wells 51-5 or 59-1. It should be noted that monitoring well 59-1 was dry during each of the six gauging events, thereby precluding a definitive conclusion that NAPL is not present in the area of that well.

The extent of LNAPL to the east of Building 51 was slightly different than the prior monitoring event. Specifically, LNAPL was observed in well 51-5 during the spring 2007 monitoring event, but not during the fall 2007 monitoring event. Since well 51-5 previously contained LNAPL, this difference is likely representative of relatively minor changes near the edge of the LNAPL plume. The extent of LNAPL to the west of Building 51 has remained unchanged since the last monitoring event.

Except for the potential presence of LNAPL in well GMA3-11 (based on a single suspect instrument reading from spring 2007), the reduction of LNAPL along the northern edge of the LNAPL area and occasional variations in LNAPL presence along the edges of the known LNAPL area, the extent of LNAPL has remained relatively consistent in recent years.

In April 2007, DNAPL was observed in well GMA3-16 during the first monitoring round performed after its installation. Since that time, the well has been checked on a weekly basis and no additional DNAPL has entered the well. With the exception of this one observation, DNAPL has not been observed at any of the GMA 3 wells.

4.5.2 NAPL Recovery

As discussed in Section 2.4, approximately 144.96 gallons of LNAPL were recovered at GMA 3 in fall 2007. Of this total, approximately 133.2 gallons were removed by the automated skimmer system at well 51-21, and the remaining 11.76 gallons were manually recovered from other monitoring wells (see Table 5). For comparison, over the same time period in fall 2006, approximately 87.74 gallons of LNAPL were recovered at GMA 3 (approximately 80.59 gallons by the automated skimmer system at well 51-21, and approximately 7.15 gallons from other monitoring wells). Since 1997, approximately 1,414 gallons of LNAPL have been removed from GMA 3 as part of GE's NAPL monitoring and recovery program.

Based on the results of LNAPL recovery testing conducted by GE from May 15-17, 2007 and presented in the *LNAPL Recovery Assessment – Spring 2007* letter submitted to EPA on July 17, 2007 (approved by EPA in a September 12, 2007 letter), GE installed recovery well GMA3-17 on October 22, 2007. Until an automated skimmer system could be installed, the well was monitored on a weekly basis and any observed LNAPL was manually removed. On February 7, 2008, the GMA3-17 skimmer system was activated and LNAPL recovery began. As approved by EPA, after one year of active LNAPL recovery, GE will assess the effectiveness of this recovery well and determine if the overall volume of LNAPL removed justifies continued system operation. The results of this assessment along with GE's recommendation regarding continued operation of the system will be included in the fall 2008 semi-annual monitoring report.

5. Proposed Program Modifications

5.1 General

The interim monitoring program now being conducted is designed to continue the natural attenuation monitoring program and obtain additional data from locations where it is not yet clear whether the initial baseline groundwater quality results indicate that certain wells may require future monitoring in a long-term program.

This section contains a description of proposed and recently approved/required modifications to the interim groundwater quality and NAPL monitoring program at GMA 3. These modifications were developed in response to the results of GE's assessments of its NAPL monitoring/recovery data, the fall 2007 soil gas/indoor air investigation results, and the fall 2007 groundwater quality data. Based on those assessments, no modifications are proposed to the groundwater quality or soil gas/indoor air sampling activities conducted at this GMA. GE's proposed modifications to the NAPL monitoring program are described below.

5.2 NAPL Monitoring Program Modifications

As discussed in Section 4.5.2, the automated LNAPL skimmer system at well GMA3-17 was activated on February 7, 2008. As such, GE proposes to remove the well from the weekly monitoring and manual LNAPL removal program. GE will monitor LNAPL recovery at the well during its routine maintenance of the system. GE will operate the new system for a period of at least one year, after which GE will assess the LNAPL recovery results to determine if the recovery volume is sufficient to justify continued operation of the system.

During the spring 2007 monitoring event conducted in April 2007, NAPL was observed for the first time at two wells that had not contained NAPL in the past. Specifically, LNAPL was observed at GMA3-11 and DNAPL was observed at GMA3-16 (which was just installed in March 2007). In response to these observations, the monitoring schedule at these wells was adjusted from a monthly to weekly basis to further assess those observations. Since that time, no NAPL has been observed in either of these two wells. As such, GE proposes to return to the prior monthly monitoring schedule at wells GMA3-11 and GMA3-16. No other changes to GE's ongoing NAPL monitoring or recovery activities at GMA 3 are proposed at this time.

6. Schedule of Future Activities

6.1 General

This section addresses the schedule for future groundwater quality monitoring activities and reporting for GMA 3. This schedule assumes that the modifications to the NAPL monitoring program proposed in Section 5 will be implemented following EPA approval.

6.2 Field Activities Schedule

GE will continue its routine groundwater quality, groundwater elevation, and NAPL monitoring according to the current schedule approved by EPA. In accordance with the approved semi-annual monitoring schedule, the spring 2008 groundwater quality sampling, groundwater elevation monitoring, and NAPL monitoring event is scheduled to be completed in April 2008. GE will conduct a NAPL bailing round approximately two weeks prior to the spring 2008 semi-annual NAPL monitoring event.

The next natural attenuation monitoring event (conducted each spring) is scheduled for April 2008. GE will sample 22 wells, analyzing for VOCs and the natural attenuation parameters listed in Table 10.

Unlike the natural attenuation sampling, interim groundwater sampling activities alternate between the spring and fall seasons on an annual basis. The next interim sampling event is scheduled for April 2008, when groundwater samples will be collected and analyzed from the same five monitoring wells sampled in fall 2007 for the constituents listed in Table 10. Two of those wells (114A and 114B-R) are also included in the natural attenuation monitoring event discussed above.

As discussed in Appendix E, during October 2008 GE will conduct an annual inventory of materials and/or products within each building that could contain volatile constituents similar to those that have been previously detected in the indoor air samples and are common to the target constituents in the LNAPL or groundwater. Shortly following completion of the building inventories, GE will perform additional monitoring of soil gas beneath, and indoor air within, Buildings 51 and 59 at or near the same locations that were sampled in fall 2007.

Prior to performance of field activities, GE will provide EPA with 7 days advance notice to allow the assignment of field oversight personnel.

6.3 Reporting Schedule

GE will submit a Spring 2008 Groundwater Quality and NAPL Monitoring Report for GMA 3 by August 31, 2008. That report will present the groundwater quality sampling and groundwater elevation monitoring results and NAPL monitoring and recovery data for the period of January 2008 through June 2008. It will also contain a summary of other activities related to groundwater quality and NAPL monitoring/recovery conducted at GMA 3 during that time period and any proposals to modify those activities, if applicable.

The results of the next round of building inventories and sub-slab soil gas/indoor air sampling will be presented as part of the Fall 2008 NAPL Monitoring Report for GMA 3, which will be submitted by February 28, 2009.

GE will also continue to provide the results of its ongoing groundwater, NAPL, soil gas and indoor monitoring activities and NAPL recovery efforts (including any results associated with the new LNAPL skimmer system installed in GMA 3) in its monthly reports on overall activities at the GE-Pittsfield/Housatonic River Site.

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Tables

Table 1
Groundwater Quality Monitoring Program Summary
Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts

Well Number	Well Designation / Analytical Category	Sampling Schedule	Analyses	Comments
2A	Natural Attenuation	Annual ⁽¹⁾	See Note 3	
6B-R	GW-3 Perimeter	Annual ⁽²⁾	VOC	Sampled on 11/1/07
16A	Natural Attenuation	Annual ⁽¹⁾	See Note 3	
16B-R	GW-2 Sentinel/Natural Attenuation	Annual ⁽¹⁾	See Note 4	
16C-R	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
39B-R	Natural Attenuation	Annual ⁽¹⁾	See Note 3	
39D-R	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
39E	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
43A	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
43B	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
51-14	GW-2 Sentinel	Annual ⁽²⁾	VOC	Sampled on 11/2/07
82B-R	GW-3 Perimeter	Annual ⁽²⁾	PCB	Sampled on 11/1/07
89A	Natural Attenuation	Annual ⁽¹⁾	See Note 3	
89B	GW-3 Perimeter/Natural Attenuation	Annual ⁽¹⁾	See Note 3	
89D-R	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
90A	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
90B	GW-3 Perimeter/Natural Attenuation	Annual ⁽¹⁾	See Note 4	
95A	Natural Attenuation	Annual ⁽¹⁾	See Note 3	
95B-R	GW-3 Perimeter/Natural Attenuation	Annual ⁽¹⁾	See Note 3	
111A-R	Natural Attenuation	Annual ⁽¹⁾	See Note 4	

Table 1
Groundwater Quality Monitoring Program Summary
Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts

Well Number	Well Designation / Analytical Category	Sampling Schedule	Analyses	Comments
111B-R	GW-3 Perimeter/Natural Attenuation	Annual ⁽¹⁾	See Note 4	
114A	Natural Attenuation / Supplemental	Annual ^(1,2)	PCB - See Note 5	Sampled on 11/2/07
114B-R	GW-3 Perimeter/Natural Attenuation	Annual ^(1,2)	PCB - See Note 5	Sampled on 11/2/07
115A	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
115B	Natural Attenuation	Annual ⁽¹⁾	See Note 4	

Notes:

1. Wells sampled under the natural attenuation monitoring program are sampled on an annual basis in the spring.
2. Wells proposed for annual interim groundwater quality sampling, are sampled for the listed parameters during the interim period between the completion of the baseline monitoring program and the initiation of a long-term monitoring program. The sampling schedule alternates between the spring and fall seasons each year, with the next sampling round scheduled for spring 2008.
3. Samples analyzed for: VOCs, two SVOCs (2-chlorophenol and 4-chlorophenol), and Natural Attenuation Parameters (methane, ethane, ethene, chloride, nitrate, nitrite, alkalinity, dissolved organic carbon, sulfate, and dissolved iron).
4. Samples analyzed for: VOCs and Natural Attenuation Parameters (methane, ethane, ethene, chloride, nitrate, nitrite, alkalinity, dissolved organic carbon, sulfate, and dissolved iron).
5. Samples analyzed for: VOCs and Natural Attenuation Parameters (methane, ethane, ethene, chloride, nitrate, nitrite, alkalinity, dissolved organic carbon, sulfate, and dissolved iron) during the spring natural attenuation sampling rounds, and for PCBs (filtered samples only) during the alternating spring/fall interim sampling rounds.

Table 2
Groundwater Elevation/NAPL Monitoring Program Summary

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts

Well Number	Monitoring Frequency ⁽¹⁾	Manual NAPL Removal Criteria ⁽²⁾	Comments
GMA 3 Monitoring Wells			
2A	Semi-Annual	Any Recoverable	
6B-R	Semi-Annual	Any Recoverable	
16A	Semi-Annual	Any Recoverable	
16B-R	Semi-Annual	Any Recoverable	
16C-R	Semi-Annual	Any Recoverable	
39B-R	Semi-Annual	Any Recoverable	
39D-R	Semi-Annual	Any Recoverable	Well 39D-R installed as a replacement for well 39D.
39E	Semi-Annual	Any Recoverable	
43A	Semi-Annual	Any Recoverable	
43B	Semi-Annual	Any Recoverable	
51-5	Monthly	Standard Criteria	
51-6	Monthly	Standard Criteria	
51-7	Monthly	Standard Criteria	
51-8	Weekly	Standard Criteria	
51-9	Monthly	Standard Criteria	
51-11	Monthly	Standard Criteria	
51-12	Monthly	Standard Criteria	
51-13	Monthly	Standard Criteria	
51-14	Monthly	Standard Criteria	
51-15	Monthly	Standard Criteria	
51-16R	Monthly	Standard Criteria	
51-17	Monthly	Standard Criteria	
51-18	Monthly	Standard Criteria	
51-19	Monthly	Standard Criteria	
51-21	Quarterly	Any Recoverable	LNAPL skimmer present in well.
54B-R	Semi-Annual	Any Recoverable	
59-1	Monthly	Standard Criteria	
59-3R	Monthly	Standard Criteria	
59-7	Monthly	Standard Criteria	
78B-R	Monthly	Any Recoverable	

Table 2
Groundwater Elevation/NAPL Monitoring Program Summary

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts

Well Number	Monitoring Frequency ⁽¹⁾	Manual NAPL Removal Criteria ⁽²⁾	Comments
82B-R	Semi-Annual	Any Recoverable	
89A	Semi-Annual	Any Recoverable	
89B	Semi-Annual	Any Recoverable	
89D-R	Semi-Annual	Any Recoverable	
90A	Semi-Annual	Any Recoverable	
90B	Semi-Annual	Any Recoverable	
95A	Semi-Annual	Any Recoverable	
95B-R	Semi-Annual	Any Recoverable	
111A-R	Semi-Annual	Any Recoverable	
111B-R	Semi-Annual	Any Recoverable	
114A	Semi-Annual	Any Recoverable	
114B-R	Semi-Annual	Any Recoverable	
115A	Semi-Annual	Any Recoverable	
115B	Semi-Annual	Any Recoverable	
GMA3-1	None	None	Installation of this well has been deferred until re-routing of Unkamet Brook is completed.
GMA3-2	Semi-Annual	Any Recoverable	
GMA3-3	Semi-Annual	Any Recoverable	
GMA3-4	Semi-Annual	Any Recoverable	
GMA3-5	Semi-Annual	Any Recoverable	
GMA3-6	Semi-Annual	Any Recoverable	
GMA3-7	Quarterly	Any Recoverable	Monitored in place of UB-PZ-1.
GMA3-8	Semi-Annual	Any Recoverable	
GMA3-9	Semi-Annual	Any Recoverable	
GMA3-10	Weekly	Standard Criteria	
GMA3-11	Monthly	Any Recoverable	
GMA3-12	Weekly	Standard Criteria	
GMA3-13	Weekly	Any Recoverable	
GMA3-14	Monthly	Any Recoverable	
GMA3-15	Quarterly	Any Recoverable	Monitored in place of UB-PZ-2.
GMA3-16	Weekly	Any Recoverable	Installed March 2007.
GMA3-17	Weekly	Any Recoverable	Installed October 2007; LNAPL skimmer present in well

Table 2
Groundwater Elevation/NAPL Monitoring Program Summary

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts

Well Number	Monitoring Frequency ⁽¹⁾	Manual NAPL Removal Criteria ⁽²⁾	Comments
OBG-2	Semi-Annual	Any Recoverable	
UB-MW-10	Monthly	Any Recoverable	
UB-PZ-3	Monthly	Any Recoverable	
GMA 4 Monitoring Wells			
60B-R	Semi-Annual	Any Recoverable	
GMA4-3	Monthly	Any Recoverable	
RF-14	Semi-Annual	Any Recoverable	
GMA 3 Staff Gauges			
GMA3-SG-1	Semi-Annual	Not Applicable	
GMA3-SG-2	Semi-Annual	Not Applicable	
GMA3-SG-3	Semi-Annual	Not Applicable	
GMA3-SG-4	Semi-Annual	Not Applicable	

Notes:

1. Monitoring consists of periodic depth to water and NAPL thickness measurements, if present, and may also consist of manual removal of NAPL if a thickness greater than the well-specific criteria is observed during a monitoring event.
2. Standard LNAPL Removal Criteria: LNAPL is manually removed from a well with this designation if a thickness of greater than 0.25 feet is observed during a monitoring event. At other wells, any recoverable quantities of LNAPL will be removed (except at well 51-21, which is equipped with an automated skimmer).
3. Any NAPL observed during the bailing round conducted prior to the spring and fall semi-annual monitoring events is manually removed.
4. No NAPL is manually removed from any wells during the spring and fall semi-annual monitoring events, provided that NAPL was removed during the bailing round.
5. No NAPL is manually removed from any wells during non-routine data collection activities.

**Table 3
Monitoring Well Construction Summary**

**Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts**

Well ID	Survey Coordinates		Well Diameter (inches)	Ground Surface Elevation (ft AMSL)	Measuring Point Elevation (ft AMSL)	Depth to Top of Screen (ft bgs)	Screen Length (ft)	Top of Screen Elevation (ft AMSL)	Base of Screen Elevation (ft AMSL)	Average Depth to Groundwater (ft bgs)	Average Groundwater Elevation (ft AMSL)
	Northing	Easting									
2A	537005.10	138853.90	1.00	991.50	994.16	45.00	5.00	946.50	941.50	5.8	985.71
6B-R	537191.50	138910.00	2.00	991.40	993.62	2.00	10.00	989.40	979.40	4.8	986.63
16A	536730.50	139115.60	2.00	991.50	991.77	44.00	6.00	947.50	941.50	6.9	984.59
16B-R	536738.18	139076.37	2.00	991.80	994.87	3.08	10.00	988.72	978.72	6.2	985.59
16C-R	536734.00	139112.40	2.00	991.40	993.23	90.00	10.00	901.40	891.40	7.8	983.64
16E	536730.30	139112.70	1.00	991.40	992.14	144.00	6.00	847.40	841.40	7.2	984.18
39B-R	536938.60	138862.60	2.00	992.29	991.97	4.00	10.00	988.29	978.29	6.8	985.48
39D-R	536941.50	138854.80	2.00	992.30	994.73	55.00	10.00	937.30	927.30	6.3	985.95
39D	536948.40	138857.90	4.00	992.34	992.16	56.00	10.00	936.34	926.34	6.4	985.95
39E	536932.10	138851.00	4.00	992.34	992.21	225.00	10.00	767.34	757.34	5.9	986.48
43A	538081.20	137905.90	1.00	991.90	993.79	45.00	5.00	946.90	941.90	5.1	986.76
43B	538081.20	137904.40	1.00	991.90	993.61	15.00	5.00	976.90	971.90	4.2	987.73
51-5	536750.50	138335.60	2.00	996.91	996.44	5.00	10.00	991.91	981.91	10.2	986.67
51-6	536937.64	138194.32	2.00	997.57	997.36	5.00	10.00	992.57	982.57	10.6	987.00
51-7	536843.80	138244.60	2.00	997.26	997.08	5.00	10.00	992.26	982.26	10.2	987.08
51-8	536677.80	138317.00	2.00	997.39	997.08	5.00	10.00	992.39	982.39	10.9	986.51
51-9	536563.70	138370.30	2.00	997.76	997.70	5.00	10.00	992.76	982.76	9.8	987.96
51-11	536860.00	138774.50	2.00	994.62	994.37	5.00	10.00	989.62	979.62	8.4	986.24
51-12	536497.30	138518.50	2.00	996.83	996.55	5.00	10.00	991.83	981.83	7.3	989.51
51-13	536917.10	138579.80	2.00	997.68	997.65	5.00	10.00	992.68	982.68	8.4	989.27
51-14	536771.40	138502.60	2.00	996.93	996.77	5.00	10.00	991.93	981.93	10.4	986.56
51-15	536808.20	138306.30	2.00	996.68	996.43	5.00	10.00	991.68	981.68	10.1	986.62
51-16R	536830.20	138347.60	2.00	996.70	996.39	5.00	10.00	991.70	981.70	9.9	986.85
51-17	536769.90	138377.40	2.00	996.48	996.43	5.00	10.00	991.48	981.48	9.7	986.78
51-18	536902.90	138463.40	2.00	997.38	997.12	5.00	10.00	992.38	982.38	10.7	986.68
51-19	536823.20	138414.80	2.00	996.65	996.43	5.00	10.00	991.65	981.65	10.2	986.43
51-21	536767.70	138442.35	4.00	996.70*	1,001.49	5.00	10.00	991.70	981.70	9.9	986.81
54B-R	537827.30	139113.60	2.00	989.00	991.49	3.00	10.00	986.00	976.00	2.2	986.77
59-1	536488.80	138238.60	2.00	997.78	996.72	4.00	20.00	993.78	973.78	10.2	987.58
59-3R	536501.00	138260.70	2.00	997.82	997.64	7.30	10.00	990.52	980.52	11.2	986.66
59-7	536517.40	138296.10	2.00	998.27	997.96	4.00	20.00	994.27	974.27	11.5	986.76
78B-R	537551.80	138716.50	2.00	989.11	988.83	1.82	10.00	987.29	977.29	1.7	987.38
82B-R	536937.40	139621.60	2.00	987.80	989.90	2.00	10.00	985.80	975.80	2.5	985.32
89A	536030.80	139413.40	1.00	983.60	985.76	43.00	5.00	940.60	935.60	0.8	982.81
89B	536031.60	139411.70	2.00	983.10	986.03	4.00	3.00	979.10	976.10	-0.4	983.47
89D-R	536072.20	139434.90	2.00	984.40	987.11	67.50	10.00	916.90	906.90	1.4	983.00
90A	536254.90	139765.40	1.00	986.50	988.07	45.00	5.00	941.50	936.50	3.7	982.84
90B	536251.60	139761.00	2.00	986.50	989.10	8.00	3.00	978.50	975.50	4.0	982.54
95A	535822.10	139769.60	1.00	985.30	987.18	45.00	5.00	940.30	935.30	4.4	980.94
95B-R	535637.20	139722.30	2.00	984.30	986.24	3.00	10.00	981.30	971.30	3.5	980.75

Table 3
Monitoring Well Construction Summary
Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts

Well ID	Survey Coordinates		Well Diameter (inches)	Ground Surface Elevation (ft AMSL)	Measuring Point Elevation (ft AMSL)	Depth to Top of Screen (ft bgs)	Screen Length (ft)	Top of Screen Elevation (ft AMSL)	Base of Screen Elevation (ft AMSL)	Average Depth to Groundwater (ft bgs)	Average Groundwater Elevation (ft AMSL)
	Northing	Easting									
95C	535823.20	139780.30	1.00	985.30	988.16	95.00	5.00	890.30	885.30	1.2	984.07
111A-R	535824.10	139087.80	2.00	995.10	997.35	40.00	10.00	955.10	945.10	11.5	983.60
111B-R	535828.40	139092.00	2.00	994.80	997.48	7.18	10.00	987.62	977.62	11.7	983.11
114A	535499.50	139775.20	1.00	983.20	986.16	45.00	5.00	938.20	933.20	3.6	979.59
114B-R	535503.90	139786.90	2.00	983.50	985.54	4.00	10.00	979.50	969.50	4.2	979.33
115A	535499.50	139775.20	1.00	986.69	988.53	36.00	5.00	950.69	945.69	7.9	978.78
115B	535496.90	139796.60	1.00	988.25	990.90	11.00	5.00	977.25	972.25	8.5	979.78
GMA3-2	536596.40	138956.60	2.00	992.25	991.94	5.19	10.00	987.06	977.06	7.9	984.31
GMA3-3	538094.20	138178.20	2.00	990.86	990.45	2.00	10.00	988.86	978.86	2.1	988.81
GMA3-4	537044.70	138021.80	2.00	994.94	994.60	3.57	10.00	991.37	981.37	7.6	987.35
GMA3-5	537323.20	139766.90	2.00	991.50	993.67	4.00	10.00	987.50	977.50	5.5	985.96
GMA3-6	537021.50	138342.30	2.00	997.74	997.49	8.00	10.00	989.74	979.74	12.1	985.63
GMA3-7	536291.70	138397.40	2.00	1000.45	1000.17	10.00	10.00	990.45	980.45	13.1	987.31
GMA3-8	536339.60	138899.10	2.00	994.50	996.24	5.00	10.00	989.50	979.50	8.8	985.68
GMA3-9	537383.20	138385.60	2.00	992.90	992.39	3.00	10.00	989.90	979.90	5.4	987.55
GMA3-10	536659.10	138056.40	2.00	997.78	997.54	9.00	10.00	988.78	978.78	10.3	987.48
GMA3-11	536353.70	138147.90	2.00	997.78	997.25	9.00	10.00	988.78	978.78	10.1	987.69
GMA3-12	536469.20	138169.70	4.00	998.04	997.84	7.00	15.00	991.04	976.04	10.6	987.43
GMA3-13	536534.30	138035.90	2.00	998.00	997.73	8.06	10	989.94	979.94	10.4	987.63
GMA3-14	536710.30	137953.20	2.00	997.66	997.42	7.25	10	990.41	980.41	9.8	987.85
GMA3-15	536710.30	137953.20	2.00	994.60	996.74	6.00	10.00	988.60	978.60	7.6	987.03
GMA3-16	537542.70	138665.00	2.00	989.80	989.26	2.00	10.00	987.80	977.80	1.9	987.91
GMA3-17	536497.80	138261.50	4.00	998.40	1002.00	7.00	13.00	991.40	978.40	13.0	985.39
OBG-2	537209.10	139475.80	3.00	992.24	992.20	3.00	11.40	989.24	977.84	5.0	987.20
UB-MW-10	536908.10	138278.30	1.00	996.21	995.99	8.00	10.00	988.21	978.21	9.5	986.73
UB-PZ-3	536480.10	138110.00	1.00	998.55	998.15	11.00	5.00	987.55	982.55	11.9	986.61

Notes:

1. The listed wells are scheduled to be utilized during spring 2008 for interim groundwater quality sampling or groundwater elevation monitoring.
2. ft AMSL: Feet above mean sea level
3. ft bgs: Feet below ground surface

Table 4
Groundwater Elevation Data - Fall 2007

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts

Well Number	Overall Average Groundwater (ft AMSL)	Average Fall Groundwater (ft AMSL)	Fall 2007 Groundwater (ft AMSL)	Fall 2007 LNAPL Thickness (ft)	Fall 2007 DNAPL Thickness (ft)
GMA 3 Monitoring Wells Screened at Water Table					
2A	985.71	986.09	985.51	0.00	0.00
6B-R	986.63	986.64	986.51	0.00	0.00
16B-R	985.59	985.63	985.17	0.00	0.00
39B-R	985.48	985.88	985.25	0.00	0.00
43B	987.73	988.07	988.23	0.00	0.00
50B	988.66	988.75	988.32	0.00	0.00
51-5	986.67	986.26	985.54	0.00	0.00
51-6	987.00	986.27	985.78	0.00	0.00
51-7	987.08	986.78	DRY	0.00	0.00
51-8	986.51	985.70	985.45	0.48	0.00
51-9	987.96	987.01	DRY	0.00	0.00
51-11	986.24	985.90	985.57	0.00	0.00
51-12	989.51	989.03	988.79	0.00	0.00
51-13	989.27	987.48	DRY	0.00	0.00
51-14	986.56	986.06	985.26	0.00	0.00
51-15	986.62	985.93	985.48	0.59	0.00
51-16R	986.85	986.23	985.47	0.25	0.00
51-17	986.78	986.03	985.63	1.21	0.00
51-18	986.68	986.16	985.53	0.00	0.00
51-19	986.43	985.78	985.33	0.18	0.00
51-21	986.81	985.93	985.08	0.10	0.00
54B-R	986.77	986.67	986.83	0.00	0.00
59-1	987.58	986.56	DRY	0.00	0.00
59-3R	986.66	985.90	985.35	0.82	0.00
59-7	986.76	986.03	985.48	0.78	0.00
78B-R	987.38	987.66	988.38	0.00	0.00
82B-R	985.32	985.24	985.26	0.00	0.00
89B	983.47	983.00	982.53	0.00	0.00
90B	982.54	982.83	982.08	0.00	0.00
95B-R	980.75	980.07	979.95	0.00	0.00
111B-R	983.11	983.54	982.68	0.00	0.00
114B-R	979.33	979.05	979.21	0.00	0.00
115B	979.78	979.51	979.22	0.00	0.00
GMA3-2	984.31	984.80	984.07	0.00	0.00
GMA3-3	988.81	989.38	989.82	0.00	0.00
GMA3-4	987.35	987.53	987.01	0.00	0.00
GMA3-5	985.96	985.95	985.23	0.00	0.00
GMA3-6	985.63	984.34	980.33	0.00	0.00
GMA3-7	987.31	986.48	985.41	0.00	0.00
GMA3-8	985.68	985.91	984.46	0.00	0.00
GMA3-9	987.55	986.82	983.61	0.00	0.00
GMA3-10	987.48	986.34	985.34	0.05	0.00
GMA3-11	987.69	986.65	985.60	0.00	0.00
GMA3-12	987.43	986.33	985.36	0.40	0.00
GMA3-13	987.63	986.18	985.33	0.01	0.00
GMA3-14	987.85	986.36	986.19	0.00	0.00
GMA3-15	987.03	985.23	984.89	0.00	0.00

Table 4
Groundwater Elevation Data - Fall 2007

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts

Well Number	Overall Average Groundwater (ft AMSL)	Average Fall Groundwater (ft AMSL)	Fall 2007 Groundwater (ft AMSL)	Fall 2007 LNAPL Thickness (ft)	Fall 2007 DNAPL Thickness (ft)
GMA3-16	987.91	NO DATA	Water at top of riser	0.00	0.00
GMA3-17	985.39	985.39	985.39	0.00	0.00
OBG-2	987.20	987.10	986.96	0.00	0.00
UB-MW-10	986.73	986.11	985.59	0.00	0.00
UB-PZ-3	986.61	985.95	985.21	0.18	0.00
GMA 4 Monitoring Wells Screened at Water Table					
60B-R	987.62	987.57	985.77	0.00	0.00
GMA4-3	986.64	986.44	985.42	0.00	0.00
RF-14	990.74	990.06	990.44	0.00	0.00
Monitoring Wells Screened Below Water Table					
16A	984.59	984.62	984.12	0.00	0.00
16C-R	983.64	984.90	984.73	0.00	0.00
39D-R	985.95	986.18	985.51	0.00	0.00
39E	986.48	986.47	986.01	0.00	0.00
43A	986.76	988.18	988.24	0.00	0.00
89A	982.81	982.80	982.47	0.00	0.00
89D-R	983.00	984.18	NO DATA	0.00	0.00
90A	982.84	982.73	982.20	0.00	0.00
95A	980.94	981.38	980.09	0.00	0.00
111A-R	983.60	984.27	983.08	0.00	0.00
114A	979.59	980.40	979.73	0.00	0.00
115A	978.78	980.56	980.09	0.00	0.00
GMA 3 Staff Gauges					
GMA3-SG-2	NA	NA	982.49	0.00	0.00
GMA3-SG-3	NA	NA	992.20	0.00	0.00
GMA3-SG-4	NA	NA	NO DATA	NA	NA

Notes:

1. Groundwater elevation/NAPL thickness data collected between October 29 and November 1, 2007.
2. Groundwater elevations denoted <## indicate that the well was dry on the date measured and the referenced elevation represents the base of well elevation.
3. Average groundwater elevations based on available seasonal groundwater elevation data since 2000.
4. NA - Data Not Available

Table 5
Groundwater Elevation and LNAPL Monitoring/Recovery Data Summary

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts

Well Name	Number of Measurements	Measuring Point Elevation (Feet AMSL)	Depth to Water		LNAPL Observations			LNAPL Recovery ⁽⁶⁾	
			Minimum (Feet BMP)	Maximum (Feet BMP)	Times Observed	Minimum Thickness (Feet)	Maximum Thickness (Feet)	LNAPL Recovery (Liters)	LNAPL Recovery (Gallons)
GMA3 Monitoring Wells									
002A	1	994.16	8.65	8.65	0	---	---	0.00	0.00
6B-R	2	993.62	7.11	7.11	0	---	---	0.00	0.00
16A	1	991.77	7.65	7.65	0	---	---	0.00	0.00
16B-R	1	994.87	9.70	9.70	0	---	---	0.00	0.00
16C-R	1	993.23	8.50	8.50	0	---	---	0.00	0.00
39B-R	1	991.97	6.72	6.72	0	---	---	0.00	0.00
39D-R	1	994.73	9.22	9.22	0	---	---	0.00	0.00
39E	1	992.21	6.20	6.20	0	---	---	0.00	0.00
43A	1	993.79	5.55	5.55	0	---	---	0.00	0.00
43B	1	993.61	5.38	5.38	0	---	---	0.00	0.00
50B	1	991.76	3.44	3.44	0	---	---	0.00	0.00
51-5	6	996.44	9.1	11.15	0	---	---	0.00	0.00
51-6	7	997.36	11.18	11.65	0	---	---	0.00	0.00
51-7	6	997.08	10.54	10.54	0	---	---	0.00	0.00
51-8	27	997.08	11.45	13.25	27	0.40	1.42	17.12	4.52
51-9	1	997.70	9.15	9.15	0	---	---	0.00	0.00
51-11	6	994.37	8.48	9.60	0	---	---	0.00	0.00
51-12	6	996.55	7.35	7.90	0	---	---	0.00	0.00
51-13	6 ³	997.42	NA	NA	NA	NA	NA	0.00	0.00
51-14	7	996.77	11.33	11.75	0	---	---	0.00	0.00
51-15	6	996.43	10.77	11.78	6	0.07	0.59	0.51	0.14
51-16R	6	996.39	10.78	11.65	6	0.08	0.45	0.43	0.11
51-17	6	996.43	11.45	12.10	6	0.88	1.21	3.12	0.82
51-18	6	997.12	11.40	11.90	0	---	---	0.00	0.00
51-19	5	996.43	11.03	11.85	5	0.11	0.50	0.47	0.12
51-21	26	1,001.49	14.42	16.54	25	<0.01	0.1	504.21	133.20
54B-R	1	991.49	4.66	4.66	0	---	---	0.00	0.00
59-1	6 ³	997.52	NA	NA	NA	NA	NA	0.00	0.00

Table 5
Groundwater Elevation and LNAPL Monitoring/Recovery Data Summary

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts

Well Name	Number of Measurements	Measuring Point Elevation (Feet AMSL)	Depth to Water		LNAPL Observations			LNAPL Recovery ⁽⁶⁾	
			Minimum (Feet BMP)	Maximum (Feet BMP)	Times Observed	Minimum Thickness (Feet)	Maximum Thickness (Feet)	LNAPL Recovery (Liters)	LNAPL Recovery (Gallons)
59-3R	6	997.64	12.47	13.22	6	0.49	0.88	2.18	0.58
59-7	5	997.96	12.18	13.30	5	0.03	0.78	0.66	0.17
78B-R	5	988.83	0.45	2.25	0	---	---	0.00	0.00
82B-R	2	989.90	4.62	4.64	0	---	---	0.00	0.00
89A	1	985.76	3.29	3.29	0	---	---	0.00	0.00
89B	1	986.03	3.50	3.50	0	---	---	0.00	0.00
89D-R	1	987.11	68.95	68.95	0	---	---	0.00	0.00
90A	1	988.07	5.87	5.87	0	---	---	0.00	0.00
90B	1	989.10	7.02	7.02	0	---	---	0.00	0.00
95A	1	987.18	7.09	7.09	0	---	---	0.00	0.00
95B-R	1	986.24	6.29	6.29	0	---	---	0.00	0.00
111A-R	1	997.35	14.27	14.27	0	---	---	0.00	0.00
111B-R	1	997.48	14.8	14.80	0	---	---	0.00	0.00
114A	2	986.16	6.11	6.43	0	---	---	0.00	0.00
114B-R	2	985.54	6.32	6.33	0	---	---	0.00	0.00
115A	1	988.53	8.44	8.44	0	---	---	0.00	0.00
115B	1	990.90	11.68	11.68	0	---	---	0.00	0.00
GMA3-2	1	991.94	7.87	7.87	0	---	---	0.00	0.00
GMA3-3	1	990.45	0.63	0.63	0	---	---	0.00	0.00
GMA3-4	1	994.60	7.59	7.59	0	---	---	0.00	0.00
GMA3-5	1	993.67	8.44	8.44	0	---	---	0.00	0.00
GMA3-6	1	997.49	17.16	17.16	0	---	---	0.00	0.00
GMA3-7	2	1,000.17	14.25	14.76	0	---	---	0.00	0.00
GMA3-8	1	996.24	11.78	11.78	0	---	---	0.00	0.00
GMA3-9	1	992.39	8.78	8.78	0	---	---	0.00	0.00
GMA3-10	27	997.54	11.60	12.68	27	0.01	0.45	2.99	0.79
GMA3-11	26	997.25	9.30	11.86	0	---	---	0.00	0.00
GMA3-12	27	997.84	11.81	13.86	27	0.02	1.01	16.12	4.26

**Table 5
Groundwater Elevation and LNAPL Monitoring/Recovery Data Summary**

**Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts**

Well Name	Number of Measurements	Measuring Point Elevation (Feet AMSL)	Depth to Water		LNAPL Observations			LNAPL Recovery ⁽⁶⁾	
			Minimum (Feet BMP)	Maximum (Feet BMP)	Times Observed	Minimum Thickness (Feet)	Maximum Thickness (Feet)	LNAPL Recovery (Liters)	LNAPL Recovery (Gallons)
GMA3-13	27	997.73	11.53	12.62	20	0.01	0.13	0.36	0.10
GMA3-14	6	997.42	10.71	11.40	0	---	---	0.00	0.00
GMA3-15	2	996.74	11.85	12.00	0	---	---	0.00	0.00
GMA3-16	20	989.26	0.80	2.94	0	---	---	0.00	0.00
GMA3-17	9	1,002.00	16.26	16.61	2	0.02	0.06	0.25	0.07
OBG-2	2	992.20	5.24	16.33	0	---	---	0.00	0.00
UB-MW-10	5	995.99	10.25	10.75	0	---	---	0.00	0.00
UB-PZ-3	5	998.15	12.65	13.32	4	0.13	>0.41	0.29	0.08
GMA4 Monitoring Wells (Adjacent to GMA3)									
RF-14	1	1,001.59	11.15	11.15	0	---	---	0.00	0.00
GMA4-3	6	1,003.95	17.80	18.56	0	---	---	0.00	0.00
60B-R	1	1,002.79	17.02	17.02	0	---	---	0.00	0.00

**Total amount of LNAPL Recovered - July 2007 through December 2007: 548.71 liters
144.96 gallons**

Notes:

1. --- indicates LNAPL was not present in a measurable quantity
2. NA indicates information not available.
3. Groundwater was not present in the well at the time measurements were conducted.
4. ft BMP = Feet Below Measuring Point
5. ft AMSL = Feet Above Mean Sea Level
6. LNAPL was recovered via an automated skimmer at well 51-21 and was manually removed from the remaining wells.

Table 6
Field Parameter Measurements - Fall 2007

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts

Well Number	Turbidity (NTU)	Temperature (degrees Celsius)	pH (standard units)	Specific Conductivity (mS/cm)	Oxidation-Reduction Potential (mV)	Dissolved Oxygen (mg/L)
6B-R	2	13.34	7.11	3.381	-109.4	0.59
51-14	1	14.46	6.53	0.382	67.5	6.44
82B-R	2	10.90	6.21	0.661	-5.4	0.82
114A	11	10.75	8.27	0.275	-211.0	0.83
114B-R	4	12.27	7.18	0.910	30.5	5.72

Notes:

1. Measurements collected during fall 2007 GMA 3 baseline monitoring program sampling activities conducted on October 31 and November 1, 2007
2. Well parameters were generally monitored continuously during purging by low-flow techniques. Final parameter readings are presented.
3. NTU - Nephelometric Turbidity Units
4. mS/cm - Millisiemens per centimeter
5. mV - Millivolts
6. mg/L - Milligrams per liter (ppm)

Table 7
Comparison of Groundwater Analytical Results to MCP Method 1 GW-2 Standards

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter	Sample ID: Date Collected:	Method 1 GW-2 Standards	51-14 11/02/07
Volatile Organics			
Carbon Tetrachloride		0.002	0.00029 J [0.00039 J]
Chlorobenzene		0.2	0.00056 J [0.00055 J]
Chloromethane		Not Listed	0.00045 J [0.0015]
Methylene Chloride		10	0.00022 J [ND(0.0050)]
Trichloroethene		0.03	0.0043 [0.0046]
Total VOCs		5	0.0058 J [0.0070 J]

Notes:

1. Samples were collected by ARCADIS BBL, and submitted to SGS Environmental Services, Inc. for analysis of volatiles and PCBs (filtered).
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS BBL (approved March 15, 2007 and re-submitted March 30, 2007).
 ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
3. Total VOCs are being compared to the notification level in the SOW of 5ppm, as there is no GW-2 Standard for total VOCs.
4. Only detected volatiles are summarized.
5. Field duplicate sample results are presented in brackets.
- 6.

Data Qualifiers:

Organics (volatiles)

J - Indicates that the associated numerical value is an estimated concentration.

Table 8
Comparison of Groundwater Analytical Results to MCP Method 1 GW-3 Standards

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter	Sample ID: Date Collected:	Method 1 GW-3 Standards	6B-R 11/01/07	82B-R 11/01/07	114-BR 11/02/07
Volatile Organics					
Benzene		10	15	NA	NA
Chlorobenzene		1	5.3	NA	NA
Methylene Chloride		50	0.49 J	NA	NA
Toluene		4	0.15 J	NA	NA
PCBs-Filtered					
None Detected		--	NA	--	--

Notes:

1. Samples were collected by ARCADIS BBL, and submitted to SGS Environmental Services, Inc. for analysis of volatiles and PCBs (filtered).
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS BBL (approved March 15, 2007 and re-submitted March 30, 2007).
3. NA - Not Analyzed.
4. -- Indicates that all constituents for the parameter group were not detected.
5. Only those constituents detected in one or more samples are summarized.
6. Shading indicates that value exceeds GW-3 Standards.

Data Qualifiers:

Organics (volatiles, PCBs)

J - Indicates that the associated numerical value is an estimated concentration.

Table 9
Comparison of Groundwater Analytical Results to MCP UCLs for Groundwater

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter	Sample ID: Date Collected:	MCP UCL for GroundWater	6B-R 11/01/07	51-14 11/02/07	82B-R 11/01/07	114-A 11/02/07	114-BR 11/02/07
Volatile Organics							
Benzene		100	15	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Carbon Tetrachloride		50	ND(0.64)	0.00029 J [0.00039 J]	NA	NA	NA
Chlorobenzene		10	5.3	0.00056 J [0.00055 J]	NA	NA	NA
Chloromethane		Not Listed	ND(0.64)	0.00045 J [0.0015]	NA	NA	NA
Methylene Chloride		100	0.49 J	0.00022 J [ND(0.0050)]	NA	NA	NA
Toluene		80	0.15 J	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Trichloroethene		50	ND(0.64)	0.0043 [0.0046]	NA	NA	NA
PCBs-Filtered							
None Detected		--	NA	NA	--	--	--

Notes:

1. Samples were collected by ARCADIS BBL, and submitted to SGS Environmental Services, Inc. for analysis of volatiles and PCBs (filtered).
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS BBL (approved March 15, 2007 and re-submitted March 30, 2007).
3. NA - Not Analyzed.
4. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
5. Field duplicate sample results are presented in brackets.
6. -- Indicates that all constituents for the parameter group were not detected.
7. Only those constituents detected in one or more samples are summarized.

Data Qualifiers:

Organics (volatiles, PCBs)

J - Indicates that the associated numerical value is an estimated concentration.

Table 10
Spring 2008 Interim Groundwater Quality Monitoring Activities

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts

Well Number	Well Designation / Analytical Category	Sampling Schedule	Analyses	Comments
2A	Natural Attenuation	Annual ⁽¹⁾	See Note 3	
6B-R	GW-3 Perimeter	Annual ⁽²⁾	VOC	
16A	Natural Attenuation	Annual ⁽¹⁾	See Note 3	
16B-R	GW-2 Sentinel/Natural Attenuation	Annual ⁽¹⁾	See Note 4	
16C-R	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
39B-R	Natural Attenuation	Annual ⁽¹⁾	See Note 3	
39D-R	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
39E	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
43A	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
43B	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
51-14	GW-2 Sentinel	Annual ⁽²⁾	VOC	
82B-R	GW-3 Perimeter	Annual ⁽²⁾	PCB	
89A	Natural Attenuation	Annual ⁽¹⁾	See Note 3	
89B	GW-3 Perimeter/Natural Attenuation	Annual ⁽¹⁾	See Note 3	
89D-R	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
90A	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
90B	GW-3 Perimeter/Natural Attenuation	Annual ⁽¹⁾	See Note 4	
95A	Natural Attenuation	Annual ⁽¹⁾	See Note 3	
95B-R	GW-3 Perimeter/Natural Attenuation	Annual ⁽¹⁾	See Note 3	
111A-R	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
111B-R	GW-3 Perimeter/Natural Attenuation	Annual ⁽¹⁾	See Note 4	
114A	Natural Attenuation / Supplemental	Annual ^(1,2)	See Note 5	Supplemental sampling conducted for PCBs to assess results from GW-3 well 114B-R

Table 10
Spring 2008 Interim Groundwater Quality Monitoring Activities

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts

Well Number	Well Designation / Analytical Category	Sampling Schedule	Analyses	Comments
114B-R	GW-3 Perimeter/Natural Attenuation	Annual ^(1,2)	See Note 5	
115A	Natural Attenuation	Annual ⁽¹⁾	See Note 4	
115B	Natural Attenuation	Annual ⁽¹⁾	See Note 4	

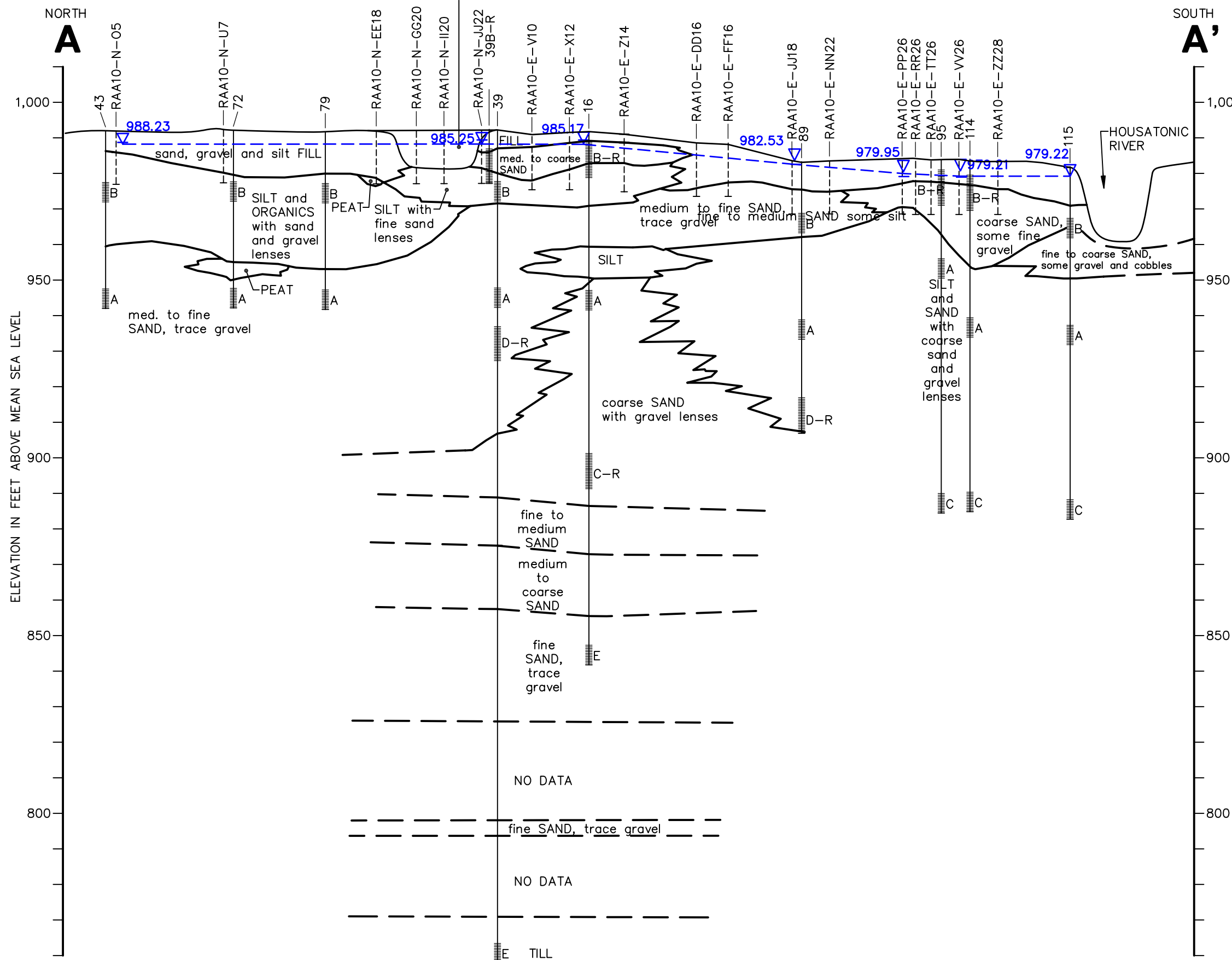
Notes:

1. Wells sampled under the natural attenuation monitoring program are proposed to continue to be sampled on an annual basis in the spring.
2. Wells proposed for annual interim groundwater quality sampling, will be sampled for the listed parameters during the interim period between the completion of the baseline monitoring program and the initiation of a long-term monitoring program. The sampling schedule is proposed to alternate between the spring and fall seasons each year, with the next sampling round scheduled for spring 2008.
3. Samples proposed to be analyzed for: VOCs, two SVOCs (2-chlorophenol and 4-chlorophenol), and Natural Attenuation Parameters (methane, ethane, ethene, chloride, nitrate, nitrite, alkalinity, dissolved organic carbon, sulfate, and dissolved iron).
4. Samples proposed to be analyzed for: VOCs and Natural Attenuation Parameters (methane, ethane, ethene, chloride, nitrate, nitrite, alkalinity, dissolved organic carbon, sulfate, and dissolved iron).
5. Samples analyzed for: VOCs and Natural Attenuation Parameters (methane, ethane, ethene, chloride, nitrate, nitrite, alkalinity, dissolved organic carbon, sulfate, and dissolved iron) during the spring natural attenuation sampling rounds, and PCBs (filtered samples only) during the alternating spring/fall interim sampling rounds.

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Figures

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 XREFS: PROJECTNAME: 20186\00



LEGEND:

- WELL CLUSTER NUMBER → 16
- SOIL BORING NUMBER → RAA10-N-05
- SOIL BORING → (Symbol)
- SCREEN INTERVAL (DEPTH FROM SURFACE) → (15-20')
- WATER TABLE ELEVATION (B-SERIES WELLS) (OCTOBER 2007) → (Symbol)

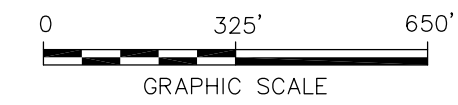
SOIL BORING

(45-50') A

(56-66' OR 70-75') D

(95-100') C

(225-235' OR 145-150') E



GENERAL ELECTRIC COMPANY
 PITTSFIELD, MASSACHUSETTS
GMA 3 MONITORING PROGRAM

**GENERALIZED GEOLOGIC
 CROSS SECTION A-A'**

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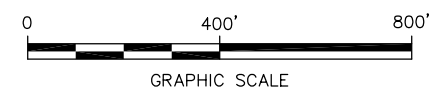
FIGURE
3

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- LEGEND:**
- SITE BOUNDARY
 - RAILROAD
 - X FENCING
 - 51-6 ○ EXISTING MONITORING WELL
 - 57 EXISTING MONITORING WELL CLUSTER
 - 51-21 ○ NAPL RECOVERY WELL (SKIMMER)
 - GMA4-3 GMA4 MONITORING WELL
 - SC-1 ▽ SURFACE WATER STAFF GAUGE
 - EXTENT OF MEASURABLE LNAPL DURING FALL 2007 SEMI-ANNUAL MONITORING EVENT

- NOTES:**
1. FIGURE IS BASED ON PHOTOGRAPHIC MAPPING BY LOCKWOOD MAPPING, INC.—FLOWN IN APRIL 1990 AND DATA PROVIDED BY GENERAL ELECTRIC COMPANY.
 2. NOT ALL PHYSICAL FEATURES SHOWN.
 3. SITE BOUNDARIES, SAMPLE LOCATIONS AND BUILDING LOCATIONS ARE APPROXIMATE.

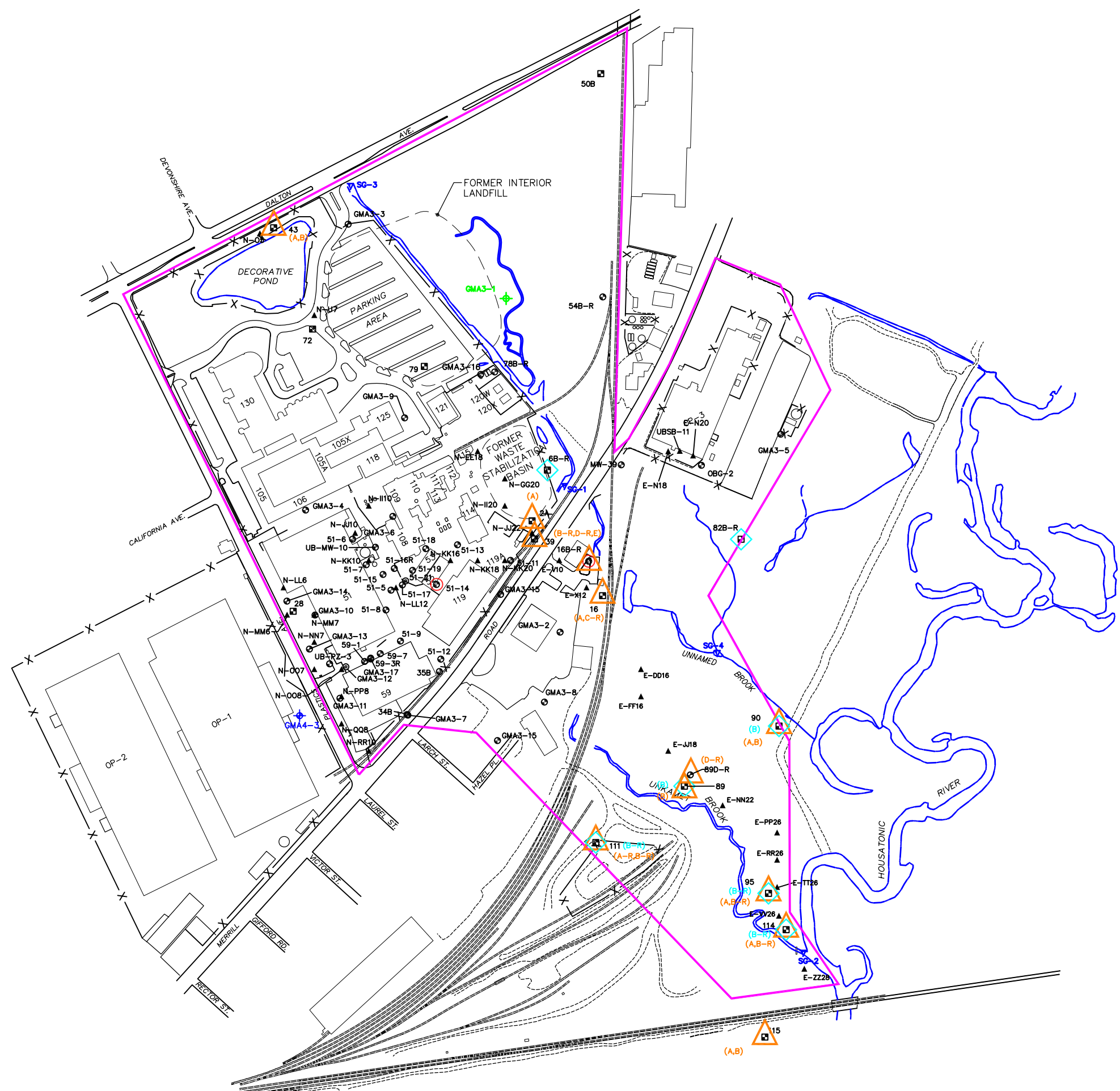


GENERAL ELECTRIC COMPANY
 PITTSFIELD, MASSACHUSETTS
GMA 3 MONITORING PROGRAM

**EXTENT OF NAPL - FALL 2007
 MONITORING EVENT**

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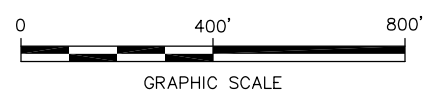
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LEGEND:

	SITE BOUNDARY
	RAILROAD
	FENCING
	UBSB-11 ▲ EXISTING SOIL BORING
	51-6 ● EXISTING MONITORING WELL
	57 ■ EXISTING MONITORING WELL CLUSTER
	51-21 ⊖ NAPL RECOVERY WELL (SKIMMER)
	GMA4-3 ◆ GMA4 MONITORING WELL
	SC-1 ▼ SURFACE WATER STAFF GAUGE
	GW-2 ○ GW-2 SENTINEL/COMPLIANCE WELL
	GW-3 ◇ GW-3 PERIMETER WELL
	NATURAL ATTENUATION MONITORING WELL
	PROPOSED MONITORING WELL

- NOTES:**
- FIGURE IS BASED ON PHOTOGRAPHIC MAPPING BY LOCKWOOD MAPPING, INC.—FLOWN IN APRIL 1990 AND DATA PROVIDED BY GENERAL ELECTRIC COMPANY.
 - NOT ALL PHYSICAL FEATURES SHOWN.
 - SITE BOUNDARIES, SAMPLE LOCATIONS AND BUILDING LOCATIONS ARE APPROXIMATE.
 - FOR WELL CLUSTERS SUBJECT TO DIFFERING MONITORING REQUIREMENTS, THE SPECIFIC WELL INCLUDED FOR EACH TYPE OF MONITORING IS PROVIDED IN PARENTHESES.
 - ALL SAMPLING WILL BE CONDUCTED ON AN ANNUAL BASIS WITH NATURAL ATTENUATION SAMPLED EACH SPRING. ALL OTHER WELLS WILL BE SAMPLED ALTERNATING SPRING./FALL.



GENERAL ELECTRIC COMPANY
 PITTSFIELD, MASSACHUSETTS
GMA 3 MONITORING PROGRAM

**PROPOSED INTERIM GROUNDWATER
 MONITORING PROGRAM**

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Appendices

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Appendix A

Groundwater Monitoring/LNAPL
Recovery Well Log - GMA 3-17



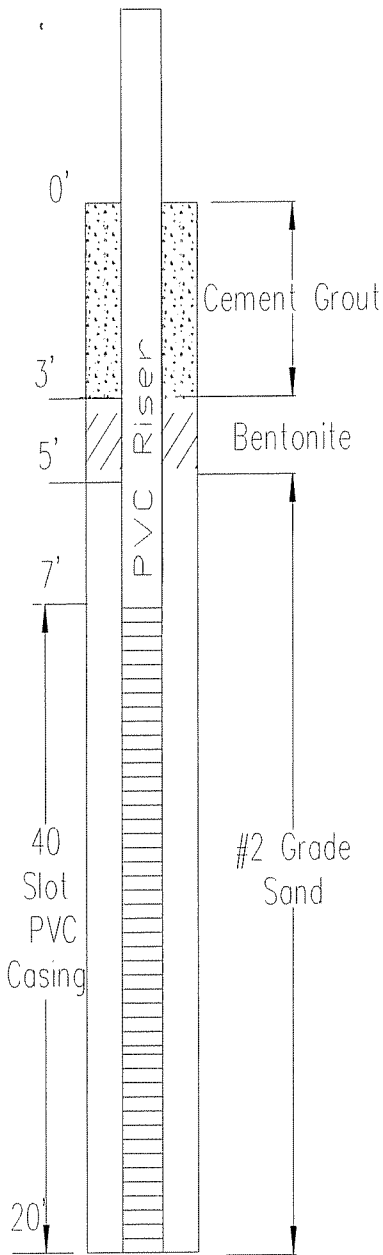
**MONITORING WELL
COMPLETION LOG**

Well I.D.: GMA 3-17

Project Name: GMA3 LNAPL Recovery Well
 Client Name: General Electric Company
 Location: Building 59 Area GE Plant Site
 Weather/Temp: Sunny 80 degrees

Project No: 7266
 Date: Monday, October 22, 2007
 Logged By: MGR
 Checked By: JDC

WELL CONSTRUCTION DETAILS



INSPECTION NOTES

Inspector: MGR
 Contractor: Aquifer Drilling and Testing, inc.
Drilling Method:
 Type: Overburden
 Equipment: 8 inch Diameter Hollow Stem Auger
 Type of Well: 4" recovery well
 Static Water Level: 13.26 ft from ground surface
 Measuring Point: ground surface
 Total Depth of Well: 20 feet bgs
Sampling Method:
 Type: Split-spoon continuous Sampling
 Weight: 200 lb hammer
 Interval: continuous
Riser Pipe Left in Place:
 Material: Schedule 40 PVC
 Length: 10 feet (includes 3 ft stick-up)
 Diameter: 4 "
Screen:
 Material: Schedule 40 PVC
 Slot Size: 40 Slot
 Stratigraphic Unit Screened: 7-20 feet bgs
Filter Pack:
 Sand: Sand
 Grade: # 2
 Amount: 5-20 feet
Seals:
 Type: Bentonite 3-5 feet bgs Grout: 0-3 feet bgs

Well Notes:

Not To Scale



BORING LOG

Boring No: GMA 3-17

Project Name: GMA 3 LNAPL Recovery Well Project No: 7266
 Client Name: General Electric Company Date: Monday, October 22, 2007
 Location: Building 59 Area GE Plant Site Logged By: MGR
 Weather/Temp: Sunny 80 degrees Checked By: JDC

Drilling Co: Aquifer Drilling and Testing Depth: 20 feet bgs
 Driller: Rich and Jay Equipment: Continuous Split Spoon Sampling
 Date Started: Monday, October 22, 2007 Method: Hollow Stem Auger
 Date Ended: Monday, October 22, 2007 Depth/Datum: NA

Depth	Sample No.	Blow Count (per 6")	Recovery (inches)	DESCRIPTIVE LOG e.g. color, grain size and amount, texture, moisture	REMARKS
0-2'	1	NA	6	0-1' Asphalt Pavement	PID reading = 0.0 ppm
		3		Dark Brown coarse SAND, some fine to coarse Gravel.	
		6			
2-4'	2	4	8	Brown and Black, coarse SAND, some fine to coarse sub-angular Gravel.	PID reading = 0.0 ppm
		5			
		4			
		4			
4-6'	3	4	6	Light Brown, fine SAND, trace coarse Sand and fine to medium angular gravel.	PID reading = 0.0 ppm
		3			
		3			
		2			
6-8'	4	3	2	Same as Above, moist.	PID reading = 0.0 ppm
		3			
		3			
		3			
8-10'	5	2	6	Same as Above, moist, ceramic pieces	PID reading = 0.0 ppm
		3			
		5			
		4			
10-12'	6	4	12	Same as Above, moist.	PID reading = 0.0 ppm
		5			
		4			
		4			



BORING LOG

Boring No:

GMA 3-17

Project Name: GMA 3 LNAPL Recovery Well
 Client Name: General Electric Company
 Location: Building 59 Area GE Plant Site
 Weather/Temp: Sunny 80 degrees

Project No: 7266
 Date: Monday, October 22, 2007
 Logged By: MGR
 Checked By: JDC

Drilling Co: Aquifer Drilling and Testing
 Driller: Rich and Jay
 Date Started: Monday, October 22, 2007
 Date Ended: Monday, October 22, 2007

Depth: 20 feet bgs
 Equipment: Continuous Split Spoon Sampling
 Method: Hollow Stem Auger
 Depth/Datum: NA

Depth	Sample No.	Blow Count (per 6")	Recovery (inches)	DESCRIPTIVE LOG e.g. color, grain size and amount, texture, moisture	REMARKS
12-14'	7	4	8	Black, coarse SAND, trace fine Sand and fine to medium angular gravel.	PID reading = 3.3 ppm sheen and petroleum odor
		4			
		5			
		4			
14-16'	8	1	6	Same as Above. Saturated.	PID reading = 6.8 ppm sheen and petroleum odor
		2			
		2			
		2			
16-18'	9	2	8	Black to Gray, coarse SAND and medium to fine Gravel.	PID reading = 5.3 ppm
		2			
		2			
		3			
18-20'	10	1	8	Brown coarse SAND.	PID reading = 6.8 ppm
		3			
		4			
		7			

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Appendix B

Groundwater Elevation and
NAPL Monitoring/Recovery Data

Table B-1

**Groundwater Elevation and NAPL Monitoring/Recovery Data
July 2007 - December 2007**

**Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts**

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)
002A	994.16	10/31/2007	8.65	---	0.00	---	55.10	0.00	985.51	---	---
006B-R	993.62	10/31/2007	7.11	---	0.00	---	14.81	0.00	986.51	---	---
006B-R	993.62	11/1/2007	7.11	---	0.00	---	14.81	0.00	986.51	---	---
016A	991.77	10/31/2007	7.65	---	0.00	---	51.07	0.00	984.12	---	---
016B-R	994.87	10/31/2007	9.70	---	0.00	---	16.43	0.00	985.17	---	---
016C-R	993.23	10/31/2007	8.50	---	0.00	---	102.25	0.00	984.73	---	---
039B-R	991.97	10/31/2007	6.72	---	0.00	---	13.90	0.00	985.25	---	---
039D-R	994.73	10/31/2007	9.22	---	0.00	---	63.45	0.00	985.51	---	---
039E	992.21	10/31/2007	6.20	---	0.00	---	239.00	0.00	986.01	---	---
043A	993.79	10/30/2007	5.55	---	0.00	---	51.45	0.00	988.24	---	---
043B	993.61	10/30/2007	5.38	---	0.00	---	21.41	0.00	988.23	---	---
050B	991.76	10/31/2007	3.44	---	0.00	---	15.08	0.00	988.32	---	---
51-05	996.44	7/30/2007	10.34	---	0.00	---	11.35	0.00	986.10	---	---
51-05	996.44	8/28/2007	11.15	---	0.00	---	11.40	0.00	985.29	---	---
51-05	996.44	9/28/2007	9.10	---	0.00	---	11.20	0.00	987.34	---	---
51-05	996.44	10/31/2007	10.90	---	0.00	---	11.10	0.00	985.54	---	---
51-05	996.44	11/26/2007	9.89	---	0.00	---	10.98	0.00	986.55	---	---
51-05	996.44	12/17/2007	10.80	---	0.00	---	10.90	0.00	985.64	---	---
51-06	997.36	7/30/2007	11.20	---	0.00	---	14.40	0.00	986.16	---	---
51-06	997.36	8/28/2007	11.65	---	0.00	---	14.35	0.00	985.71	---	---
51-06	997.36	9/17/2007	11.65	---	0.00	---	14.40	0.00	985.71	---	---
51-06	997.36	9/28/2007	11.18	---	0.00	---	14.40	0.00	986.18	---	---
51-06	997.36	10/31/2007	11.58	---	0.00	---	14.35	0.00	985.78	---	---
51-06	997.36	11/26/2007	11.33	---	0.00	---	14.35	0.00	986.03	---	---
51-06	997.36	12/18/2007	11.28	---	0.00	---	14.33	0.00	986.08	---	---
51-07	997.08	7/30/2007	Dry at 11.22 (feet BMP)				11.22	0.00	NA	---	---
51-07	997.08	8/28/2007	Dry at 11.23 (feet BMP)				11.23	0.00	NA	---	---

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**Groundwater Elevation and NAPL Monitoring/Recovery Data
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Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts**

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)
51-07	997.08	9/17/2007	Dry at 11.23 (feet BMP)				11.23	0.00	NA	---	---
51-07	997.08	9/28/2007	Dry at 11.20 (feet BMP)				11.20	0.00	NA	---	---
51-07	997.08	10/31/2007	Dry at 11.20 (feet BMP)				11.20	0.00	NA	---	---
51-07	997.08	11/26/2007	10.54	---	0.00	---	11.20	0.00	986.54	---	---
51-07	997.08	12/17/2007	Buried Under Ice & Snow				NA	NA	NA	---	---
51-08	997.08	7/3/2007	11.45	11.05	0.40	---	14.64	0.00	986.00	0.25	---
51-08	997.08	7/9/2007	12.00	11.09	0.91	---	14.62	0.00	985.93	0.56	---
51-08	997.08	7/18/2007	12.30	11.20	1.10	---	14.63	0.00	985.80	---	---
51-08	997.08	7/25/2007	12.10	11.30	0.80	---	14.63	0.00	985.72	0.49	---
51-08	997.08	7/30/2007	12.35	11.33	1.02	---	14.63	0.00	985.68	0.75	---
51-08	997.08	7/30/2007	12.35	11.33	1.02	---	14.63	0.00	985.68	0.75	---
51-08	997.08	8/7/2007	12.60	11.55	1.05	---	14.64	0.00	985.46	0.65	---
51-08	997.08	8/15/2007	12.70	11.60	1.10	---	14.64	0.00	985.40	0.68	---
51-08	997.08	8/22/2007	13.18	11.76	1.42	---	14.65	0.00	985.22	0.88	---
51-08	997.08	8/28/2007	12.90	11.80	1.10	---	14.62	0.00	985.20	0.68	---
51-08	997.08	9/4/2007	12.92	11.90	1.02	---	14.61	0.00	985.11	0.63	---
51-08	997.08	9/10/2007	13.05	11.92	1.13	---	14.61	0.00	985.08	0.70	---
51-08	997.08	9/19/2007	12.80	11.90	0.90	---	14.64	0.00	985.12	0.49	---
51-08	997.08	9/28/2007	13.20	11.80	1.40	---	14.64	0.00	985.18	0.86	---
51-08	997.08	10/2/2007	13.25	11.95	1.30	---	14.62	0.00	985.04	0.80	---
51-08	997.08	10/9/2007	13.22	12.04	1.18	---	14.64	0.00	984.96	0.73	---
51-08	997.08	10/16/2007	13.05	11.93	1.12	---	14.62	0.00	985.07	0.69	---
51-08	997.08	10/24/2007	12.90	11.82	1.08	---	14.62	0.00	985.18	0.67	---
51-08	997.08	10/29/2007	12.08	11.60	0.48	---	14.63	0.00	985.45	0.74	---
51-08	997.08	11/6/2007	12.86	11.65	1.21	---	14.62	0.00	985.35	0.75	---
51-08	997.08	11/13/2007	12.78	11.68	1.10	---	14.64	0.00	985.32	0.68	---
51-08	997.08	11/20/2007	12.50	11.43	1.07	---	14.64	0.00	985.58	0.66	---

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General Electric Company - Pittsfield, Massachusetts**

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)	
51-08	997.08	11/26/2007	12.15	11.40	0.75	---	14.62	0.00	985.63	0.46	---	
51-08	997.08	12/4/2007	12.40	11.43	0.97	---	14.62	0.00	985.58	0.60	---	
51-08	997.08	12/12/2007	12.60	11.40	1.20	---	14.61	0.00	985.60	0.74	---	
51-08	997.08	12/17/2007	12.45	11.38	1.07	---	14.62	0.00	985.63	0.66	---	
51-08	997.08	12/24/2007	12.22	11.30	0.92	---	14.61	0.00	985.72	0.57	---	
51-09	997.70	7/30/2007	Dry at 11.60 (feet BMP)				---	11.60	NA	NA	---	---
51-09	997.70	8/28/2007	Dry at 11.60 (feet BMP)				---	11.60	NA	NA	---	---
51-09	997.70	9/17/2007	Dry at 11.56 (feet BMP)				---	11.58	NA	NA	---	---
51-09	997.70	10/31/2007	Dry at 11.65 (feet BMP)				---	11.65	NA	NA	---	---
51-09	997.70	11/26/2007	9.15	---	---	---	11.56	0.00	988.55	---	---	
51-09	997.70	12/18/2007	Dry at 11.58 (feet BMP)				---	11.58	NA	NA	---	---
51-11	994.37	7/30/2007	9.00	---	0.00	---	13.53	0.00	985.37	---	---	
51-11	994.37	8/28/2007	9.60	---	0.00	---	13.48	0.00	984.77	---	---	
51-11	994.37	9/17/2007	9.38	---	0.00	---	13.54	0.00	984.99	---	---	
51-11	994.37	10/31/2007	8.80	---	0.00	---	13.57	0.00	985.57	---	---	
51-11	994.37	11/26/2007	8.48	---	0.00	---	13.54	0.00	985.89	---	---	
51-11	994.37	12/18/2007	8.83	---	0.00	---	13.55	0.00	985.54	---	---	
51-12	996.55	7/30/2007	7.63	---	0.00	---	13.34	0.00	988.92	---	---	
51-12	996.55	8/28/2007	7.85	---	0.00	---	13.35	0.00	988.70	---	---	
51-12	996.55	9/17/2007	7.90	---	0.00	---	13.30	0.00	988.65	---	---	
51-12	996.55	10/31/2007	7.76	---	0.00	---	13.40	0.00	988.79	---	---	
51-12	996.55	11/26/2007	7.35	---	0.00	---	13.32	0.00	989.20	---	---	
51-12	996.55	12/18/2007	7.61	---	0.00	---	13.30	0.00	988.94	---	---	
51-13	997.42	7/30/2007	Dry at 9.82 (feet BMP)				---	9.82	NA	NA	---	---
51-13	997.42	8/28/2007	Dry at 9.82 (feet BMP)				---	9.82	NA	NA	---	---
51-13	997.42	9/17/2007	Dry at 9.80 (feet BMP)				---	9.81	NA	NA	---	---
51-13	997.42	10/31/2007	Dry at 9.90 (feet BMP)				---	9.90	NA	NA	---	---

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Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)
51-13	997.42	11/26/2007	Dry at 9.82 (feet BMP)				9.82	NA	NA	---	---
51-13	997.42	12/18/2007	Dry at 9.80 (feet BMP)				9.80	NA	NA	---	---
51-14	996.77	7/30/2007	11.35	---	0.00	---	14.74	0.00	985.42	---	---
51-14	996.77	8/28/2007	11.75	---	0.00	---	14.70	0.00	985.02	---	---
51-14	996.77	9/17/2007	11.56	---	0.00	---	14.70	0.00	985.21	---	---
51-14	996.77	10/31/2007	11.51	---	0.00	---	14.70	0.00	985.26	---	---
51-14	996.77	11/2/2007	11.48	---	0.00	---	14.64	0.00	985.29	---	---
51-14	996.77	11/26/2007	11.35	---	0.00	---	14.68	0.00	985.42	---	---
51-14	996.77	12/18/2007	11.33	---	0.00	---	14.68	0.00	985.44	---	---
51-15	996.43	7/30/2007	10.84	10.72	0.12	---	14.44	0.00	985.70	---	---
51-15	996.43	8/28/2007	11.45	11.20	0.25	---	14.35	0.00	985.21	0.15	---
51-15	996.43	9/28/2007	11.78	11.20	0.58	---	14.40	0.00	985.19	0.36	---
51-15	996.43	10/31/2007	11.50	10.91	0.59	---	14.36	0.00	985.48	---	---
51-15	996.43	11/26/2007	10.77	10.70	0.07	---	14.40	0.00	985.73	---	---
51-15	996.43	12/17/2007	10.90	10.80	0.10	---	14.40	0.00	985.62	---	---

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Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)
51-16R	996.39	7/30/2007	10.88	10.72	0.16	---	14.54	0.00	985.66	---	---
51-16R	996.39	8/28/2007	11.40	11.15	0.25	---	14.50	0.00	985.22	0.15	---
51-16R	996.39	9/28/2007	11.65	11.20	0.45	---	14.53	0.00	985.16	0.28	---
51-16R	996.39	10/31/2007	11.15	10.90	0.25	---	14.52	0.00	985.47	---	---
51-16R	996.39	11/26/2007	10.82	10.73	0.09	---	14.50	0.00	985.65	---	---
51-16R	996.39	12/17/2007	10.78	10.70	0.08	---	14.54	0.00	985.68	---	---
51-17	996.43	7/30/2007	11.70	10.50	1.20	---	14.50	0.00	985.85	0.74	---
51-17	996.43	8/28/2007	12.00	10.95	1.05	---	14.51	0.00	985.41	0.65	---
51-17	996.43	9/28/2007	12.10	11.05	1.05	---	14.49	0.00	985.31	0.65	---
51-17	996.43	10/31/2007	11.93	10.72	1.21	---	14.50	0.00	985.63	---	---
51-17	996.43	11/26/2007	11.45	10.57	0.88	---	14.50	0.00	985.80	0.54	---
51-17	996.43	12/17/2007	11.85	10.97	0.88	---	14.50	0.00	985.40	0.54	---
51-18	997.12	7/30/2007	11.50	---	0.00	---	12.60	0.00	985.62	---	---
51-18	997.12	8/28/2007	11.90	---	0.00	---	12.60	0.00	985.22	---	---
51-18	997.12	9/17/2007	11.78	---	0.00	---	12.58	0.00	985.34	---	---
51-18	997.12	10/31/2007	11.59	---	0.00	---	12.65	0.00	985.53	---	---
51-18	997.12	11/26/2007	11.40	---	0.00	---	12.60	0.00	985.72	---	---
51-18	997.12	12/18/2007	11.45	---	0.00	---	12.60	0.00	985.67	---	---
51-19	996.43	7/30/2007	11.09	10.98	0.11	---	14.10	0.00	985.44	0.07	---
51-19	996.43	8/28/2007	11.85	11.35	0.50	---	14.09	0.00	985.05	0.31	---
51-19	996.43	9/28/2007	11.62	11.47	0.15	---	14.08	0.00	984.95	0.09	---
51-19	996.43	10/31/2007	11.27	11.09	0.18	---	14.05	0.00	985.33	---	---
51-19	996.43	11/26/2007	11.03	10.90	0.13	---	14.08	0.00	985.52	---	---
51-19	996.43	12/17/2007	Buried Under Ice & Snow				NA	NA	NA	---	---
51-21	1001.49	7/5/2007	15.56	P	< 0.01	---	NM	0.00	985.93	9.46	---
51-21	1001.49	7/10/2007	15.68	P	< 0.01	---	NM	0.00	985.81	7.19	---
51-21	1001.49	7/18/2007	15.80	P	< 0.01	---	NM	0.00	985.69	9.46	---

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Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)
51-21	1001.49	7/27/2007	15.95	P	< 0.01	---	NM	0.00	985.54	24.98	---
51-21	1001.49	8/1/2007	15.95	15.94	0.01	---	NM	0.00	985.55	9.46	---
51-21	1001.49	8/9/2007	16.11	16.10	0.01	---	NM	0.00	985.39	24.98	---
51-21	1001.49	8/14/2007	16.11	16.10	0.01	---	NM	0.00	985.39	14.76	---
51-21	1001.49	8/21/2007	16.13	16.12	0.01	---	NM	0.00	985.37	21.96	---
51-21	1001.49	8/30/2007	16.35	16.34	0.01	---	NM	0.00	985.15	36.34	---
51-21	1001.49	9/4/2007	16.48	16.46	0.02	---	NM	0.00	985.03	35.58	---
51-21	1001.49	9/13/2007	16.25	16.24	0.01	---	NM	0.00	985.25	39.75	---
51-21	1001.49	9/18/2007	16.30	P	< 0.01	---	NM	0.00	985.19	16.28	---
51-21	1001.49	9/27/2007	14.42	14.41	0.01	---	NM	0.00	987.08	40.88	---
51-21	1001.49	10/2/2007	16.45	16.44	0.01	---	NM	0.00	985.05	---	---
51-21	1001.49	10/9/2007	16.54	16.53	0.01	---	NM	0.00	984.96	33.31	---
51-21	1001.49	10/16/2007	16.50	16.49	0.01	----	NM	0.00	985.00	30.28	---
51-21	1001.49	10/23/2007	16.30	P	< 0.01	---	NM	0.00	985.19	28.01	---
51-21	1001.49	10/30/2007	16.50	16.40	0.10	---	NM	0.00	985.08	6.44	---
51-21	1001.49	11/7/2007	16.10	16.09	0.01	---	NM	0.00	985.40	24.98	---
51-21	1001.49	11/13/2007	16.13	P	< 0.01	---	NM	0.00	985.36	16.66	---
51-21	1001.49	11/20/2007	15.90	15.89	0.01	---	NM	0.00	985.60	14.76	---
51-21	1001.49	11/27/2007	15.88	15.87	0.01	---	NM	0.00	985.62	12.49	---
51-21	1001.49	12/4/2007	15.80	15.79	0.01	---	NM	0.00	985.70	6.44	---
51-21	1001.49	12/10/2007	15.93	15.91	0.02	---	NM	0.00	985.58	12.49	---
51-21	1001.49	12/18/2007	15.90	P	< 0.01	---	NM	0.00	985.59	17.79	---
51-21	1001.49	12/27/2007	15.87	---	0.00	---	NM	0.00	985.62	9.46	---
59-01	997.52	7/30/2007	Dry at 11.42 (feet BMP)				11.42	NA	NA	---	---
59-01	997.52	8/28/2007	Dry at 11.40 (feet BMP)				11.40	NA	NA	---	---
59-01	997.52	9/28/2007	Dry at 11.40 (feet BMP)				11.40	NA	NA	---	---
59-01	997.52	10/31/2007	Dry at 11.39 (feet BMP)				11.39	NA	NA	---	---

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Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)	
59-01	997.52	11/26/2007	Dry at 11.40 (feet BMP)				11.40	NA	NA	---	---	
59-01	997.52	12/18/2007	Dry at 11.41 (feet BMP)				11.41	NA	NA	---	---	
59-03R	997.64	7/30/2007	12.50	11.75	0.75	---	17.05	0.00	985.84	0.46	---	
59-03R	997.64	8/28/2007	12.95	12.30	0.65	---	17.04	0.00	985.29	0.40	---	
59-03R	997.64	9/28/2007	13.22	12.45	0.77	---	17.05	0.00	985.14	0.48	---	
59-03R	997.64	10/31/2007	13.05	12.23	0.82	---	17.04	0.00	985.35	---	---	
59-03R	997.64	11/26/2007	12.78	11.90	0.88	---	17.04	0.00	985.68	0.54	---	
59-03R	997.64	12/17/2007	12.47	11.98	0.49	---	17.04	0.00	985.63	0.30	---	
59-07	997.96	7/30/2007	12.18	12.15	0.03	---	23.50	0.00	985.81	---	---	
59-07	997.96	8/28/2007	12.70	12.60	0.10	---	23.53	0.00	985.35	---	---	
59-07	997.96	9/28/2007	13.30	12.68	0.62	---	23.50	0.00	985.24	0.38	---	
59-07	997.96	10/31/2007	13.21	12.43	0.78	---	23.45	0.00	985.48	---	---	
59-07	997.96	11/26/2007	12.65	12.20	0.45	---	23.48	0.00	985.73	0.28	---	
59-07	997.96	12/17/2007	Buried Under Ice & Snow				NA	NA	NA	---	---	
054B-R	991.49	10/31/2007	4.66	---	0.00	---	15.58	0.00	986.83	---	---	
078B-R	988.83	7/30/2007	1.72	---	0.00	---	11.75	0.00	987.11	---	---	
078B-R	988.83	8/28/2007	2.25	---	0.00	---	11.75	0.00	986.58	---	---	
078B-R	988.83	9/17/2007	1.37	---	0.00	---	11.78	0.00	987.46	---	---	
078B-R	988.83	10/31/2007	0.45	---	0.00	---	11.78	0.00	988.38	---	---	
078B-R	988.83	11/26/2007	Water Just Below Riser				---	11.71	0.00	NA	---	---
078B-R	988.83	12/17/2007	Buried Under Ice & Snow				NA	NA	NA	---	---	
082B-R	989.90	11/1/2007	4.62	---	0.00	---	11.58	0.00	985.28	---	---	
082B-R	989.90	11/1/2007	4.64	---	0.00	---	11.57	0.00	985.26	---	---	
089A	985.76	11/1/2007	3.29	---	0.00	---	47.41	0.00	982.47	---	---	
089B	986.03	11/1/2007	3.50	---	0.00	---	8.89	0.00	982.53	---	---	
089D-R	987.11	11/1/2007	68.95	---	0.00	---	78.78	0.00	918.16	---	---	
090A	988.07	10/31/2007	5.87	---	0.00	---	51.42	0.00	982.20	---	---	

Table B-1**Groundwater Elevation and NAPL Monitoring/Recovery Data
July 2007 - December 2007****Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts**

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)
090B	989.10	10/31/2007	7.02	---	0.00	---	12.92	0.00	982.08	---	---
095A	987.18	10/31/2007	7.09	---	0.00	---	51.00	0.00	980.09	---	---
095B-R	986.24	10/31/2007	6.29	---	0.00	---	13.60	0.00	979.95	---	---
111A-R	997.35	10/31/2007	14.27	---	0.00	---	52.20	0.00	983.08	---	---
111B-R	997.48	10/31/2007	14.80	---	0.00	---	19.75	0.00	982.68	---	---
114A	986.16	10/31/2007	6.43	---	0.00	---	52.50	0.00	979.73	---	---
114A	986.16	11/2/2007	6.11	---	0.00	---	52.10	0.00	980.05	---	---
114B-R	985.54	10/31/2007	6.33	---	0.00	---	15.30	0.00	979.21	---	---
114B-R	985.54	11/2/2007	6.32	---	0.00	---	15.24	0.00	979.22	---	---
115A	988.53	10/31/2007	8.44	---	0.00	---	42.75	0.00	980.09	---	---
115B	990.90	10/31/2007	11.68	---	0.00	---	15.57	0.00	979.22	---	---
GMA3-10	997.54	7/3/2007	11.60	11.28	0.32	---	17.83	0.00	986.24	0.20	---
GMA3-10	997.54	7/9/2007	11.83	11.38	0.45	---	17.83	0.00	986.13	0.28	---
GMA3-10	997.54	7/18/2007	11.80	11.50	0.30	---	17.82	0.00	986.02	0.19	---
GMA3-10	997.54	7/25/2007	12.00	11.60	0.40	---	17.81	0.00	985.91	0.25	---
GMA3-10	997.54	7/30/2007	11.95	11.70	0.25	---	17.80	0.00	985.82	0.15	---
GMA3-10	997.54	7/30/2007	11.95	11.70	0.25	---	17.80	0.00	985.82	0.15	---
GMA3-10	997.54	8/7/2007	12.10	11.83	0.27	---	17.80	0.00	985.69	0.17	---
GMA3-10	997.54	8/15/2007	12.21	11.92	0.29	---	17.80	0.00	985.60	0.18	---
GMA3-10	997.54	8/22/2007	12.38	12.05	0.33	---	17.81	0.00	985.47	0.20	---
GMA3-10	997.54	8/28/2007	12.28	12.15	0.13	---	17.80	0.00	985.38	---	---
GMA3-10	997.54	9/4/2007	12.37	12.23	0.14	---	17.80	0.00	985.30	---	---
GMA3-10	997.54	9/10/2007	12.35	12.25	0.10	---	17.80	0.00	985.28	---	---
GMA3-10	997.54	9/19/2007	12.25	12.18	0.07	---	17.80	0.00	985.36	---	---
GMA3-10	997.54	9/28/2007	12.55	12.30	0.25	---	17.84	0.00	985.22	0.75	---
GMA3-10	997.54	10/2/2007	12.65	12.35	0.30	---	17.80	0.00	985.17	0.19	---
GMA3-10	997.54	10/9/2007	12.55	12.40	0.15	---	17.80	0.00	985.13	---	---

Table B-1**Groundwater Elevation and NAPL Monitoring/Recovery Data
July 2007 - December 2007****Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts**

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)
GMA3-10	997.54	10/16/2007	12.68	12.34	0.34	---	17.80	0.00	985.18	0.21	---
GMA3-10	997.54	10/24/2007	12.45	12.30	0.15	---	17.80	0.00	985.23	---	---
GMA3-10	997.54	10/29/2007	12.25	12.20	0.05	---	17.80	0.00	985.34	0.03	---
GMA3-10	997.54	11/6/2007	12.10	12.08	0.02	---	17.81	0.00	985.46	---	---
GMA3-10	997.54	11/13/2007	12.05	12.03	0.02	---	17.78	0.00	985.51	---	---
GMA3-10	997.54	11/20/2007	11.92	11.91	0.01	---	17.79	0.00	985.63	---	---
GMA3-10	997.54	11/26/2007	11.86	11.85	0.01	---	17.78	0.00	985.69	---	---
GMA3-10	997.54	12/4/2007	11.80	11.75	0.05	---	17.80	0.00	985.79	---	---
GMA3-10	997.54	12/12/2007	11.94	11.85	0.09	---	17.78	0.00	985.68	---	---
GMA3-10	997.54	12/17/2007	11.90	11.80	0.10	---	17.78	0.00	985.73	---	---
GMA3-10	997.54	12/24/2007	11.87	11.80	0.07	---	17.78	0.00	985.74	0.04	---

Table B-1**Groundwater Elevation and NAPL Monitoring/Recovery Data
July 2007 - December 2007****Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts**

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)
GMA3-11	997.25	7/9/2007	10.65	---	0.00	---	18.28	0.00	986.60	---	---
GMA3-11	997.25	7/18/2007	10.85	---	0.00	---	18.24	0.00	986.40	---	---
GMA3-11	997.25	7/25/2007	10.90	---	0.00	---	18.28	0.00	986.35	---	---
GMA3-11	997.25	7/30/2007	11.02	---	0.00	---	18.26	0.00	986.23	---	---
GMA3-11	997.25	7/30/2007	11.02	---	0.00	---	18.26	0.00	986.23	---	---
GMA3-11	997.25	8/7/2007	11.25	---	0.00	---	18.24	0.00	986.00	---	---
GMA3-11	997.25	8/15/2007	11.30	---	0.00	---	18.24	0.00	985.95	---	---
GMA3-11	997.25	8/22/2007	11.43	---	0.00	---	18.24	0.00	985.82	---	---
GMA3-11	997.25	8/28/2007	11.50	---	0.00	---	18.25	0.00	985.75	---	---
GMA3-11	997.25	9/4/2007	11.65	---	0.00	---	18.24	0.00	985.60	---	---
GMA3-11	997.25	9/10/2007	11.70	---	0.00	---	18.20	0.00	985.55	---	---
GMA3-11	997.25	9/17/2007	11.50	---	0.00	---	18.24	0.00	985.75	---	---
GMA3-11	997.25	9/26/2007	11.70	---	0.00	---	18.22	0.00	985.55	---	---
GMA3-11	997.25	10/2/2007	11.80	---	0.00	---	18.20	0.00	985.45	---	---
GMA3-11	997.25	10/9/2007	11.86	---	0.00	---	18.22	0.00	985.39	---	---
GMA3-11	997.25	10/16/2007	11.80	---	0.00	---	18.20	0.00	985.45	---	---
GMA3-11	997.25	10/24/2007	11.80	---	0.00	---	18.18	0.00	985.45	---	---
GMA3-11	997.25	10/29/2007	11.65	---	0.00	---	18.18	0.00	985.60	---	---
GMA3-11	997.25	11/6/2007	11.54	---	0.00	---	18.18	0.00	985.71	---	---
GMA3-11	997.25	11/13/2007	11.43	---	0.00	---	18.18	0.00	985.82	---	---
GMA3-11	997.25	11/20/2007	9.30	---	0.00	---	18.15	0.00	987.95	---	---
GMA3-11	997.25	11/26/2007	11.26	---	0.00	---	18.15	0.00	985.99	---	---
GMA3-11	997.25	12/4/2007	10.90	---	0.00	---	18.15	0.00	986.35	---	---
GMA3-11	997.25	12/12/2007	11.24	---	0.00	---	18.13	0.00	986.01	---	---

Table B-1

**Groundwater Elevation and NAPL Monitoring/Recovery Data
July 2007 - December 2007**

**Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts**

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)
GMA3-11	997.25	12/18/2007	11.28	---	0.00	---	18.14	0.00	985.97	---	---
GMA3-11	997.25	12/24/2007	11.18	---	0.00	---	18.12	0.00	986.07	---	---
GMA3-12	997.84	7/3/2007	11.81	11.70	0.11	---	21.25	0.00	986.13	---	---
GMA3-12	997.84	7/9/2007	11.90	11.76	0.14	---	21.25	0.00	986.07	---	---
GMA3-12	997.84	7/18/2007	12.05	11.88	0.17	---	21.20	0.00	985.95	0.11	---
GMA3-12	997.84	7/25/2007	12.14	11.98	0.16	---	21.25	0.00	985.85	---	---
GMA3-12	997.84	7/30/2007	12.02	12.00	0.02	---	21.22	0.00	985.84	---	---
GMA3-12	997.84	7/30/2007	12.02	12.00	0.02	---	21.22	0.00	985.84	---	---
GMA3-12	997.84	8/7/2007	12.55	12.18	0.37	---	21.20	0.00	985.63	0.91	---
GMA3-12	997.84	8/15/2007	12.35	12.30	0.05	---	21.21	0.00	985.54	0.03	---
GMA3-12	997.84	8/22/2007	12.81	12.50	0.31	---	21.30	0.00	985.32	0.77	---
GMA3-12	997.84	8/28/2007	12.54	12.46	0.08	---	21.22	0.00	985.37	---	---
GMA3-12	997.84	9/4/2007	12.64	12.54	0.10	---	21.21	0.00	985.29	---	---
GMA3-12	997.84	9/10/2007	12.99	12.58	0.41	---	21.21	0.00	985.23	1.01	---
GMA3-12	997.84	9/19/2007	12.74	12.40	0.34	---	21.22	0.00	985.42	0.84	---
GMA3-12	997.84	9/28/2007	13.25	12.54	0.71	---	21.24	0.00	985.25	0.44	---
GMA3-12	997.84	10/2/2007	13.26	12.58	0.68	---	21.23	0.00	985.21	1.68	---
GMA3-12	997.84	10/9/2007	13.35	12.73	0.62	---	21.24	0.00	985.07	1.53	---
GMA3-12	997.84	10/16/2007	12.95	12.60	0.35	---	21.23	0.00	985.22	0.87	---
GMA3-12	997.84	10/24/2007	12.82	12.60	0.22	---	21.24	0.00	985.22	---	---
GMA3-12	997.84	10/29/2007	12.85	12.45	0.40	---	21.24	0.00	985.36	0.25	---
GMA3-12	997.84	11/6/2007	13.86	12.85	1.01	---	21.24	0.00	984.92	2.50	---
GMA3-12	997.84	11/13/2007	12.85	12.36	0.49	---	21.24	0.00	985.45	1.21	---
GMA3-12	997.84	11/20/2007	12.50	12.24	0.26	---	21.22	0.00	985.58	0.64	---

Table B-1**Groundwater Elevation and NAPL Monitoring/Recovery Data
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Groundwater Management Area 3
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Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)
GMA3-12	997.84	11/26/2007	12.47	12.16	0.31	---	21.23	0.00	985.66	0.77	---
GMA3-12	997.84	12/4/2007	12.80	12.05	0.75	---	21.22	0.00	985.74	1.85	---
GMA3-12	997.84	12/12/2007	12.24	12.14	0.10	---	21.23	0.00	985.69	---	---
GMA3-12	997.84	12/17/2007	12.28	12.08	0.20	---	21.22	0.00	985.75	---	---
GMA3-12	997.84	12/24/2007	12.37	12.08	0.29	---	21.22	0.00	985.74	0.72	---
GMA3-13	997.73	7/3/2007	11.53	11.45	0.08	---	17.45	0.00	986.27	0.05	---
GMA3-13	997.73	7/9/2007	11.68	11.57	0.11	---	17.46	0.00	986.15	0.07	---
GMA3-13	997.73	7/18/2007	11.80	11.70	0.10	---	17.47	0.00	986.02	0.01	---
GMA3-13	997.73	7/25/2007	11.92	11.80	0.12	---	17.45	0.00	985.92	0.07	---
GMA3-13	997.73	7/30/2007	11.91	11.88	0.03	---	17.45	0.00	985.85	0.02	---
GMA3-13	997.73	7/30/2007	11.91	11.88	0.03	---	17.45	0.00	985.85	0.02	---
GMA3-13	997.73	8/7/2007	12.04	12.02	0.02	---	17.45	0.00	985.71	0.01	---
GMA3-13	997.73	8/15/2007	12.15	12.12	0.03	---	17.45	0.00	985.61	0.02	---
GMA3-13	997.73	8/22/2007	12.24	12.22	0.02	---	17.40	0.00	985.51	0.01	---
GMA3-13	997.73	8/28/2007	12.31	---	0.00	---	17.40	0.00	985.42	---	---
GMA3-13	997.73	9/4/2007	12.44	12.42	0.02	---	17.42	0.00	985.31	0.01	---
GMA3-13	997.73	9/10/2007	12.45	12.42	0.03	---	17.40	0.00	985.31	0.02	---
GMA3-13	997.73	9/19/2007	12.31	12.30	0.01	---	17.43	0.00	985.43	0.01	---
GMA3-13	997.73	9/28/2007	12.46	12.45	0.01	---	17.40	0.00	985.28	0.01	---
GMA3-13	997.73	10/2/2007	12.54	12.52	0.02	---	17.40	0.00	985.21	0.01	---
GMA3-13	997.73	10/9/2007	12.62	---	0.00	---	17.43	0.00	985.11	---	---
GMA3-13	997.73	10/16/2007	12.56	12.55	0.01	---	17.44	0.00	985.18	0.01	---
GMA3-13	997.73	10/24/2007	12.50	12.48	0.02	---	17.43	0.00	985.25	0.01	---
GMA3-13	997.73	10/29/2007	12.41	12.40	0.01	---	17.42	0.00	985.33	---	---

Table B-1**Groundwater Elevation and NAPL Monitoring/Recovery Data
July 2007 - December 2007****Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
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General Electric Company - Pittsfield, Massachusetts**

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)
GMA3-13	997.73	11/6/2007	12.29	---	0.00	---	17.41	0.00	985.44	---	---
GMA3-13	997.73	11/13/2007	12.24	12.11	0.13	---	17.41	0.00	985.61	---	---
GMA3-13	997.73	11/20/2007	12.13	12.11	0.02	---	17.42	0.00	985.62	0.01	---
GMA3-13	997.73	11/26/2007	12.05	12.04	0.01	---	17.41	0.00	985.69	0.01	---
GMA3-13	997.73	12/4/2007	11.92	---	0.00	---	17.40	0.00	985.81	---	---
GMA3-13	997.73	12/12/2007	12.00	---	0.00	---	17.40	0.00	985.73	---	---
GMA3-13	997.73	12/17/2007	11.91	---	0.00	---	17.38	0.00	985.82	---	---
GMA3-13	997.73	12/24/2007	11.94	---	0.00	---	17.40	0.00	985.79	---	---
GMA3-14	997.42	7/30/2007	11.02	---	0.00	---	16.70	0.00	986.40	---	---
GMA3-14	997.42	8/28/2007	11.40	---	0.00	---	16.70	0.00	986.02	---	---
GMA3-14	997.42	9/17/2007	11.20	---	0.00	---	16.74	0.00	986.22	---	---
GMA3-14	997.42	10/31/2007	11.23	---	0.00	---	16.60	0.00	986.19	---	---
GMA3-14	997.42	11/26/2007	10.98	---	0.00	---	16.58	0.00	986.44	---	---
GMA3-14	997.42	12/18/2007	10.71	---	0.00	---	16.54	0.00	986.71	---	---
GMA3-15	996.74	7/30/2007	12.00	---	0.00	---	17.18	0.00	984.74	---	---
GMA3-15	996.74	10/31/2007	11.85	---	0.00	---	17.26	0.00	984.89	---	---
GMA3-16	989.26	7/3/2007	2.94	---	0.00	---	12.95	0.00	986.32	---	---
GMA3-16	989.26	7/9/2007	1.50	---	0.00	---	12.94	0.00	987.76	---	---
GMA3-16	989.26	7/18/2007	1.90	---	0.00	---	12.95	0.00	987.36	---	---
GMA3-16	989.26	7/25/2007	2.02	---	0.00	---	12.85	0.00	987.24	---	---
GMA3-16	989.26	7/30/2007	1.90	---	0.00	---	12.86	0.00	987.36	---	---
GMA3-16	989.26	7/30/2007	1.90	---	0.00	---	12.86	0.00	987.36	---	---
GMA3-16	989.26	8/7/2007	2.48	---	0.00	---	12.84	0.00	986.78	---	---
GMA3-16	989.26	8/15/2007	2.11	---	0.00	---	12.85	0.00	987.15	---	---

Table B-1

**Groundwater Elevation and NAPL Monitoring/Recovery Data
July 2007 - December 2007**

**Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts**

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)
GMA3-16	989.26	8/22/2007	2.50	---	0.00	---	12.82	0.00	986.76	---	---
GMA3-16	989.26	8/28/2007	2.68	---	0.00	---	12.75	0.00	986.58	---	---
GMA3-16	989.26	9/4/2007	2.80	---	0.00	---	12.78	0.00	986.46	---	---
GMA3-16	989.26	9/10/2007	1.85	---	0.00	---	12.75	0.00	987.41	---	---
GMA3-16	989.26	9/17/2007	1.78	---	0.00	---	12.73	0.00	987.48	---	---
GMA3-16	989.26	9/26/2007	1.85	---	0.00	---	12.70	0.00	987.41	---	---
GMA3-16	989.26	10/2/2007	1.71	---	0.00	---	12.65	0.00	987.55	---	---
GMA3-16	989.26	10/9/2007	1.36	---	0.00	---	12.60	0.00	987.90	---	---
GMA3-16	989.26	10/16/2007	1.28	---	0.00	---	12.65	0.00	987.98	---	---
GMA3-16	989.26	10/24/2007	0.80	---	0.00	---	12.64	0.00	988.46	---	---
GMA3-16	989.26	10/29/2007	Water just below riser			---	12.60	0.00	NA	---	---
GMA3-16	989.26	11/6/2007	Water just below riser			---	12.62	0.00	NA	---	---
GMA3-16	989.26	11/13/2007	Water just below riser			---	12.55	0.00	NA	---	---
GMA3-16	989.26	11/20/2007	Water just below riser			---	12.52	0.00	NA	---	---
GMA3-16	989.26	11/26/2007	Water just below riser			---	12.55	0.00	NA	---	---
GMA3-16	989.26	12/4/2007	1.01	---	0.00	---	12.53	0.00	988.25	---	---
GMA3-16	989.26	12/12/2007	Water just below riser			---	12.52	0.00	NA	---	---
GMA3-16	989.26	12/18/2007	1.25	---	0.00	---	12.50	0.00	988.01	---	---
GMA3-16	989.26	12/24/2007	Water just above riser			---	12.55	0.00	NA	---	---
GMA3-17	1002.00	11/2/2007	16.61	---	0.00	---	23.25	0.00	985.39	---	---
GMA3-17	1002.00	11/6/2007	16.58	---	0.00	---	23.28	0.00	985.42	---	---
GMA3-17	1002.00	11/13/2007	16.55	---	0.00	---	23.30	0.00	985.45	---	---
GMA3-17	1002.00	11/20/2007	16.38	---	0.00	---	23.30	0.00	985.62	---	---
GMA3-17	1002.00	11/26/2007	16.33	---	0.00	---	23.30	0.00	985.67	---	---

Table B-1

**Groundwater Elevation and NAPL Monitoring/Recovery Data
July 2007 - December 2007**

**Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts**

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)
GMA3-17	1002.00	12/4/2007	16.28	---	0.00	---	23.32	0.00	985.72	---	---
GMA3-17	1002.00	12/12/2007	16.42	---	0.00	---	23.30	0.00	985.58	---	---
GMA3-17	1002.00	12/19/2007	16.36	16.30	0.06	---	23.34	0.00	985.70	0.15	---
GMA3-17	1002.00	12/24/2007	16.26	16.22	0.04	---	23.28	0.00	985.78	0.10	---
GMA3-2	991.94	10/31/2007	7.87	---	0.00	---	14.97	0.00	984.07	---	---
GMA3-3	990.45	10/31/2007	0.63	---	0.00	---	12.25	0.00	989.82	---	---
GMA3-4	994.6	10/31/2007	7.59	---	0.00	---	13.22	0.00	987.01	---	---
GMA3-5	993.67	11/1/2007	8.44	---	0.00	---	15.42	0.00	985.23	---	---
GMA3-6	997.49	10/31/2007	17.16	---	0.00	---	23.61	0.00	980.33	---	---
GMA3-7	1000.17	7/30/2007	14.25	---	0.00	---	19.79	0.00	985.92	---	---
GMA3-7	1000.17	10/31/2007	14.76	---	0.00	---	19.86	0.00	985.41	---	---
GMA3-8	996.24	10/30/2007	11.78	---	0.00	---	15.72	0.00	984.46	---	---
GMA3-9	992.39	10/31/2007	8.78	---	0.00	---	12.60	0.00	983.61	---	---
OBG-2	992.2	11/1/2007	5.24	---	0.00	---	14.86	0.00	986.96	---	---
OBG-2	992.2	11/27/2007	16.33	---	0.00	---	23.30	0.00	975.87	---	---
UB-MW-10	995.99	7/30/2007	10.25	---	0.00	---	14.65	0.00	985.74	---	---
UB-MW-10	995.99	8/28/2007	10.75	---	0.00	---	14.52	0.00	985.24	---	---
UB-MW-10	995.99	9/17/2007	10.60	---	0.00	---	14.52	0.00	985.39	---	---
UB-MW-10	995.99	10/31/2007	10.40	---	0.00	---	14.50	0.00	985.59	---	---
UB-MW-10	995.99	11/26/2007	10.32	---	0.00	---	14.50	0.00	985.67	---	---
UB-MW-10	995.99	12/17/2007	Buried Under Ice & Snow				NA	NA	NA	---	---
UB-PZ-3	998.15	7/30/2007	12.65	12.50	0.15	---	13.43	0.00	985.64	---	---
UB-PZ-3	998.15	8/28/2007	13.32	12.91	0.41	---	13.41	0.00	985.21	0.14	---
UB-PZ-3	998.15	9/28/2007	---	13.00	>0.41	---	13.41	0.00	NA	0.14	---

Table B-1

**Groundwater Elevation and NAPL Monitoring/Recovery Data
July 2007 - December 2007**

**Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts**

Well Name	Measuring Point Elev. (feet)	Date	Depth to Water (ft BMP)	Depth to LNAPL (ft BMP)	LNAPL Thickness (feet)	Depth to DNAPL (ft BMP)	Total Depth (ft BMP)	DNAPL Thickness (feet)	Corrected Water Elev. (feet)	LNAPL Removed (Liters)	DNAPL Removed (Liters)	
UB-PZ-3	998.15	10/31/2007	13.11	12.93	0.18	---	13.40	0.00	985.21	---	---	
UB-PZ-3	998.15	11/26/2007	12.75	12.62	0.13	---	13.41	0.00	985.52	0.01	---	
Unkamet Brook Staff Gauges												
GMA3-SG-1	988.90	10/31/2007	4.27	Chiseled square in concrete headwall at Outfall 009C						993.17	---	---
GMA3-SG-2	981.61	10/31/2007	0.88	---	---	---	---	---	982.49	---	---	
GMA3-SG-3	989.42	10/31/2007	2.78	---	---	---	---	---	992.20	---	---	
GMA4 Monitoring Wells (Adjacent to GMA3)												
060B-R	1,002.79	10/31/2007	17.02	---	0.00	---	20.75	0.00	985.77	---	---	
GMA4-3	1,003.95	7/10/2007	17.80	---	0.00	---	26.25	0.00	986.15	---	---	
GMA4-3	1,003.95	8/28/2007	18.53	---	0.00	---	26.25	0.00	985.42	---	---	
GMA4-3	1,003.95	9/17/2007	18.56	---	0.00	---	26.23	0.00	985.39	---	---	
GMA4-3	1,003.95	10/31/2007	18.53	---	0.00	---	26.24	0.00	985.42	---	---	
GMA4-3	1,003.95	11/29/2007	18.27	---	0.00	---	26.25	0.00	985.68	---	---	
GMA4-3	1,003.95	12/17/2007	18.20	---	0.00	---	26.24	0.00	985.75	---	---	
RF-14	1,001.59	10/31/2007	11.15	---	0.00	---	22.64	0.00	990.44	---	---	

Notes:

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

ARCADIS

Appendix C

Field Sampling Data

GROUNDWATER SAMPLING LOG

Well No. GMA-3-6BR
 Key No. —
 PID Background (ppm) —
 Well Headspace (ppm) —

Site/GMA Name GE Pittsfield
 Sampling Personnel KA / RKA
 Date 11.10.07
 Weather cloudy 50°

WELL INFORMATION

Reference Point Marked? Y N
 Height of Reference Point 2.3' Meas. From TIC
 Well Diameter 2"
 Screen Interval Depth 2-12' Meas. From FE Ground
 Water Table Depth 7.11 Meas. From TIC
 Well Depth 14.81 Meas. From TIC
 Length of Water Column 7.7
 Volume of Water in Well 1.23
 Intake Depth of Pump/Tubing 9.5'-14.5' Meas. From TIC

Sample Time 11:25
 Sample ID GMA-3-6BR
 Duplicate ID —
 MS/MSD
 Split Sample ID —

Required	Analytical Parameters:	Collected
<input checked="" type="checkbox"/>	VOCs (Std. list)	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	VOCs (Exp. list)	<input type="checkbox"/>
<input type="checkbox"/>	SVOCs	<input type="checkbox"/>
<input type="checkbox"/>	PCBs (Total)	<input type="checkbox"/>
<input type="checkbox"/>	PCBs (Dissolved)	<input type="checkbox"/>
<input type="checkbox"/>	Metals/Inorganics (Total)	<input type="checkbox"/>
<input type="checkbox"/>	Metals/Inorganics (Dissolved)	<input type="checkbox"/>
<input type="checkbox"/>	EPA Cyanide (Dissolved)	<input type="checkbox"/>
<input type="checkbox"/>	PAC Cyanide (Dissolved)	<input type="checkbox"/>
<input type="checkbox"/>	PCDDs/PCDFs	<input type="checkbox"/>
<input type="checkbox"/>	Pesticides/Herbicides	<input type="checkbox"/>
<input type="checkbox"/>	Natural Attenuation	<input type="checkbox"/>
<input type="checkbox"/>	Other (Specify)	<input type="checkbox"/>

Reference Point Identification:

TIC: Top of Inner (PVC) Casing
 TOC: Top of Outer (Protective) Casing
 Grade/BGS: Ground Surface

Redevelop? Y N

EVACUATION INFORMATION

Pump Start Time 10:25
 Pump Stop Time 11:25
 Minutes of Pumping 80
 Volume of Water Removed 4.0 gallons
 Did Well Go Dry? Y N

Evacuation Method: Bailor Bladder Pump
 Peristaltic Pump Submersible Pump Other/Specify ()
 Pump Type: per pump #2
 Samples collected by same method as evacuation? Y N (specify)

Water Quality Meter Type(s) / Serial Numbers: YSI #2 030392 Hawk 2100P Turbidity meter

Time	Pump Rate (ML/min)	Total Gallons Removed	Water Level (ft TIC)	Temp. (Celsius) [3%]*	pH (0.1 units)*	Sp. Cond. (mS/cm) [3%]*	Turbidity (NTU) [10% or 1 NTU]*	DO (mg/l) [10% or 0.1 mg/l]*	ORP (mV) [10 mV]*
10:07	350	0.18	7.48				6		
10:10	250	0.38	7.70	14.36	6.30	2.376	8.0	5.43	-27.6
10:15	250	0.71	8.15	14.02	6.77	1.459	4.0	2.72	-27.2
10:20	175	0.94	8.55	13.85	6.77	1.373	3.0	1.71	-28.9
10:25	175	1.17	8.92	13.95	6.74	1.645	2.0	1.49	-27.1
10:30	175	1.40	9.11	14.00	6.77	1.763	2.0	1.26	-53.9
10:35	175	1.63	9.54	14.03	6.88	1.985	2.0	0.85	-56.9
10:40	150	1.83	9.7	13.92	6.86	2.125	2.0	0.84	-54.9

* The stabilization criteria for each field parameter (three consecutive readings collected at 3- to 5-minute intervals) is listed in each column heading.

OBSERVATIONS/SAMPLING METHOD DEVIATIONS medium color yellow tint clear

SAMPLE DESTINATION

Laboratory: JGS
 Delivered Via: UPI
 Airbill #: —

Field Sampling Coordinator: [Signature]

GROUNDWATER SAMPLING LOG

Well No. 51-14
 Key No. _____
 PID Background (ppm) —
 Well Headspace (ppm) —

Site/GMA Name GG Pittsfield / GMA 3
 Sampling Personnel KAC, RU
 Date 11/2/07
 Weather Sunny 55

WELL INFORMATION

Reference Point Marked? Y N
 Height of Reference Point _____ Meas. From _____
 Well Diameter 2"
 Screen Interval Depth 5-15 Meas. From Ground
 Water Table Depth 11.45 Meas. From TIC
 Well Depth 12.64 Meas. From TIC
 Length of Water Column 3.16'
 Volume of Water in Well 0.52 gallons
 Intake Depth of Pump/Tubing ~19 Meas. From TIC

Sample Time 16:00
 Sample ID 51-14
 Duplicate ID GH143-DUP #2
 MS/MSD _____
 Split Sample ID _____

Required	Analytical Parameters:	Collected
(X)	VOCs (Std. list)	(X)
()	VOCs (Exp. list)	()
()	SVOCs	()
()	PCBs (Total)	()
()	PCBs (Dissolved)	()
()	Metals/Inorganics (Total)	()
()	Metals/Inorganics (Dissolved)	()
()	EPA Cyanide (Dissolved)	()
()	PAC Cyanide (Dissolved)	()
()	PCDDs/PCDFs	()
()	Pesticides/Herbicides	()
()	Natural Attenuation	()
()	Other (Specify)	()

Reference Point Identification:

TIC: Top of Inner (PVC) Casing
 TOC: Top of Outer (Protective) Casing
 Grade/BGS: Ground Surface

Redevelop? Y (N)

EVACUATION INFORMATION

Pump Start Time 14:45
 Pump Stop Time 16:05
 Minutes of Pumping 80
 Volume of Water Removed 3.0 gallons
 Did Well Go Dry? Y (N)

Evacuation Method: Bailer () Bladder Pump (X)
 Peristaltic Pump () Submersible Pump () Other/Specify ()
 Pump Type: Marschnite-System One
 Samples collected by same method as evacuation? (Y) N (specify)

Water Quality Meter Type(s) / Serial Numbers: YSI-556 MPS Hand 2100P Turbidimeter

Time	Pump Rate (L/min.)	Total Gallons Removed	Water Level (ft TIC)	Temp. (Celsius) [3%]*	pH [0.1 units]*	Sp. Cond. (mS/cm) [3%]*	Turbidity (NTU) [10% or 1 NTU]*	DO (mg/l) [10% or 0.1 mg/l]*	ORP (mV) [10 mV]*
15:10	100	0.66	NA	14.64	6.53	.231	35	7.77	79.6
15:15	100	0.79	NA	14.48	6.46	.239	17	7.46	86.4
15:20	100	0.92	NA	14.39	6.43	.249	12	7.41	88.6
15:25	200	1.18	NA	14.26	6.45	.265	10	7.61	90.5
15:30	150	1.38	NA	14.47	6.47	.311	6	6.60	81.0
15:35	150	1.58	NA	14.50	6.50	.336	4	6.47	73.5
15:40	150	1.78	NA	14.53	6.52	.352	3	6.42	70.2
15:45	150	1.98	NA	14.51	6.53	.386	1	6.46	68.4

* The stabilization criteria for each field parameter (three consecutive readings collected at 3- to 5-minute intervals) is listed in each column heading. 768.4 (P)

OBSERVATIONS/SAMPLING METHOD DEVIATIONS

Hand 2100P Turbidimeter 20 NTU
Issues with bladder pump, turbidity not measured
Water level above top of pump, can't measure

SAMPLE DESTINATION

Laboratory: 505
 Delivered Via: UPS
 Airbill #: _____

Field Sampling Coordinator: [Signature]

GROUNDWATER SAMPLING LOG

Well No. 82-BR
 Key No. -
 PID Background (ppm) -
 Well Headspace (ppm) -

Site/GMA Name GE Field/GMA 3
 Sampling Personnel KJC, RD
 Date 11/1/07
 Weather 55° cloudy / rain

WELL INFORMATION

Reference Point Marked? Y N
 Height of Reference Point _____ Meas. From _____
 Well Diameter 2"
 Screen Interval Depth 2-12 Meas. From Ground
 Water Table Depth 4.62 Meas. From TIC
 Well Depth 11.58 Meas. From TIC
 Length of Water Column 6.96'
 Volume of Water in Well 1.14 gallons
 Intake Depth of Pump/Tubing 7.5 Meas. From TIC

Sample Time 1525
 Sample ID GMA-82-BR
 Duplicate ID GMA3-DUP #2
 MS/MSD -
 Split Sample ID -

Required	Analytical Parameters:	Collected
()	VOCs (Std. list)	()
()	VOCs (Exp. list)	()
()	SVOCs	()
()	PCBs (Total)	()
(X)	PCBs (Dissolved)	(X)
()	Metals/Inorganics (Total)	()
()	Metals/Inorganics (Dissolved)	()
()	EPA Cyanide (Dissolved)	()
()	PAC Cyanide (Dissolved)	()
()	PCDDs/PCDFs	()
()	Pesticides/Herbicides	()
()	Natural Attenuation	()
()	Other (Specify)	()

Reference Point Identification:

TIC: Top of Inner (PVC) Casing
 TOC: Top of Outer (Protective) Casing
 Grade/BGS: Ground Surface

Redevelop? Y (N)

EVACUATION INFORMATION

Pump Start Time 1415
 Pump Stop Time 1545
 Minutes of Pumping 90
 Volume of Water Removed 2.5 gallons
 Did Well Go Dry? Y (N)

Evacuation Method: Bailer () Bladder Pump ()
Peristaltic Pump (X) Submersible Pump () Other/Specify ()
 Pump Type: Geo Pump
 Samples collected by same method as evacuation? (Y) N (specify)

Water Quality Meter Type(s) / Serial Numbers: YSI-556 MPS Hash 2100 P Turbidimeter

Time	Pump Rate (L/min.)	Total Gallons Removed	Water Level (ft TIC)	Temp. (Celsius) [3%]*	pH [0.1 units]*	Sp. Cond. (mS/cm) [3%]*	Turbidity (NTU) [10% or 1 NTU]*	DO (mg/l) [10% or 0.1 mg/l]*	ORP (mV) [10 mV]*
1430	100	0.13	4.70	-	-	-	22	-	-
1435		0.53	4.62	-	-	-	21	-	-
1440		0.66	4.68	10.78	6.21	0.510	20	3.11	17.2
1445		0.79	4.70	10.80	6.21	0.543	22	1.89	8.9
1450		0.92	4.70	10.86	6.21	0.577	14	1.40	2.6
1455		1.06	4.70	10.90	6.20	0.603	8	1.15	0.1
1500		1.19	4.70	10.93	6.20	0.629	5	0.99	-1.4
1505		1.32	4.70	10.97	6.20	0.639	3	0.97	-2.9

* The stabilization criteria for each field parameter (three consecutive readings collected at 3- to 5-minute intervals) is listed in each column heading.

OBSERVATIONS/SAMPLING METHOD DEVIATIONS

SAMPLE DESTINATION

Laboratory: SGS
 Delivered Via: UPS
 Airbill #: -

Field Sampling Coordinator: [Signature]

GROUNDWATER SAMPLING LOG

Well No. 82-BR
 Key No. -
 PID Background (ppm) -
 Well Headspace (ppm) -

Site/GMA Name GE Field/GMA 3
 Sampling Personnel GC, RD
 Date 11/1/03
 Weather 55° cloudy / rain

WELL INFORMATION

Reference Point Marked? Y N
 Height of Reference Point _____ Meas. From _____
 Well Diameter 2"
 Screen Interval Depth 2-12 Meas. From Ground
 Water Table Depth 4.62 Meas. From TIC
 Well Depth 11.58 Meas. From TIC
 Length of Water Column 6.96'
 Volume of Water in Well 1.14 gallons
 Intake Depth of Pump/Tubing 7.5 Meas. From TIC

Sample Time 1525
 Sample ID GMA-82-BR
 Duplicate ID GMA3-DOD #2
 MS/MSD -
 Split Sample ID -

Reference Point Identification:

TIC: Top of Inner (PVC) Casing
 TOC: Top of Outer (Protective) Casing
 Grade/BGS: Ground Surface

Redevelop? Y (N)

Required	Analytical Parameters:	Collected
()	VOCs (Std. list)	()
()	VOCs (Exp. list)	()
()	SVOCs	()
()	PCBs (Total)	()
(X)	PCBs (Dissolved)	(X)
()	Metals/Inorganics (Total)	()
()	Metals/Inorganics (Dissolved)	()
()	EPA Cyanide (Dissolved)	()
()	PAC Cyanide (Dissolved)	()
()	PCDDs/PCDFs	()
()	Pesticides/Herbicides	()
()	Natural Attenuation	()
()	Other (Specify)	()

EVACUATION INFORMATION

Pump Start Time 1415
 Pump Stop Time 1545
 Minutes of Pumping 90
 Volume of Water Removed 2.5 gallons
 Did Well Go Dry? Y (N)

Evacuation Method: Bailer () Bladder Pump ()
Peristaltic Pump (X) Submersible Pump () Other/Specify ()
 Pump Type: Geo Pump
 Samples collected by same method as evacuation? (Y) N (specify)

Water Quality Meter Type(s) / Serial Numbers: YSI-556 MDS Hach 2100 P Turbidity

Time	Pump Rate (L/min.)	Total Gallons Removed	Water Level (ft TIC)	Temp. (Celsius) [3%]*	pH [0.1 units]*	Sp. Cond. (mS/cm) [3%]*	Turbidity (NTU) [10% or 1 NTU]*	DO (mg/l) [10% or 0.1 mg/l]*	ORP (mV) [10 mV]*
1430	100	0.13	4.70	-	-	-	22	-	-
1435		0.53	4.62	-	-	-	21	-	-
1440		0.66	4.68	10.78	6.21	0.510	20	3.11	17.2
1445		0.79	4.70	10.80	6.21	0.543	22	1.89	8.9
1450		0.92	4.70	10.86	6.21	0.577	14	1.40	2.6
1455		1.06	4.70	10.90	6.20	0.603	8	1.15	0.1
1500		1.19	4.70	10.93	6.20	0.629	5	0.99	-1.4
1505		1.32	4.70	10.97	6.20	0.639	3	0.97	-2.9

* The stabilization criteria for each field parameter (three consecutive readings collected at 3- to 5-minute intervals) is listed in each column heading.

OBSERVATIONS/SAMPLING METHOD DEVIATIONS

SAMPLE DESTINATION

Laboratory: JGS
 Delivered Via: UPS
 Airbill #: _____

Field Sampling Coordinator: [Signature]

GROUNDWATER SAMPLING LOG

41 30
47.5

Well No. 114A
 Key No. _____
 PID Background (ppm) —
 Well Headspace (ppm) —

Site/GMA Name GMA-3 GE Pit + ReLO
 Sampling Personnel SEL
 Date 11/2/07
 Weather SUNNY 50°F

WELL INFORMATION

Reference Point Marked? Y N
 Height of Reference Point _____ Meas. From TOC
 Well Diameter 2"
 Screen Interval Depth 45.50 Meas. From TOC
 Water Table Depth 6.11 Meas. From TOC
 Well Depth 52.10 Meas. From TOC
 Length of Water Column 45.99'
 Volume of Water in Well 7.51 gallons
 Intake Depth of Pump/Tubing 47.5 Meas. From TOC

Sample Time 1120
 Sample ID 114A
 Duplicate ID _____
 MS/MSD 114AMS / 114AMSD
 Split Sample ID _____

Required	Analytical Parameters:	Collected
()	VOCs (Std. list)	()
()	VOCs (Exp. list)	()
()	SVOCs	()
()	PCBs (Total)	()
(X)	PCBs (Dissolved)	(X)
()	Metals/Inorganics (Total)	()
()	Metals/Inorganics (Dissolved)	()
()	EPA Cyanide (Dissolved)	()
()	PAC Cyanide (Dissolved)	()
()	PCDDs/PCDFs	()
()	Pesticides/Herbicides	()
()	Natural Attenuation	()
()	Other (Specify)	()

Reference Point Identification:

TIC: Top of Inner (PVC) Casing
 TOC: Top of Outer (Protective) Casing
 Grade/BGS: Ground Surface

Redevelop? Y (N)

EVACUATION INFORMATION

Pump Start Time 1035
 Pump Stop Time 1130
 Minutes of Pumping 55
 Volume of Water Removed 1.5 gallons
 Did Well Go Dry? Y (N)

Evacuation Method: Bailer () Bladder Pump ()
 Peristaltic Pump (X) Submersible Pump () Other/Specify ()
 Pump Type: GEORPUMP Z
 Samples collected by same method as evacuation? (Y) N (specify)

Water Quality Meter Type(s) / Serial Numbers: YSI 03C0392AE HACH TURBIDITY 021000028329

Time	Pump Rate (L/min.)	Total Gallons Removed	Water Level (ft TIC)	Temp. (Celsius) [3%]*	pH [0.1 units]*	Sp. Cond. (mS/cm) [3%]*	Turbidity (NTU) [10% or 1 NTU]*	DO (mg/l) [10% or 0.1 mg/l]*	ORP (mV) [10 mV]*
1038	0.10	0.08	9.40	11.42	7.86	0.428	9.0	8.65	154.6
1043	0.12	0.24	10.90	11.33	8.03	0.362	11.0	2.28	-72.2
1048	0.10	0.37	11.42	10.98	8.12	0.327	11.0	1.66	-126.5
1053	0.10	0.50	12.35	10.86	8.18	0.294	11.0	1.23	-182.7
1058	0.10	0.63	13.05	10.84	8.20	0.286	11.0	1.03	-190.6
1103	0.10	0.76	13.67	10.75	8.24	0.280	11.0	0.88	-203.7
1108	0.10	0.89	13.91	10.76	8.23	0.278	11.0	0.81	-203.7
1113	0.10	1.02	14.49	10.75	8.27	0.275	11.0	0.83	-211.0

* The stabilization criteria for each field parameter (three consecutive readings collected at 3- to 5-minute intervals) is listed in each column heading.

OBSERVATIONS/SAMPLING METHOD DEVIATIONS

SAMPLE DESTINATION

Laboratory: SGS
 Delivered Via: FedEx UPS
 Airbill #: _____

Field Sampling Coordinator: [Signature]

GROUNDWATER SAMPLING LOG

Well No. 114 BR
 Key No. FX-37
 PID Background (ppm) -
 Well Headpace (ppm) -

Site/GMA Name GE Pittsfield GMA3
 Sampling Personnel KLC
 Date 11/2/07
 Weather Sunny 55

WELL INFORMATION

Reference Point Marked? Y N
 Height of Reference Point _____ Meas. From _____
 Well Diameter 2"
 Screen Interval Depth 4-14 Meas. From Ground
 Water Table Depth 6.32 Meas. From TIC
 Well Depth 15.24 Meas. From TIC
 Length of Water Column 8.92
 Volume of Water in Well 1.46 gal
 Intake Depth of Pump/Tubing 10.5 Meas. From TIC

Sample Time 1215
 Sample ID 114 BR
 Duplicate ID -
 MSMSD -
 Split Sample ID -

Reference Point Identification:
 TIC: Top of Inner (PVC) Casing
 TOC: Top of Outer (Protective) Casing
 Grade/BGS: Ground Surface

Redevelop? Y N

Required	Analytical Parameters:	Collected
()	VOCs (Std. list)	()
()	VOCs (Exp. list)	()
()	SVOCs	()
()	PCBs (Total)	()
(X)	PCBs (Dissolved)	(X)
()	Metals/Inorganics (Total)	()
()	Metals/Inorganics (Dissolved)	()
()	EPA Cyanide (Dissolved)	()
()	PAC Cyanide (Dissolved)	()
()	PCDDs/PCDFs	()
()	Pesticides/Herbicides	()
()	Natural Attenuation	()
()	Other (Specify)	()

EVACUATION INFORMATION

Pump Start Time 1110
 Pump Stop Time 1225
 Minutes of Pumping 85
 Volume of Water Removed 3.25
 Did Well Go Dry? Y N

Evacuation Method: Bailer () Bladder Pump
 Peristaltic Pump () Submersible Pump () Other/Specify ()
 Pump Type: Marschelle system one
 Samples collected by same method as evacuation? Y N (specify)

Water Quality Meter Type(s) / Serial Numbers: YSI-556 MPS Hoch 2100P turb

Time	Pump Rate (L/min.)	Total Gallons Removed	Water Level (ft TIC)	Temp. (Celsius) [3%]*	pH (0.1 units)*	Sp. Cond. (mS/cm) [3%]*	Turbidity (NTU) [10% or 1 NTU]*	DO (mg/l) [10% or 0.1 mg/l]*	ORP (mV) [10 mV]*
1115	350	1.39	7.35	13.24	7.21	0.875	36	9.51	58.8
1120	200	1.65	7.34	13.37	7.18	0.873	26	8.18	46.4
1125	100	1.78	6.70	13.76	7.15	0.877	17	8.86	43.2
1130	100	1.91	6.40	12.21	7.17	0.888	15	7.18	40.2
1135	100	2.04	6.30	12.76	7.18	0.893	11	7.37	37.4
1140	100	2.17	6.34	12.77	7.17	0.896	8	6.77	38.7
1145	100	2.30	6.34	12.40	7.18	0.898	6	6.87	37.9
1150	100	2.43	6.34	13.03	7.18	0.899	6	6.08	37.8

* The stabilization criteria for each field parameter (three consecutive readings collected at 3- to 5-minute intervals) is listed in each column heading.

OBSERVATIONS/SAMPLING METHOD DEVIATIONS

SAMPLE DESTINATION

Laboratory: SGS
 Delivered Via: UPS
 Airbill #: _____

Field Sampling Coordinator: [Signature]

Appendix D

Data Validation Report

**Appendix D
Groundwater Sampling Data Validation Report
Groundwater Management Area 3 - Fall 2007**

**General Electric Company
Pittsfield, Massachusetts**

1.0 General

This attachment summarizes the data validation review performed on behalf to the General Electric Company (GE) for groundwater samples collected between November and December 2007 as part of groundwater sampling activities conducted at Groundwater Management Area 3, located at the General Electric Company/Housatonic River Site in Pittsfield, Massachusetts. The samples were analyzed for polychlorinated biphenyls (PCBs) and/or various other constituents listed in Appendix IX of 40 CFR Part 264, plus one additional constituent -- 2-chloroethyl vinyl ether (hereafter referred to as Appendix IX+1) by SGS Environmental Services, Inc. (formerly Paradigm Analytical Labs, Inc.) of Wilmington, North Carolina. Data validation was performed for five PCB samples and six volatile organic compound (VOC) samples.

2.0 Data Evaluation Procedures

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

- *Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS BBL (submitted by GE on March 30, 2007 and approved by EPA on June 13, 2007);*
- *Region I Tiered Organic and Inorganic Data Validation Guidelines, USEPA Region I (July 1, 1993); and*
- *Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses, USEPA Region I (Draft, December 1996).*

The data were validated to either a Tier I or Tier II level, as described below. Any deviations from the applicable quality control criteria utilized during the data review process are identified below. A tabulated summary of the Tier I/Tier II data review is presented in Table D-1. Each sample subject to evaluation is listed in Table D-1 to document that data review was performed. Samples that required data qualification are listed separately.

The following data qualifiers were used in this data evaluation:

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

- U The compound was analyzed for, but was not detected. The sample quantitation limit is presented. Non-detect sample results are presented as ND(PQL) within this report for consistency with documents previously prepared for investigations conducted at the GE-Pittsfield/Housatonic River Site.
- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is estimated and may or may not represent the actual level of quantitation. Non-detect sample results that required qualification are presented as ND(PQL) J within this report for consistency with documents previously prepared for investigations conducted at the GE-Pittsfield/Housatonic River Site.
- R Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data should not be used for any qualitative or quantitative purpose.

3.0 Data Validation Procedures

Section 7.5 of the FSP/QAPP states that 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* (EPA guidelines). The Tier I review consisted of a completeness evidence audit, as outlined in the *EPA Region I CSF Completeness Evidence Audit Program* (EPA Region I, July 31, 1991), to ensure that laboratory data and documentation were present. In the event data packages were determined to be incomplete, the missing information was requested from the laboratory. Upon completion of the Tier I review, the data packages complied with the EPA Region I Tier I data completeness requirements.

The Tier II data review consisted of a review of 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. Additionally, field duplicates were examined for relative percent difference (RPD) compliance with the criteria specified in the FSP/QAPP.

A tabulated summary of the samples subject to Tier I and Tier II data review is presented in the following table.

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	3	1	1	5
VOCs	0	0	0	2	1	3	6
Total	0	0	0	5	2	4	11

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 EPA 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 in Section 4 below.

4.0 Summary of QA/QC Parameter Deviations Requiring Data Qualification

This section provides a summary of the deviations from the applicable QA/QC criteria that resulted in qualification of results.

The 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 not achieved. The compounds that did not achieve the initial calibration criterion and the number of samples qualified are presented in the following table.

Compounds Qualified Due to Initial Calibration Deviations (RRF)

Analysis	Compound	Number of Affected Samples	Qualification
VOCs	1,2-Dibromo-3-chloropropane	6	J
	1,4-Dioxane	6	J
	2-Butanone	6	J
	2-Chloroethylvinylether	6	J
	Acetone	6	J
	Acetonitrile	6	J
	Acrolein	6	J
	Acrylonitrile	6	J
	Isobutanol	6	J
	Propionitrile	6	J

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

Compounds Qualified Due to MS/MSD RPD Deviations

Analysis	Compound	Number of Affected Samples	Qualification
PCBs	All Aroclors	1	J

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

Compound Qualified Due to Continuing Calibration of %D Values

Analysis	Compound	Number of Affected Samples	Qualification
VOCs	Bromoform	4	J

Blank action levels for compounds detected in the blanks were calculated at five times the blank concentrations. Detected sample results that were below the blank action level were qualified with a "U." The compound detected in method/analytical blanks which resulted in qualification of sample data, along with the number of affected samples, are presented in the following table.

Compound Qualified Due to Blank Deviations

Analysis	Compound	Number of Affected Samples	Qualification
VOCs	Chloroform	2	U

Surrogate compounds are analyzed with every organic sample to aid in evaluation of the sample extraction efficiency. As specified in the FSP/QAPP, at least one of the PCB surrogate compounds must have a recovery between laboratory-specified control limits. Associated sample results were qualified as estimated (J) for all compounds when surrogate recovery criteria were outside control limits and greater than 10%. A summary of the compounds affected by surrogate recovery exceedances and the number of samples qualified due to those deviations are presented in the following table.

Compounds Qualified Due to Surrogate Recovery Deviations

Analysis	Compound	Number of Affected Samples	Qualification
PCBs	All Aroclors	1	J

5.0 Overall Data Usability

This section summarizes the analytical data in terms of its completeness and usability. Data completeness is defined as the percentage of sample results that have been determined to be usable during the data validation process. The percent usability calculation included analyses evaluated under both the Tier I/II data validation reviews. The percent usability calculation also includes quality control samples (i.e., field/equipment blanks, trip blanks, and field duplicates) to aid in the evaluation of data usability. Data usability is summarized in the following table.

Data Usability

Parameter	Percent Usability	Rejected Data
PCBs	100	None
VOCs	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 field duplicates, MS/MSD samples, and LCS/LCSD samples. For this analytical program, 2.1% of the data required qualification due to MS/MSD RPD deviations. None of the data required qualification due to field duplicate RPD deviations or LCS/LCSD 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, LCS/LCSDs, MS/MSD samples, and surrogate compound recoveries. For this analytical program, 17.0% of the data required qualification due to instrument calibration deviations and 2.1% of the data required qualification due to surrogate compound recovery deviations. None of the data required qualification due to LCS/LCSD recovery deviations or MS/MSD 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 the EPA-approved work plans, and by following the procedures for sample collection/analyses that were described in the FSP/QAPP. Additionally, the analytical program used procedures consistent with EPA-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 data set, none of the data required qualification due to holding time deviations.

5.4 Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. This goal was achieved through the use of the standardized techniques for sample collection and analysis presented in the FSP/QAPP. Specifically, all the groundwater samples collected between November and December 2007 were analyzed by EPA SW-846 method 8082 for PCBs and 8260 for VOCs.

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. This analytical data set had an overall usability of 100%.

Table D-1
Analytical Data Validation Summary
Groundwater Management Area 3 - Fall 2007

General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Sample Delivery Group No.	Sample ID	Date Collected	Matrix	Validation Level	Qualification	Compound	QA/QC Parameter	Value	Control Limits	Qualified Result	Notes
PCBs											
G135-540	82B-R (Filtered)	11/1/2007	Water	Tier II	No						
G135-540	GMA3-DUP-1 (Filtered)	11/1/2007	Water	Tier II	Yes	Aroclor-1016	Surrogate Recovery	34.5%, 38.1%	40.0% to 140%	ND(0.000065) J	Parent Sample 82B-R (Filtered)
						Aroclor-1221	Surrogate Recovery	34.5%, 38.1%	40.0% to 140%	ND(0.000065) J	
						Aroclor-1232	Surrogate Recovery	34.5%, 38.1%	40.0% to 140%	ND(0.000065) J	
						Aroclor-1242	Surrogate Recovery	34.5%, 38.1%	40.0% to 140%	ND(0.000065) J	
						Aroclor-1248	Surrogate Recovery	34.5%, 38.1%	40.0% to 140%	ND(0.000065) J	
						Aroclor-1254	Surrogate Recovery	34.5%, 38.1%	40.0% to 140%	ND(0.000065) J	
						Aroclor-1260	Surrogate Recovery	34.5%, 38.1%	40.0% to 140%	ND(0.000065) J	
						Total PCBs	Surrogate Recovery	34.5%, 38.1%	40.0% to 140%	ND(0.000065) J	
G135-543	114-A (Filtered)	11/2/2007	Water	Tier II	Yes	Aroclor-1016	MS/MSD RPD	13.9%	<12%	ND(0.000065) J	
						Aroclor-1221	MS/MSD RPD	13.9%	<12%	ND(0.000065) J	
						Aroclor-1232	MS/MSD RPD	13.9%	<12%	ND(0.000065) J	
						Aroclor-1242	MS/MSD RPD	13.9%	<12%	ND(0.000065) J	
						Aroclor-1248	MS/MSD RPD	13.9%	<12%	ND(0.000065) J	
						Aroclor-1254	MS/MSD RPD	13.9%	<12%	ND(0.000065) J	
						Aroclor-1260	MS/MSD RPD	13.9%	<12%	ND(0.000065) J	
						Total PCBs	MS/MSD RPD	13.9%	<12%	ND(0.000065) J	
G135-543	114-BR (Filtered)	11/2/2007	Water	Tier II	No						
G135-571	GMA-3-RB-1 (Filtered)	12/3/2007	Water	Tier II	No						
VOCs											
G135-540	6B-R	11/1/2007	Water	Tier II	Yes	1,2-Dibromo-3-chloropropane	ICAL RRF	0.029	>0.05	ND(3.2) J	
						1,4-Dioxane	ICAL RRF	0.001	>0.05	ND(64) J	
						2-Butanone	ICAL RRF	0.044	>0.05	ND(3.2) J	
						2-Chloroethylvinylether	ICAL RRF	0.026	>0.05	ND(8.0) J	
						Acetone	ICAL RRF	0.021	>0.05	ND(3.2) J	
						Acetonitrile	ICAL RRF	0.007	>0.05	ND(13) J	
						Acrolein	ICAL RRF	0.019	>0.05	ND(16) J	
						Acrylonitrile	ICAL RRF	0.037	>0.05	ND(16) J	
						Bromoform	CCAL %D	30.3%	<25%	ND(0.64) J	
						Isobutanol	ICAL RRF	0.004	>0.05	ND(32) J	
						Propionitrile	ICAL RRF	0.013	>0.05	ND(13) J	
G135-540	Trip Blank	11/1/2007	Water	Tier II	Yes	1,2-Dibromo-3-chloropropane	ICAL RRF	0.024	>0.05	ND(0.0050) J	
						1,4-Dioxane	ICAL RRF	0.000	>0.05	ND(0.10) J	
						2-Butanone	ICAL RRF	0.044	>0.05	ND(0.0050) J	
						2-Chloroethylvinylether	ICAL RRF	0.014	>0.05	ND(0.013) J	
						Acetone	ICAL RRF	0.029	>0.05	ND(0.0050) J	
						Acetonitrile	ICAL RRF	0.010	>0.05	ND(0.020) J	
						Acrolein	ICAL RRF	0.019	>0.05	ND(0.025) J	
						Acrylonitrile	ICAL RRF	0.032	>0.05	ND(0.025) J	
						Isobutanol	ICAL RRF	0.003	>0.05	ND(0.050) J	
						Propionitrile	ICAL RRF	0.004	>0.05	ND(0.020) J	
G135-543	51-14	11/2/2007	Water	Tier II	Yes	1,2-Dibromo-3-chloropropane	ICAL RRF	0.029	>0.05	ND(0.0050) J	
						1,4-Dioxane	ICAL RRF	0.001	>0.05	ND(0.10) J	
						2-Butanone	ICAL RRF	0.044	>0.05	ND(0.0050) J	
						2-Chloroethylvinylether	ICAL RRF	0.026	>0.05	ND(0.013) J	
						Acetone	ICAL RRF	0.021	>0.05	ND(0.0050) J	
						Acetonitrile	ICAL RRF	0.007	>0.05	ND(0.020) J	
						Acrolein	ICAL RRF	0.019	>0.05	ND(0.025) J	
						Acrylonitrile	ICAL RRF	0.037	>0.05	ND(0.025) J	
						Bromoform	CCAL %D	30.3%	<25%	ND(0.0010) J	
						Chloroform	Analytical Blank	-	-	ND(0.0016)	
						Isobutanol	ICAL RRF	0.004	>0.05	ND(0.050) J	
						Propionitrile	ICAL RRF	0.013	>0.05	ND(0.020) J	

Table D-1
Analytical Data Validation Summary
Groundwater Management Area 3 - Fall 2007

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 (continued)																	
G135-543	GMA3-DUP-2	11/2/2007	Water	Tier II	Yes	1,2-Dibromo-3-chloropropane	ICAL RRF	0.029	>0.05	ND(0.0050) J	Parent Sample 51-14						
						1,4-Dioxane	ICAL RRF	0.001	>0.05	ND(0.10) J							
						2-Butanone	ICAL RRF	0.044	>0.05	ND(0.0050) J							
						2-Chloroethylvinylether	ICAL RRF	0.026	>0.05	ND(0.013) J							
						Acetone	ICAL RRF	0.021	>0.05	ND(0.0050) J							
						Acetonitrile	ICAL RRF	0.007	>0.05	ND(0.020) J							
						Acrolein	ICAL RRF	0.019	>0.05	ND(0.025) J							
						Acrylonitrile	ICAL RRF	0.037	>0.05	ND(0.025) J							
						Bromofom	CCAL %D	30.3%	<25%	ND(0.0010) J							
						Chloroform	Analytical Blank	-	-	ND(0.0015)							
						Isobutanol	ICAL RRF	0.004	>0.05	ND(0.050) J							
						Propionitrile	ICAL RRF	0.013	>0.05	ND(0.020) J							
						G135-543	TRIP BLANK	11/2/2007	Water	Tier II		Yes	1,2-Dibromo-3-chloropropane	ICAL RRF	0.029	>0.05	ND(0.0050) J
													1,4-Dioxane	ICAL RRF	0.001	>0.05	ND(0.10) J
2-Butanone	ICAL RRF	0.044	>0.05	ND(0.0050) J													
2-Chloroethylvinylether	ICAL RRF	0.026	>0.05	ND(0.013) J													
Acetone	ICAL RRF	0.021	>0.05	ND(0.0050) J													
Acetonitrile	ICAL RRF	0.007	>0.05	ND(0.020) J													
Acrolein	ICAL RRF	0.019	>0.05	ND(0.025) J													
Acrylonitrile	ICAL RRF	0.037	>0.05	ND(0.025) J													
Bromofom	CCAL %D	30.3%	<25%	ND(0.0010) J													
Isobutanol	ICAL RRF	0.004	>0.05	ND(0.050) J													
Propionitrile	ICAL RRF	0.013	>0.05	ND(0.020) J													
G135-571	GMA-3-RB-1	12/3/2007	Water	Tier II	Yes						1,2-Dibromo-3-chloropropane		ICAL RRF	0.013	>0.05	ND(0.0050) J	
											1,4-Dioxane		ICAL RRF	0.000	>0.05	ND(0.10) J	
											2-Butanone		ICAL RRF	0.039	>0.05	ND(0.0050) J	
						2-Chloroethylvinylether	ICAL RRF	0.015	>0.05	ND(0.013) J							
						Acetone	ICAL RRF	0.022	>0.05	ND(0.0050) J							
						Acetonitrile	ICAL RRF	0.008	>0.05	ND(0.020) J							
						Acrolein	ICAL RRF	0.015	>0.05	ND(0.025) J							
						Acrylonitrile	ICAL RRF	0.025	>0.05	ND(0.025) J							
						Isobutanol	ICAL RRF	0.003	>0.05	ND(0.050) J							
						Propionitrile	ICAL RRF	0.004	>0.05	ND(0.020) J							

ARCADIS

Appendix E

Fall 2007 Soil Gas/Indoor Air
Sampling Results

Appendix E

Sub-Slab Soil Gas and Indoor Air Investigation Summary Report for Buildings 51 and 59 – Fall 2007

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E-8	Comparison Of Indoor Air Results To Occupational Exposure Limits - Building 59

Figure

Figure E-1 Existing Sub-Slab Soil Gas and Indoor Air Sampling Locations

Attachments

- Attachment A Data Validation Report
- Attachment B Sub-Slab Soil Gas Sampling Logs
- Attachment C Indoor Air Sampling Logs

1. Background

On March 16, 2007, the General Electric Company (GE) submitted to the United States Environmental Protection Agency (EPA) a document titled *Supplemental Soil Gas Migration Assessment Report and Sampling Plan - Groundwater Management Area 3* (Supplemental Assessment Report). That document was submitted in response to a conditional approval letter issued by EPA on February 15, 2007 regarding GE's September 15, 2006 *Soil Gas Investigation Summary Report for Groundwater Management Area 3* (Soil Gas Summary Report) and October 20, 2006 *Soil Gas Migration Assessment Report for Groundwater Management Area 3* (Migration Assessment Report). Those GE reports summarized the results of groundwater, light non-aqueous-phase liquid (LNAPL), soil gas, and indoor air sampling conducted by GE in 2006 near and within GE-owned Buildings 51 and 59 at the GE Pittsfield facility. The Supplemental Assessment Report summarized the results of an inspection performed by GE in October 2006 at Buildings 51 and 59 to identify potential pathways by which soil gas beneath the building might enter the buildings through the slabs or sidewalls. That report also included, at EPA's direction, GE's proposed plans for future monitoring of soil gas beneath, and indoor air within, Buildings 51 and 59, as well as for conducting an inventory to identify commercial products within those buildings that may contain the chemicals detected in soil gas and indoor air samples.

GE received EPA conditional approval of the Supplemental Assessment Report in a letter dated June 25, 2007. Pursuant to Conditions 1 and 2 of EPA's letter, GE submitted the *Addendum to the Supplemental Soil Gas Migration Assessment Report and Sampling Plan* (Addendum to Supplemental Assessment Report) to EPA on July 24, 2007. That report presented an assessment of whether potential pathways/penetrations extend to the underlying soil, and it summarized the actions that had been taken up to that time to seal pathways/penetrations that may have extended to the underlying soil. The Addendum to Supplemental Assessment Report also identified five such potential pathways/penetrations in Building 51 that may extend to the underlying soil, but that could not be sealed during the available timeframe and provided a proposal for addressing those remaining potential pathways/penetrations.

EPA provided conditional approval of the Addendum to Supplemental Assessment Report by letter dated October 1, 2007. In response to Condition No. 1 of that letter, GE submitted the *Second Addendum to Supplemental Soil Gas Migration Assessment Report and Sampling Plan* to EPA on November 12, 2007. That report presented GE's confirmation that three of the five remaining potential pathways/penetrations within Building 51 were sealed and stated that the other two potential pathways/penetrations, after further

investigation, were found not to penetrate to the underlying soil. Therefore, no additional sampling (beyond that previously proposed in the Supplemental Assessment Report) was required.

GE has conducted the building material/products inventory and soil gas and indoor air sampling as proposed in the Supplemental Assessment Report. This report summarizes the results of those activities and provides a general review and assessment of the most recent sampling data. Section 2 of this report summarizes the results of the material/product inventory and soil gas/indoor air sampling activities at Buildings 51 and 59. Section 3 provides an assessment of the recent sampling activities, and includes a comparison of the recent indoor air data to applicable occupational standards for workplace exposure. That section also identifies GE's proposed next soil gas and indoor air investigation activities.

2. Summary of Fall 2007 Sub-Slab Soil Gas and Indoor Air Assessment Activities

2.1 General

In October 2007, GE conducted a building products and materials inventory, sub-slab soil gas sampling beneath Buildings 51 and 59, and indoor air sampling within those buildings, using the same sampling methods that had previously been used in the October 2006 soil gas sampling event, and as proposed in the Supplemental Assessment Report. The building inventories, sample collection, and analytical results are described below.

2.2 Building Products and Materials Inventory

On October 10, 2007, GE performed a reconnaissance within each building to identify materials and/or products that could contain chemicals that could represent a potential source of volatile constituents in indoor air and/or that are common to the target constituents identified in the groundwater or LNAPL. The inventory was performed for immediately accessible areas in and around the designated sampling areas. In addition, although certain building materials could potentially contain VOCs (e.g., carpeting, adhesives, etc.), the inventory focused on the identification of those materials and products that are used or stored inside the buildings, such as fuels, chemicals, cleaning supplies, etc. – i.e., the inventory did not specifically focus on the building structure itself or on furnishings. Moreover, the inventory did not attempt to identify potential sources that may have been present but were not visually apparent, including perfumes, dry cleaning solvents in clothes, and cleaning agents.

Multiple items that could contain volatile constituents were identified during the reconnaissance of Buildings 51 and 59. Tables E-1 and E-2 summarize those items and the chemicals that are associated with each item.

2.3 Indoor Air and Sub-Slab Soil Sampling Activities

GE collected and analyzed indoor air samples and sub-slab soil gas samples from within and beneath Buildings 51 and 59 on October 11, 2007. As discussed below, the samples were collected using SUMMA[®] canisters, in accordance with the procedures contained in GE's approved *Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP)*. This sampling was conducted to provide further information regarding the presence of volatile constituents in the soil gas and indoor air to support further assessments regarding the potential migration

of such constituents from beneath Buildings 51 and 59 into the buildings interior. The locations at which the samples were collected are shown on Figure E-1. As discussed in the Supplemental Assessment Report, the sample locations for soil gas and indoor air were co-located in order to assess potential interactions, if any, between soil gas and indoor air quality.

2.3.1 Sub-Slab Soil Gas and Indoor Air Sampling and Analysis

Indoor air samplers were placed at the approximate height of the breathing zone of the building occupants. The collection of the sub-slab soil gas samples involved the drilling of a small diameter hole through existing or new sample locations in the concrete floor slabs (which ranged in thickness from 12 to 16 inches) to allow access for a sampling tube to the underside of the floor slab. The duplicate sub-slab soil gas sample (SS-DUP-1) was collected simultaneously with sample BLDG59-SS-03 in the Building 59 office/lobby area using a "T-shaped" regulator that was attached to the two canisters to allow for a uniform sample collection over the same 8-hour sampling period. Note that this method differs from the method used in the previous sampling event in which a duplicate sample was collected over a shorter period of time using an increased vacuum, which appeared to produce anomalous results. The sub-slab soil gas and indoor air sampling logs are included as Attachments B and C, respectively.

The indoor air and sub-slab soil gas samples were collected over an approximate 8-hour period (to coincide with normal working hours within each building) using a 6-liter SUMMA[®] canister with an attached pre-set flow regulator. The laboratory provided batch-certified-clean canisters with an initial vacuum of 26 inches of mercury (in. of Hg) for sample collection. Flow regulators were pre-set by the laboratory to provide uniform sample collection over the approximate 8-hour sampling period.

All indoor air and sub-slab soil gas sample analyses were submitted for laboratory analysis in accordance with USEPA Compendium Method TO-15, titled *Compendium of Methods for the Determination of Toxic Organics Compounds in Ambient Air – Determination of Volatile Organic Compounds (VOCs) in Air Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*. The samples were submitted to Lancaster Laboratories, Inc. of Lancaster, Pennsylvania, which has current National Environmental Laboratory Accreditation Program (NELAP) certification and is accredited in the Commonwealth of Massachusetts for conducting analyses in accordance with EPA Compendium Method TO-15. The constituents for which analyses were performed include the same constituents for which analyses were performed on the deep soil gas samples

collected in 2006 – namely, VOCs and certain SVOCs that can be identified during the same analysis (including 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, and naphthalene).

2.3.2 Sub-Slab Soil Gas and Indoor Air Analytical Results

The analytical results for the sub-slab soil gas samples collected in October 2007 are presented in Table E-3 (for samples collected beneath Building 51) and Table E-4 (for samples collected beneath Building 59), along with the respective analytical results from the 2006 sampling event (where such data exist). Analytical results for the indoor air samples are presented in Table E-5 (for samples collected in Building 51) and Table E-6 (for samples collected in Building 59). A general assessment of these results is provided in Section 3.

2.4 Data Validation

The sub-slab soil gas and indoor air analytical results were received from the laboratory in both units of micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and parts per million (ppm), and both sets of data have been validated in accordance with the procedures outlined in GE's approved FSP/QAPP. The results of this review are included in Attachment A. They indicate that 100% of the analytical data are considered usable. Thus, this data set meets the data quality objectives (DQOs) set forth in the FSP/QAPP.

3. Assessment of Results and Future Activities

3.1 General

GE has reviewed the data sets from the 2006 sampling event (as presented in GE's Migration Assessment Report) and the recent sub-slab soil gas and indoor air sampling conducted in October 2007 (described in Section 2). The results of that evaluation are summarized in this section. This section also provides a proposal for further follow-up activities.

3.2 Evaluation of Analytical Results

3.2.1 Sub-Slab Soil Gas Data

The sub-slab soil gas data presented in the Migration Assessment Report and the more recent data show the presence of a variety of constituents (Tables E-3 and E-4). Specifically, a total of 34 VOCs were detected in one or more of the fall 2007 sub-slab soil gas samples collected from Building 51, compared to 28 VOCs and one SVOC detected in one or more of the September 2006 sub-slab soil gas samples from this building. At Building 59, a total of 40 VOCs and six SVOCs were detected in one or more of the fall 2007 sub-slab soil gas samples from Building 59, while 27 VOCs and one SVOC were detected in one or more of the sub-slab soil gas samples from this building in 2006. Most of the new constituents observed in fall 2007, as compared to the 2006 data, were detected at estimated concentrations below the detection limits utilized during the 2006 analyses, or were identified at locations that were not sampled in 2006 (i.e., the Building 51 Records Room and the Building 59 Library Area).

Of the constituents detected in soil gas, only three VOCs (methylene chloride, tetrachloroethene [PCE], and TCE) and one SVOC (1,2,4-trichlorobenzene) were also detected in the previous LNAPL samples, and two of them (PCE and TCE) were only detected in one previous LNAPL sample (from well 51-8). Further, only one constituent, TCE, was detected in at least one deep soil gas, sub-slab soil gas, LNAPL, and groundwater sample.

3.2.2 Indoor Air Data

The indoor air data from both Building 51 and Building 59, presented in Tables E-5 and E-6, show a variety of detected constituents, most of which were not detected in the previously collected LNAPL or groundwater samples. In fall 2007, 28 VOCs were detected in the indoor air at Building 51 and 25 VOCs were detected in Building 59. In comparison, 19 VOCs were detected in Building 51 and 26 VOCs were detected in Building 59 in September 2006. One SVOC was also detected in Building 59 during the 2006 sampling event. As noted in the Migration Assessment Report, the detection of constituents at these frequencies in the indoor air of buildings is expected and routine.

The indoor air concentrations found in both buildings are all far below the limits applicable to occupational settings such as Buildings 51 and 59 – namely, the workplace exposure standards established by the U.S. Occupational Safety and Health Administration (OSHA) and the guidelines established by NIOSH. This is shown in Tables E-7 and E-8 for Buildings 51 and 59, respectively. [Note that, in these tables, the concentrations have been converted from micrograms per cubic meter to parts per million (ppm), since the OSHA standards and NIOSH guidelines are expressed in ppm. Review of these tables indicates that all indoor air concentrations are at least three orders of magnitude below the OSHA standards and NIOSH guidelines.

There are many potential sources of VOCs in the indoor air in buildings. As identified during the material/product inventory (Tables E-1 and E-2), there are items within the buildings that could also be potential sources of VOCs (e.g., paint, paint thinner, cleaners, etc.). In addition, as noted above, other substances in the indoor environment not identified through the inspection may be contributing to indoor air concentrations as well

3.3 Future Activities

In fall 2008, GE will continue to conduct another annual inventory of materials and/or products within each building that could contain volatile constituents similar to those that have been previously detected in the indoor air samples and are common to the target constituents in the LNAPL or groundwater. Following completion of the building inventories, GE will perform additional monitoring of soil gas beneath, and indoor air within, Buildings 51 and 59 at or near the same locations that were sampled in fall 2007. The results of this inventory and sampling event will be presented as part of the Fall 2008 NAPL Monitoring Report for GMA 3, which will be submitted by February 28, 2009.

ARCADIS

Tables

**Table E-1
Summary Of Material/Product Inventory For Building 51**

**Sub-Slab Soil Gas and Indoor Air Investigation Summary Report for Buildings 51 and 59 – Fall 2007
General Electric Company - Pittsfield, Massachusetts**

Area	Identified Material/Product	Information Regarding Material/Product
Chiller Room	Foamtrol AF1440	distillates, petroleum, straight run middle (CAS# 6474-44-2)
	Unigran 85	
	Spectrus NX106	magnesium nitrate (CAS# 10377-60-3), 5-chloro-2-methyl-4-isothiazolin-3-one (CAS# 26172-55-4)
	Lithium Bromide (drums)	CAS# 7550-35-8
	Paint Thinner	Information could not be found
	Grez-Off Degreaser (Spray Nine) spray bottle	propylene glycol monobutyl ether (CAS# 5131-66-8), alcohols C9-11ethoxylated (68439-46-3), isopropyl alcohol (CAS# 67-63-0)
	Evaporator coil cleaner	2-butoxyethanol
	Rust-oleum paint (2 gal.)	polyamide resin (CAS# 684-41-9), xylene (CAS# 1330-20-7), n-butanol (CAS# 71-36-3), para-nonyl phenol (CAS# 84852-15-3), ethylbenzene (CAS# 100-41-4)
	Corrshield NT402 (Betz Dearborn)	sodium nitrate (CAS# 7632-00-0), boric acid (CAS# 12179-04-3)
	Duct Wrap Insulation	urea, polymer with formaldehyde and phenol (CAS# 25104-55-6), fiberglass wool (CAS# 65997-17-3)
	Stoko - Kresto Hand Cleaner	No hazardous ingredients
Garage Area (off Chiller Room)	Dianodic DN300 Drums (GE Betz)	phosphoric acid (CAS# 7778-53-2), potassium hydroxide (CAS# 1310-58-3), 1-h-benzotriazole (CAS# 29385-43-1), phosphonic acid (CAS# 2809-21-4)
GEPS Area (office area)	No materials/products other than furnishings/structural items present at this area	
Records Room	Xerox copier toner cartridges	styrene/butadiene copolymer, carbon
	Stoko - Kresto Hand Cleaner	No hazardous ingredients

Note:

1. Where brands were not specified or ingredients listed on containers/items, general MSDS sheets were consulted.
2. The material/product inventory was conducted in immediately accessible areas in and around the designated soil gas and indoor air sample locations on October 10, 2007.

Table E-2
Summary Of Material/Product Inventory For Building 59

Sub-Slab Soil Gas and Indoor Air Investigation Summary Report for Buildings 51 and 59 – Fall 2007
General Electric Company - Pittsfield, Massachusetts

Area	Identified Material/Product	Information Regarding Material/Product
Facility Area	Xerox copier toner cartridges	styrene/butadiene copolymer, carbon
	Lysol basin tub-tile cleaner	diethylene glycol monobutyl ether (CAS#112-34-5)
Library Area	Xerox copier toner cartridges	styrene/butadiene copolymer, carbon
	White Out	ammonium hydroxide, calcium carbonate, ethylene glycol
Office Area	Xerox copier toner cartridges	styrene/butadiene copolymer, carbon
	White Out	ammonium hydroxide, calcium carbonate, ethylene glycol
Machine Shop Area / Storage	Oil/lubricants	Information could not be found
	Alconox	sodium dodecylbenzenesulfonate (CAS# 25155-30-0), sodium carbonate (CAS# 497-19-8), tetrasodium pyrophosphate (CAS# 7722-88-5), sodium phosphate (CAS#7758-29-4)
	Calibration Standards	Information could not be found
	Duct Wrap	urea, polymer with formaldehyde and phenol (CAS# 25104-55-6), fiberglass wool (CAS# 65997-17-3)
	Antifreeze	propylene glycol (CAS# 57-55-6)
	Liquefied Petroleum gas	propane (CAS# 74-98-6), propylene (CAS# 115-07-1)

Note:

1. Where brands were not specified or ingredients listed on containers/items, general MSDS sheets were consulted.
2. The material/product inventory was conducted in immediately accessible areas in and around the designated soil gas and indoor air sampling locations on October 10, 2007.

Table E-3
Summary of Subslab Soil Gas Data for Building 51

Sub-Slab Soil Gas and Indoor Air Investigation Summary Report for Buildings 51 and 59 – Fall 2007
General Electric Company - Pittsfield, Massachusetts
(Results are presented in ug/m³)

Location ID: Sample ID: Date Collected:	Chiller Room		Records Room	Power Systems Hall	
	Summa Canister #0324 09/28/06	BLDG51-SS-1 10/11/07	BLDG51-SS-2 10/11/07	Summa Canister #0066 09/28/06	BLDG51-SS-3 10/11/07
Volatile Organics					
1,1,1-Trichloroethane	2.9 J	37	43	ND(5.5)	9.8
1,1,2-trichloro-1,2,2-trifluoroethane	51	ND(7.7)	ND(7.7)	ND(7.7)	ND(7.7)
1,1,2-Trichloroethane	ND(5.5)	ND(5.5)	12	ND(5.5)	1.4 J
1,1-Dichloroethane	ND(4.0)	1.4 J	ND(4.0)	ND(4.0)	ND(4.0)
1,2,4-Trimethylbenzene	15	1.3 J	1.3 J	11	1.2 J
1,3,5-Trimethylbenzene	9.0	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)
1,3-butadiene	ND(4.4)	2.3 J	5.6	ND(4.4)	2.9 J
2-Butanone	55	11	29	46	17
2-Hexanone	ND(8.2)	ND(8.2)	2.5 J	ND(8.2)	ND(8.2)
4-Ethyltoluene	15	1.3 J	1.2 J	ND(4.9)	1.3 J
4-Methyl-2-pentanone	ND(8.2)	ND(8.2)	6.3 J	ND(8.2)	ND(8.2)
Acetone	140	48	100	54	180
Acetonitrile	ND(3.4)	ND(3.4) J	ND(3.4) J	8.0	ND(3.4) J
Acrolein	ND(4.6)	1.7 J	3.3 J	ND(4.6)	1.9 J
Benzene	0.86 J	2.9 J	5.1	1.3 J	7.7
Bromomethane	ND(3.9)	ND(3.9)	1.6 J	ND(3.9)	ND(3.9)
Carbon Disulfide	ND(3.1)	2.0 J	1.6 J	ND(3.1)	3.4
Carbon Tetrachloride	ND(6.3)	ND(6.3)	ND(6.3)	ND(6.3)	ND(6.3)
Chlorodifluoromethane	63	ND(3.5)	ND(3.5)	46	0.71 J
Chloroform	1.1 J	3.2 J	4.4 J	ND(4.9)	ND(4.9)
Dichlorodifluoromethane	3.4 J	4.0 J	3.4 J	3.0 J	3.9 J
Dichlorofluoromethane	ND(4.2)	ND(4.2)	0.93 J	ND(4.2)	ND(4.2)
Ethylbenzene	6.7	2.8 J	3.9 J	8.0	3.7 J
Heptane	ND(4.1)	2.3 J	27	8.7	3.6 J
Hexane	14	23	25	13	25
Isooctane	2.2 J	1.1 J	1.1 J	2.8 J	1.2 J
Isopropylbenzene	1.2 J	ND(4.9)	1.1 J	0.98 J	4.9
m&p-Xylene	12	4.5	6.0	16	5.8
Methyl tert-butyl ether	160	ND(3.6)	ND(3.6)	67	ND(3.6)
Methylene Chloride	2.5 J	1.0 J	1.6 J	18	0.73 J
Octane	1.4 J	1.9 J	9.1	2.2 J	5.6
o-Xylene	5.5	1.7 J	2.3 J	7.9	2.4 J
Pentane	5.5	3.9	9.1	7.3	3.5
Propene	11	4.3	130	ND(1.7)	23
Styrene	ND(4.3)	ND(4.3)	ND(4.3)	ND(4.3)	ND(4.3)
tert-Butyl Alcohol	ND(3.0)	0.91 J	1.0 J	ND(3.0)	0.94 J
Tetrachloroethene	ND(6.8)	9.8	3.9 J	ND(6.8)	160
Toluene	19	6.2	12	59	13
Trichloroethene	58	650	18	ND(5.4)	25
Trichlorofluoromethane	5.5 J	8.3	6.1	4.0 J	5.0 J
Vinyl Chloride	0.74 J	ND(2.6)	ND(2.6)	1.2 J	ND(2.6)
Semivolatile Organics					
1,2,4-Trichlorobenzene	9.9 J	ND(15)	ND(15)	ND(15)	ND(15)

Notes:

1. Samples were collected by ARCADIS BBL, and submitted to Lancaster Laboratories for analysis of VOCs and selected SVOCs.
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS (approved March 15, 2007 and re-submitted March 30, 2007)
3. Only those constituents detected in one or more samples are summarized.
4. ND - Analyte was not detected. The number in parentheses is the associated detection limit.
5. NA - Not Analyzed.

Data Qualifiers:

Organics (volatiles, semivolatiles)

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

Table E-4
Summary of Subslab Soil Gas Data for Building 59

Sub-Slab Soil Gas and Indoor Air Investigation Summary Report for Buildings 51 and 59 – Fall 2007
General Electric Company - Pittsfield, Massachusetts
(Results are presented in ug/m³)

Location ID: Sample ID: Parameter Date Collected:	Facility Area		Library Area	Lobby Area		
	Summa Canister #0073	BLDG59-SS-1	BLDG59-SS-2	Summa Canister #0511	Summa Canister #0061 (Duplicate)*	BLDG59-SS-3
	09/28/06	10/11/07	10/11/07	09/28/06	09/28/06	10/11/07
Volatile Organics						
1,1,1-Trichloroethane	ND(5.5)	1.9 J	44	ND(55)	1.4 J	1.1 J [1.1 J]
1,2,4-Trimethylbenzene	8.8	1.3 J	3.8 J	ND(49)	4.1 J	15 [1.3 J]
1,3,5-Trimethylbenzene	ND(4.9)	ND(4.9)	ND(4.9)	ND(49)	8.7	6.6 [ND(4.9)]
2-Butanone	47	7.2	10	50 J	ND(5.9)	6.9 [8.7]
4-Ethyltoluene	ND(4.9)	1.5 J	1.3 J	ND(49)	3.7 J	6.5 [1.2 J]
4-Methyl-2-pentanone	ND(8.2)	ND(8.2)	2.5 J	ND(82)	ND(8.2)	ND(8.2) [ND(8.2)]
Acetone	53	25	37	200	210	24 [30]
Acetonitrile	ND(3.4)	ND(3.4) J	ND(3.4) J	58	ND(3.4)	ND(3.4) J [ND(3.4) J]
Acrolein	ND(4.6)	1.2 J	1.3 J	ND(46)	ND(4.6)	ND(4.6) [ND(4.6)]
Alpha Methyl Styrene	ND(4.8)	10 J	ND(4.8) J	ND(48)	ND(4.8)	3.6 J [ND(4.8)]
Benzene	0.73 J	12	1.5 J	ND(32)	0.77 J	1.8 J [2.0 J]
Bromobenzene	ND(6.4)	ND(6.4)	ND(6.4)	ND(64)	ND(6.4)	1.5 J [ND(6.4)]
Bromomethane	ND(3.9)	0.97 J	ND(3.9)	ND(39)	ND(3.9)	4.5 [1.1 J]
Carbon Disulfide	ND(3.1)	5.9	1.9 J	93	ND(3.1)	1.5 J [1.1 J]
Carbon Tetrachloride	ND(6.3)	110	ND(6.3)	ND(63)	4.7 J	4.7 J [4.5 J]
Chlorobenzene	ND(4.6)	ND(4.6)	ND(4.6)	ND(46)	ND(4.6)	3.0 J [ND(4.6)]
Chlorodifluoromethane	0.99 J	0.71 J	5.6	20 J	ND(3.5)	1.8 J [1.9 J]
Chloroethane	ND(2.6)	1.5 J	ND(2.6)	65	ND(2.6)	0.84 J [ND(2.6)]
Chloroform	ND(4.9)	55	17	ND(49)	2.1 J	1.7 J [1.7 J]
Chloromethane	ND(2.1)	ND(2.1)	ND(2.1)	ND(21)	ND(2.1)	0.89 J [1.0 J]
cis-1,2-Dichloroethene	ND(4.0)	ND(4.0)	1.0 J	ND(40)	ND(4.0)	ND(4.0) [ND(4.0)]
Dichlorodifluoromethane	1.7 J	2.4 J	130	11 J	6.1	23 [23]
Ethylbenzene	3.1 J	3.7 J	2.9 J	ND(43)	1.3 J	4.3 J [2.6 J]
Heptane	1.4 J	1.6 J	ND(4.1)	23 J	1.0 J	1.0 J [0.94 J]
Hexane	62	15	26	85	9.6	20 [21]
Isooctane	1.8 J	2.1 J	1.0 J	ND(47)	ND(4.7)	ND(4.7) [ND(4.7)]
Isopropylbenzene	ND(4.9)	3.3 J	ND(4.9)	ND(49)	NA	2.9 J [1.3 J]
m&p-Xylene	5.2	5.9	4.4	ND(43)	2.7 J	19 [5.3]
Methyl tert-butyl ether	260	5.2	ND(3.6)	62	12	0.79 J [0.72 J]
Methylene Chloride	3.3 J	ND(3.5)	0.76 J	58	ND(3.5)	ND(3.5) [0.87 J]
Octane	ND(4.7)	3.7 J	1.0 J	ND(47)	ND(4.7)	3.0 J [2.0 J]
o-Xylene	2.5 J	2.2 J	1.7 J	ND(43)	1.3 J	6.2 [1.9 J]
Pentane	1.9 J	2.2 J	2.6 J	27 J	ND(3.0)	2.4 J [2.5 J]
Propene	ND(1.7)	1.9	3.9	ND(17)	ND(1.7)	5.4 [5.9]
Styrene	ND(4.3)	ND(4.3)	ND(4.3)	ND(43)	ND(4.3)	2.1 J [ND(4.3)]
tert-Butyl Alcohol	ND(3.0)	3.2	1.1 J	ND(30)	0.67 J	4.4 [1.4 J]
Tetrachloroethene	ND(6.8)	4.5 J	13	ND(68)	ND(6.8)	20 [7.0]
Toluene	8.4	40	6.2	64	8.5	11 [12]
trans-1,2-Dichloroethene	ND(4.0)	ND(4.0)	0.99 J	ND(40)	ND(4.0)	ND(4.0) [ND(4.0)]
Trichloroethene	5.3 J	540	1,700	ND(54)	470	180 [170]
Trichlorofluoromethane	15	5.6	250	44 J	37	60 [60]
Semivolatile Organics						
1,2,4-Trichlorobenzene	8.8 J	ND(15)	ND(15)	ND(150)	6.4 J	7.5 J [ND(15)]
1,2-Dichlorobenzene	ND(6.0)	ND(6.0)	ND(6.0)	ND(60)	ND(6.0)	13 [ND(6.0)]
1,3-Dichlorobenzene	ND(6.0)	ND(6.0)	ND(6.0)	ND(60)	ND(6.0)	11 [ND(6.0)]
1,4-Dichlorobenzene	ND(6.0)	ND(6.0)	ND(6.0)	ND(60)	ND(6.0)	12 [ND(6.0)]
Hexachlorobutadiene	ND(21)	ND(21)	ND(21)	ND(210)	ND(21)	57 [ND(21)]
Naphthalene	ND(5.2)	8.0	ND(5.2)	ND(5.2)	ND(5.2)	ND(5.2) [ND(5.2)]

- Notes:
1. Samples were collected by ARCADIS BBL, and submitted to Lancaster Laboratories for analysis of VOCs and selected SVOCs.
 2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS (approved March 15, 2007 and re-submitted March 30, 2007).
 3. Only those constituents detected in one or more samples are summarized.
 4. Field duplicate sample results are presented in brackets.
 5. ND - Analyte was not detected. The number in parentheses is the associated detection limit.
 6. NA - Not Analyzed.
 7. * - Although this sample is labeled as a duplicate sample, as previously discussed in the Migration Assessment Report, it was incorrectly collected at an increased rate and over a shorter period of time than the other 2006 samples.

Data Qualifiers:

Organics (volatiles, semivolatiles)

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

Table E-5
Summary of Indoor Air Data for Building 51

Sub-Slab Soil Gas and Indoor Air Investigation Summary Report for Buildings 51 and 59 – Fall 2007
General Electric Company - Pittsfield, Massachusetts
(Results are presented in ug/m³)

Location ID: Sample ID: Date Collected:	Chiller Room (Lobby Area Outside)		Records Room		Power Systems Hall	
	Summa Canister #0337 09/28/06	BLDG51-IA-1 10/11/07	Summa Canister #0197 09/28/06	BLDG51-IA-2 10/11/07	Summa Canister #0075 09/28/06	BLDG51-IA-3 10/11/07
Volatile Organics						
1,2,4-Trimethylbenzene	ND(4.9)	ND(4.9)	ND(4.9)	4.1 J	ND(49)	ND(4.9)
2-Butanone	4.1 J	3.3 J	30	1.5 J	550	ND(5.9)
Acetone	21	23	23	15	340	16
Acetonitrile	ND(3.4)	ND(3.4) J	ND(3.4)	ND(3.4) J	73	12 J
Acrolein	ND(4.6)	2.7 J	ND(4.6)	1.5 J	ND(46)	ND(4.6)
Alpha Methyl Styrene	ND(4.8)	ND(4.8)	ND(4.8)	2.3 J	ND(48)	ND(4.8)
Benzene	ND(3.2)	1.1 J	ND(3.2)	1.2 J	ND(32)	1.2 J
Bromomethane	ND(3.9)	ND(3.9)	ND(3.9)	ND(3.9)	ND(39)	3.8 J
Carbon Disulfide	ND(3.1)	ND(3.1)	ND(3.1)	0.75 J	160	ND(3.1)
Chlorodifluoromethane	650	0.74 J	590	0.85 J	500	ND(3.5)
Chloroethane	ND(2.6)	ND(2.6)	ND(2.6)	ND(2.6)	74	ND(2.6)
Chloroform	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(49)	6.9
Chloromethane	ND(2.1)	1.1 J	ND(2.1)	1.4 J	ND(21)	4.6
Dichlorodifluoromethane	8.7	3.6 J	7.8	3.1 J	13 J	5
Ethylbenzene	ND(4.3)	1.4 J	ND(4.3)	1.2 J	11 J	ND(4.3)
Freon 114	ND(7.0)	ND(7.0)	ND(7.0)	ND(7.0)	ND(70)	3.8 J
Heptane	ND(4.1)	ND(4.1)	14	1.9 J	280	ND(4.1)
Hexane	ND(3.5)	1.6 J	1.1 J	2.2 J	31 J	3.5 J
Isooctane	ND(4.7)	ND(4.7)	ND(4.7)	1.7 J	ND(47)	ND(4.7)
m&p-Xylene	ND(4.3)	3.4 J	0.96 J	3.1 J	18 J	1.0 J
Methyl tert-butyl ether	ND(3.6)	ND(3.6)	ND(3.6)	ND(3.6)	44	ND(3.6)
Methylene Chloride	2.8 J	0.83 J	3.0 J	0.73 J	59	15
Octane	ND(4.7)	0.93 J	ND(4.7)	ND(4.7)	ND(47)	ND(4.7)
o-Xylene	ND(4.3)	1.1 J	ND(4.3)	1.3 J	ND(43)	ND(4.3)
Pentane	0.86 J	1.1 J	1.4 J	0.83 J	54	3.4
Propene	1.4 J	1.3 J	ND(1.7)	0.72 J	ND(17)	1.4 J
Styrene	ND(4.3)	ND(4.3)	ND(4.3)	ND(4.3)	9.4 J	ND(4.3)
tert-Butyl Alcohol	ND(3.0)	1.8 J	ND(3.0)	1.0 J	ND(30)	ND(3.0)
Toluene	9.6	6.3	150	4.8	1,900	2.1 J
Trichloroethene	ND(5.4)	1.3 J	1.2 J	2.7 J	23 J	ND(5.4)
Trichlorofluoromethane	1.5 J	2.3 J	2.5 J	3.8 J	19 J	5.2 J
Semivolatile Organics						
None Detected	--	--	--	--	--	--

Notes:

1. Samples were collected by ARCADIS BBL, and submitted to Lancaster Laboratories for analysis of VOCs and selected SVOCs.
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS (approved March 15, 2007 or re-submitted March 30, 2007).
3. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
4. Only those constituents detected in one or more samples are summarized.

Data Qualifiers:

Organics (volatiles, semivolatiles)

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

Table E-6
Summary of Indoor Air Data for Building 59

Sub-Slab Soil Gas and Indoor Air Investigation Summary Report for Buildings 51 and 59 – Fall 2007
General Electric Company - Pittsfield, Massachusetts
(Results are presented in ug/m³)

Location ID: Sample ID: Parameter Date Collected:	Facility Area		Library Area		Lobby Area		
	Summa Canister #0110 09/28/06	BLDG59-IA-1 10/11/07	Summa Canister #0174 09/28/06	BLDG59-IA-2 10/11/07	Summa Canister #0200 09/28/06	Summa Canister #0189 (Duplicate)* 09/28/06	BLDG59-IA-3 10/11/07
Volatile Organics							
1,1,1-Trichloroethane	ND(5.5)	ND(5.5)	1.5 J	ND(5.5)	ND(5.5)	ND(5.5)	ND(5.5)
1,2,4-Trimethylbenzene	ND(4.9)	1.4 J	1.9 J	1.8 J	1.4 J	ND(4.9)	ND(4.9)
1,3,5-Trimethylbenzene	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)	2.0 J	0.98 J
2-Butanone	1.8 J	2.1 J	4.8 J	3.1 J	2.1 J	ND(5.9)	3.3 J
4-Ethyltoluene	1.1 J	ND(4.9)	2.0 J	1.9 J	ND(4.9)	ND(4.9)	ND(4.9)
Acetone	26	15	100	30	29	29	25
Acrolein	ND(4.6)	ND(4.6)	ND(4.6)	2.5 J	ND(4.6)	ND(4.6)	2.0 J
Benzene	ND(3.2)	ND(3.2)	4.6	1.8 J	1.5 J	0.67 J	1.1 J
Chlorodifluoromethane	2.0 J	ND(3.5)	6.0	4.5	4.9	2.5 J	3.0 J
Chloroform	ND(4.9)	ND(4.9)	1.2 J	ND(4.9)	ND(4.9)	ND(4.9)	ND(4.9)
Chloromethane	0.78 J	1.1 J	1.2 J	1.1 J	0.78 J	0.89 J	1.2 J
Dichlorodifluoromethane	1.9 J	2.3 J	3.2 J	2.6 J	2.7 J	2.4 J	3.1 J
Ethylbenzene	ND(4.3)	ND(4.3)	8.3	1.9 J	0.87 J	ND(4.3)	ND(4.3)
Heptane	1.2 J	1.8 J	3.0 J	1.1 J	1.7 J	ND(4.1)	ND(4.1)
Hexane	91	3.5 J	470	81	230	60	33
Isooctane	0.98 J	ND(4.7)	2.3 J	1.3 J	1.4 J	1.1 J	ND(4.7)
m&p-Xylene	3.9 J	1.3 J	20	5.0	2.2 J	0.96 J	1.8 J
Methyl tert-butyl ether	ND(3.6)	ND(3.6)	1.8 J	2.6 J	ND(3.6)	ND(3.6)	0.72 J
Methylene Chloride	3.1 J	8.6	4.5	ND(3.5)	2.7 J	6.6	19
Octane	ND(4.7)	ND(4.7)	2.3 J	1.2 J	ND(4.7)	ND(4.7)	ND(4.7)
o-Xylene	1.5 J	ND(4.3)	11	1.9 J	ND(4.3)	ND(4.3)	ND(4.3)
Pentane	1.7 J	0.86 J	5.7	7.7	3.5	1.8 J	3.2
Propene	ND(1.7)	1.2 J	ND(1.7)	6.9	11	5.5	3.2
Styrene	ND(4.3)	ND(4.3)	ND(4.3)	ND(4.3)	15	ND(4.3)	ND(4.3)
tert-Butyl Alcohol	ND(3.0)	1.1 J	ND(3.0)	0.61 J	ND(3.0)	ND(3.0)	0.61 J
Toluene	3.1 J	15	16	12	7.1	8.2	6.1
Trichloroethene	5.7	ND(5.4)	41	15	9.1	5.5	4.7 J
Trichlorofluoromethane	31	2.9 J	210	110	73	51	44
Semivolatile Organics							
Hexachlorobutadiene	ND(21)	ND(21)	ND(21)	ND(21)	12 J	ND(21)	ND(21)

- Notes:**
1. Samples were collected by ARCADIS BBL, and submitted to Lancaster Laboratories for analysis of VOCs and selected SVOCs.
 2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS (approved March 15, 2007 and re-submitted March 30, 2007).
 3. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
 4. Only those constituents detected in one or more samples are summarized.
 5. * - Although this sample is labeled as a duplicate sample, as previously discussed in the Migration Assessment Report, it was incorrectly collected at an increased rate and over a shorter period of time than the other 2006 samples.

Data Qualifiers:

Organics (volatiles, semivolatiles)

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

Table E-7

Comparison of Indoor Air Results to Occupational Exposure Limits - Building 51

Sub-Slab Soil Gas and Indoor Air Investigation Summary Report for Buildings 51 and 59 – Fall 2007

General Electric Company - Pittsfield, Massachusetts

(Results are presented in parts per million, ppm)

Sample Location: Sample ID: Parameter Date Collected:	OSHA PEL ⁽⁴⁾	NIOSH REL ⁽⁵⁾	Chiller Room (Lobby Area Outside) Summa Canister #0337 09/28/06		Records Room Summa Canister #0197 09/28/06		Power Systems Hall Summa Canister #0075 09/28/06		
			BLDG51-IA-1 10/11/07	BLDG51-IA-2 10/11/07	Summa Canister #0075 09/28/06	BLDG51-IA-3 10/11/07			
Volatile Organics									
1,2,4-Trimethylbenzene	--	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.00083 J	ND(0.010)	ND(0.0010)	
2-Butanone	200	200	0.0014 J	0.0011 J	0.010	0.00050 J	0.19	ND(0.0020)	
Acetone	1,000	250	0.0087	0.0097	0.0096	0.0063	0.14	0.0067	
Acetonitrile	40	20	ND(0.0020)	ND(0.0020) J	ND(0.0020)	ND(0.0020) J	0.043	0.0072 J	
Acrolein	0.1	0.1	ND(0.0020)	0.0012 J	ND(0.0020)	0.00067 J	ND(0.020)	ND(0.0020)	
Alpha Methyl Styrene	100	50	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.00048 J	ND(0.010)	ND(0.0010)	
Benzene	1	0.1	ND(0.0010)	0.00034 J	ND(0.0010)	0.00036 J	ND(0.010)	0.00036 J	
Bromomethane	20	--	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.010)	0.00097 J	
Carbon Disulfide	20	1	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.00024 J	0.052	ND(0.0010)	
Chlorodifluoromethane	1,000	1,000	0.19	0.00021 J	0.17	0.00024 J	0.14	ND(0.0010)	
Chloroethane	1,000	--	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.028	ND(0.0010)	
Chloroform	50	2	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.010)	0.0014	
Chloromethane	100	--	ND(0.0010)	0.00051 J	ND(0.0010)	0.00069 J	ND(0.010)	0.0022	
Dichlorodifluoromethane	1,000	1,000	0.0018	0.00072 J	0.0016	0.00063 J	0.0026 J	0.0010	
Ethylbenzene	100	100	ND(0.0010)	0.00033 J	ND(0.0010)	0.00027 J	0.0026 J	ND(0.0010)	
Freon 114	1,000	1,000	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.010)	0.00055 J	
Heptane	500	85	ND(0.0010)	ND(0.0010)	0.0035	0.00047 J	0.069	ND(0.0010)	
Hexane	500	50	ND(0.0010)	0.00045 J	0.00031 J	0.00063 J	0.0088 J	0.00098 J	
Isooctane	500	75	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.00037 J	ND(0.010)	ND(0.0010)	
m&p-Xylene	100	100	ND(0.0010)	0.00078 J	0.00022 J	0.00072 J	0.0042 J	0.00023 J	
Methyl tert-butyl ether	200	--	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.012	ND(0.0010)	
Methylene Chloride	25	--	0.00080 J	0.00024 J	0.00086 J	0.00021 J	0.017	0.0044	
Octane	500	75	ND(0.0010)	0.00020 J	ND(0.0010)	ND(0.0010)	ND(0.010)	ND(0.0010)	
o-Xylene	100	100	ND(0.0010)	0.00025 J	ND(0.0010)	0.00030 J	ND(0.010)	ND(0.0010)	
Pentane	1,000	120	0.00029 J	0.00038 J	0.00049 J	0.00028 J	0.018	0.0012	
Propene	3	--	0.00082 J	0.00078 J	ND(0.0010)	0.00042 J	ND(0.010)	0.00083 J	
Styrene	100	50	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0022 J	ND(0.0010)	
tert-Butyl Alcohol	100	100	ND(0.0010)	0.00060 J	ND(0.0010)	0.00034 J	ND(0.010)	ND(0.0010)	
Toluene	200	100	0.0026	0.0017	0.039	0.0013	0.51	0.00056 J	
Trichloroethene	100	25	ND(0.0010)	0.00025 J	0.00022 J	0.00050 J	0.0043 J	ND(0.0010)	
Trichlorofluoromethane	1,000	1,000	0.00027 J	0.00041 J	0.00045 J	0.00068 J	0.0033 J	0.00092 J	

Notes:

1. Samples were collected by ARCADIS BBL, and submitted to Lancaster Laboratories for analysis of VOCs and selected SVOCs.
2. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
3. Only those constituents detected in one or more samples are summarized.
4. The United States Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs) for indoor air in an occupational setting for an 8-hour workday and a 40-hour workweek.
5. The National Institute for Occupational Safety and Health (NIOSH) recommended exposure levels (RELs) for up to a 10-hour workday over a 40-hour workweek.
6. Concentrations have been converted from micrograms per cubic meter (ug/m3) to parts per million (ppm) since the OSHA standards and NIOSH guidelines are expressed in ppm.
7. -- - Occupational exposure limit not available.

Data Qualifiers:

Organics (volatiles, semivolatiles)

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

Table E-8
Comparison of Indoor Air Results to Occupational Exposure Limits - Building 59

Sub-Slab Soil Gas and Indoor Air Investigation Summary Report for Buildings 51 and 59 – Fall 2007
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Sample Location: Sample ID: Parameter Date Collected:	OSHA PEL ⁽⁴⁾	NIOSH REL ⁽⁵⁾	Facility Area		Library Area		Lobby Area		
			Summa Canister #0110 09/28/06	BLDG59-IA-1 10/11/07	Summa Canister #0174 09/28/06	BLDG59-IA-2 10/11/07	Summa Canister #0200 09/28/06	Summa Canister #0189 (Dup)* 09/28/06	BLDG59-IA-3 10/11/07
Volatile Organics									
1,1,1-Trichloroethane	350	350	ND(0.0010)	ND(0.0010)	0.00027 J	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
1,2,4-Trimethylbenzene	--	25	ND(0.0010)	0.00028 J	0.00038 J	0.00036 J	0.00029 J	ND(0.0010)	ND(0.0010)
1,3,5-Trimethylbenzene	--	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.00040 J	0.00020 J
2-Butanone	200	200	0.00060 J	0.00071 J	0.0016 J	0.0011 J	0.00072 J	ND(0.0020)	0.0011 J
4-Ethyltoluene	--	--	0.00022 J	ND(0.0010)	0.00041 J	0.00039 J	ND(0.0010)	ND(0.0010)	ND(0.0010)
Acetone	1,000	250	0.011	0.0062	0.043	0.013	0.012	0.012	0.010
Acrolein	0.1	0.1	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0011 J	ND(0.0020)	ND(0.0020)	0.00087 J
Benzene	1	0.1	ND(0.0010)	ND(0.0010)	0.0014	0.00055 J	0.00046 J	0.00021 J	0.00034 J
Chlorodifluoromethane	1,000	1,000	0.00057 J	ND(0.0010)	0.0017	0.0013	0.0014	0.00072 J	0.00085 J
Chloroform	50	2	ND(0.0010)	ND(0.0010)	0.00024 J	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
Chloromethane	100	--	0.00038 J	0.00051 J	0.00057 J	0.00054 J	0.00038 J	0.00043 J	0.00058 J
Dichlorodifluoromethane	1,000	1,000	0.00039 J	0.00047 J	0.00065 J	0.00052 J	0.00055 J	0.00048 J	0.00062 J
Ethylbenzene	100	100	ND(0.0010)	ND(0.0010)	0.0019	0.00044 J	0.00020 J	ND(0.0010)	ND(0.0010)
Heptane	500	85	0.00030 J	0.00043 J	0.00074 J	0.00028 J	0.00042 J	ND(0.0010)	ND(0.0010)
Hexane	500	50	0.026	0.00098 J	0.13	0.023	0.065	0.017	0.0095
Isooctane	500	75	0.00021 J	ND(0.0010)	0.00049 J	0.00028 J	0.00031 J	0.00023 J	ND(0.0010)
m&p-Xylene	100	100	0.00089 J	0.00030 J	0.0047	0.0012	0.00050 J	0.00022 J	0.00041 J
Methyl tert-butyl ether	--	--	ND(0.0010)	ND(0.0010)	0.00051 J	0.00073 J	ND(0.0010)	ND(0.0010)	0.00020 J
Methylene Chloride	25	--	0.00090 J	0.0025	0.0013	ND(0.0010)	0.00079 J	0.0019	0.0054
Octane	500	75	ND(0.0010)	ND(0.0010)	0.00049 J	0.00025 J	ND(0.0010)	ND(0.0010)	ND(0.0010)
o-Xylene	100	100	0.00034 J	ND(0.0010)	0.0025	0.00043 J	ND(0.0010)	ND(0.0010)	ND(0.0010)
Pentane	1,000	120	0.00059 J	0.00029 J	0.0019	0.0026	0.0012	0.00062 J	0.0011
Propene	--	--	ND(0.0010)	0.00072 J	ND(0.0010)	0.0040	0.0066	0.0032	0.0019
Styrene	100	50	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0035	ND(0.0010)	ND(0.0010)
tert-Butyl Alcohol	100	100	ND(0.0010)	0.00037 J	ND(0.0010)	0.00020 J	ND(0.0010)	ND(0.0010)	0.00020 J
Toluene	200	100	0.00081 J	0.0041	0.0043	0.0031	0.0019	0.0022	0.0016
Trichloroethene	100	25	0.0011	ND(0.0010)	0.0077	0.0027	0.0017	0.0010	0.00088 J
Trichlorofluoromethane	1,000	1,000	0.0055	0.00052 J	0.037	0.019	0.013	0.0090	0.0078
Semivolatile Organics									
Hexachlorobutadiene	0.02	0.02	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0011 J	ND(0.0020)	ND(0.0020)

Notes:

1. Samples were collected by ARCADIS BBL, and submitted to Lancaster Laboratories for analysis of VOCs and selected SVOCs.
2. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
3. Only those constituents detected in one or more samples are summarized.
4. The United States Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs) for indoor air in an occupational setting for an 8-hour workday and a 40-hour workweek.
5. The National Institute for Occupational Safety and Health (NIOSH) recommended exposure levels (RELs) for up to a 10-hour workday over a 40-hour workweek.
6. Concentrations have been converted from micrograms per cubic meter (ug/m3) to parts per million (ppm) since the OSHA standards and NIOSH guidelines are expressed in ppm.
7. -- - Occupational exposure limit not available.
8. * - Although this sample is labeled as a duplicate sample, as previously discussed in the Migration Assessment Report, it was incorrectly collected at an increased rate and over a shorter period of time than the other 2006 samples.

Data Qualifiers:

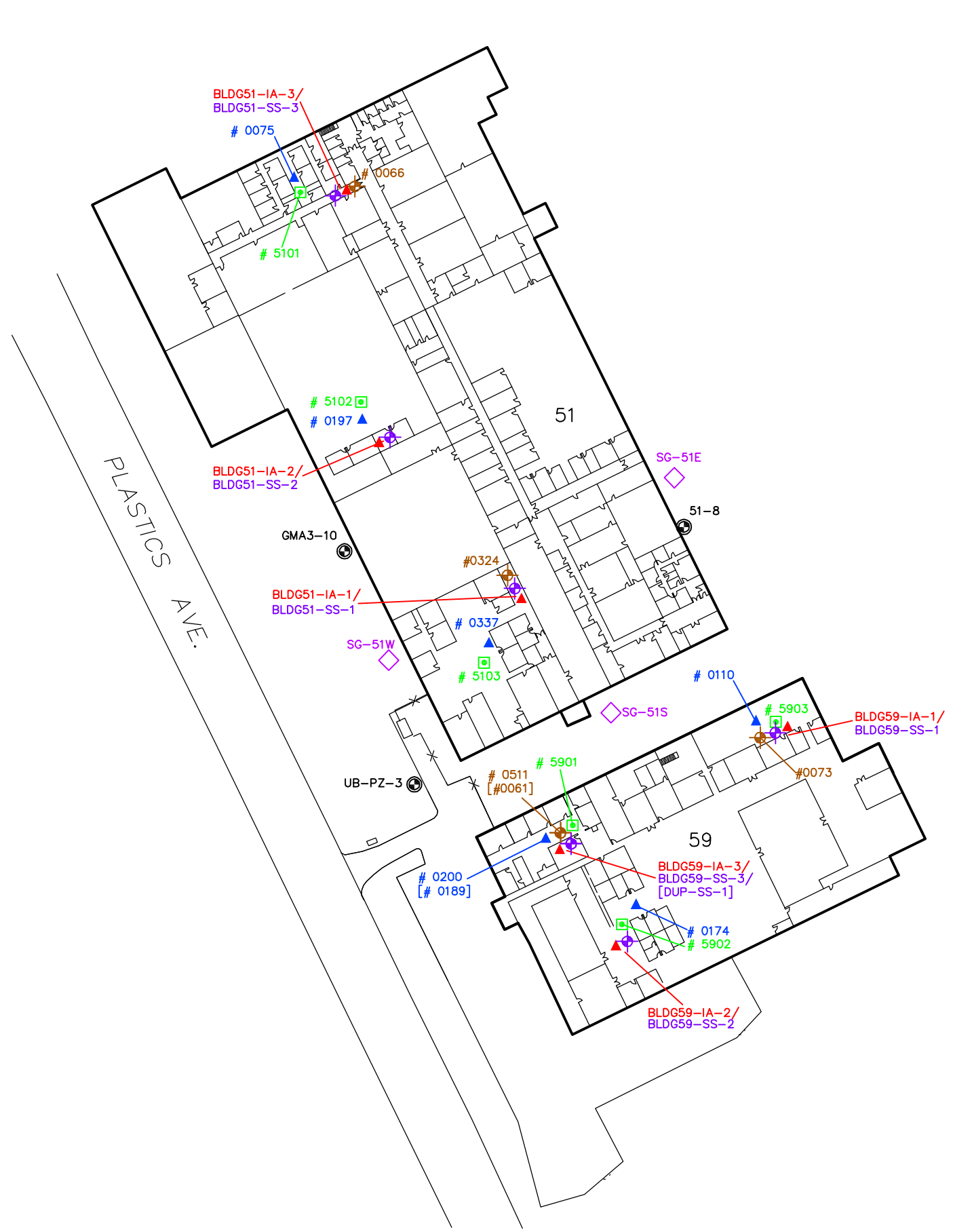
Organics (volatiles, semivolatiles)

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

ARCADIS

Figure

CITY:SYRACUSE DIV:GROUP:85 DB:LAF LD: PIC: PM:J.PISKORZ TM: LYS:ON#OFF#REF
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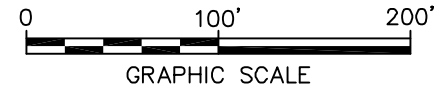


LEGEND:

- SG-51E ◊ AUGUST 2006 DEEP SOIL GAS SAMPLE LOCATION
- 51-8 ⊙ AUGUST 2006 GROUNDWATER / LNAPL SAMPLE LOCATION
- # 0511 ⊕ SEPTEMBER 2006 SUB-SLAB SOIL GAS SAMPLE LOCATION
- # 0200 ▲ SEPTEMBER 2006 INDOOR AIR SAMPLE LOCATION
- # 5902 □ SEPTEMBER 2006 INDUSTRIAL HYGIENE INDOOR AIR SAMPLE LOCATION
- BLDG51-IA-3 ▲ OCTOBER 2007 INDOOR AIR SAMPLE LOCATION
- BLDG51-SS-3 ⊕ OCTOBER 2007 SUB-SLAB SOIL GAS SAMPLE LOCATION

NOTES:

1. FIGURE IS BASED ON PHOTOGRAPHIC MAPPING BY LOCKWOOD MAPPING, INC.—FLOWN IN APRIL 1990 AND DATA PROVIDED BY GENERAL ELECTRIC COMPANY.
2. NOT ALL PHYSICAL FEATURES SHOWN.
3. SITE BOUNDARIES, SAMPLE AND BUILDING LOCATIONS ARE APPROXIMATE.



GENERAL ELECTRIC COMPANY PITTSFIELD, MASSACHUSETTS GMA3 INTERIM MONITORING PROGRAM	
EXISTING SUB-SLAB SOIL GAS AND INDOOR AIR SAMPLE LOCATIONS	
	FIGURE E-1

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Attachments

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Attachment A

Data Validation Report

**Attachment A
Air Sampling Data Validation Report
Buildings 51 and 59 Soil Gas and Indoor Air Quality Investigations - Fall 2007**

**General Electric Company
Pittsfield, Massachusetts**

1.0 General

This attachment summarizes the data validation review performed on behalf of the General Electric Company (GE) for air samples collected in October 2007 as part of soil gas and indoor air quality investigations conducted at Buildings 51 and 59, located at the General Electric Company/Housatonic River Site in Pittsfield, Massachusetts. The samples were analyzed in accordance with the United States Environmental Protection Agency (EPA) Compendium Method TO-15 for volatile organic compound (VOC) constituents, as well as certain semi-volatile (SVOC) constituents that can also be identified during the analyses, which were conducted by Lancaster Laboratories, Inc. of Lancaster, Pennsylvania. Data validation was performed for 13 volatile organic compound (VOC) samples.

2.0 Data Evaluation Procedures

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

- *Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS BBL (submitted by GE on March 30, 2007 and approved by EPA on June 13, 2007);*
- *Region I Tiered Organic and Inorganic Data Validation Guidelines, USEPA Region I (July 1, 1993); and*
- *Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses, USEPA Region I (Draft, December 1996).*

The data were validated to either a Tier I or Tier II level, as described below. Any deviations from the applicable quality control criteria utilized during the data review process are identified below. A tabulated summary of the Tier I/Tier II data review is presented in Table A-1. Each sample subject to evaluation is listed in Table A-1 to document that data review was performed. Samples that required data qualification are listed separately.

The following data qualifiers were used in this data evaluation:

- J The compound was positively identified, but the associated numerical value is an estimated concentration. This qualifier is used when the data evaluation procedure identifies a deficiency in the data generation process. This qualifier is also used when a compound is detected at an estimated concentration less than the corresponding practical quantitation limit (PQL).
- U The compound was analyzed for, but was not detected. The sample quantitation limit is presented. Non-detect sample results are presented as ND(PQL) within this report for consistency with documents previously prepared for investigations conducted at the GE-Pittsfield/Housatonic River Site.

- UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is estimated and may or may not represent the actual level of quantitation. Non-detect sample results that required qualification are presented as ND(PQL) J within this report for consistency with documents previously prepared for investigations conducted at the GE-Pittsfield/Housatonic River Site.
- R Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data should not be used for any qualitative or quantitative purpose.

3.0 Data Validation Procedures

Section 7.5 of the FSP/QAPP states that 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* (EPA guidelines). The Tier I review consisted of a completeness evidence audit, as outlined in the *EPA Region I CSF Completeness Evidence Audit Program* (EPA Region I, July 31, 1991), to ensure that laboratory data and documentation were present. In the event data packages were determined to be incomplete, the missing information was requested from the laboratory. Upon completion of the Tier I review, the data packages complied with the EPA Region I Tier I data completeness requirements.

The Tier II data review consisted of a review of 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. Additionally, field duplicates were examined for relative percent difference (RPD) compliance with the criteria specified in the FSP/QAPP.

A tabulated summary of the samples subject to Tier I and Tier II data review is presented in the following table.

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	
EPA TO-15	0	0	0	12	1	0	13
Total	0	0	0	12	1	0	13

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 EPA 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 in Section 4 below.

4.0 Summary of QA/QC Parameter Deviations Requiring Data Qualification

This section provides a summary of the deviations from the applicable QA/QC criteria that resulted in qualification of results.

The continuing calibration criterion requires that the percent difference (%D) between the initial calibration RRF and the continuing calibration RRF for VOCs be less than 30%. Sample data for detect and non-detect compounds with %D values that exceeded the continuing calibration criteria were qualified as estimated (J). A summary of the compounds that exceeded the continuing calibration criterion and the number of samples qualified due to those deviations are presented in the following table.

Compounds Qualified Due to Continuing Calibration of %D Values

Analysis	Compound	Number of Affected Samples	Qualification
EPA TO-15	Acetonitrile	13	J
	Alpha methyl styrene	5	J

5.0 Overall Data Usability

This section summarizes the analytical data in terms of its completeness and usability. Data completeness is defined as the percentage of sample results that have been determined to be usable during the data validation process. The percent usability calculation included analyses evaluated under both the Tier I/II data validation reviews. The percent usability calculation also includes quality control samples (i.e., field/equipment blanks, trip blanks, and field duplicates) to aid in the evaluation of data usability. Data usability is summarized in the following table.

Data Usability

Parameter	Percent Usability	Rejected Data
EPA TO-15	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 field duplicates and LCS/LCSD samples. None of the data required qualification due to field duplicate RPD deviations or LCS/LCSD 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, and LCS/LCSD recoveries. For this analytical program, 1.7% of the data required qualification due to instrument calibration deviations. None of the data required qualification due to internal standard or LCS/LCSD 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 the EPA-approved work plans, and by following the procedures for sample collection/analyses that were described in the FSP/QAPP. Additionally, the analytical program used procedures consistent with EPA-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 data set, none of the data required qualification due to holding time deviations.

5.4 Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. This goal was achieved through the use of the standardized techniques for sample collection and analysis presented in the FSP/QAPP. Specifically, all the soil gas and indoor air samples collected in October 2007 were analyzed by EPA TO-15 for VOCs.

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. This analytical data set had an overall usability of 100%.

Table A-1
Analytical Data Validation Summary
Buildings 51 and 59 Soil Gas and Indoor Air Investigation- Fall 2007

General Electric Company - Pittsfield, Massachusetts
 (Results are presented in parts per million by volume, ppmv and micrograms per cubic meter, ug/m³)

Sample Delivery Group No.	Sample ID	Date Collected	Matrix	Validation Level	Qualification	Compound	QA/QC Parameter	Value	Control Limits	Qualified Result (ppmv)	Qualified Result (ug/m ³)	Notes
EPA TO-15												
PTF04	BLDG59-SS-1	10/11/2007	Air	Tier II	Yes	Acetonitrile	CCAL %D	33.0%	<30%	ND(0.0020) J	ND(3.4) J	
						Alpha methyl styrene	CCAL %D	31.0%	<30%	0.0021 J	10 J	
PTF04	BLDG59-IA-1	10/11/2007	Air	Tier II	Yes	Acetonitrile	CCAL %D	33.0%	<30%	ND(0.0020) J	ND(3.4) J	
						Alpha methyl styrene	CCAL %D	31.0%	<30%	ND(0.0010) J	ND(4.8) J	
PTF04	BLDG59-SS-2	10/11/2007	Air	Tier II	Yes	Acetonitrile	CCAL %D	33.0%	<30%	ND(0.0020) J	ND(3.4) J	
						Alpha methyl styrene	CCAL %D	31.0%	<30%	ND(0.0010) J	ND(4.8) J	
PTF04	BLDG59-IA-2	10/11/2007	Air	Tier II	Yes	Acetonitrile	CCAL %D	33.0%	<30%	ND(0.0020) J	ND(3.4) J	
						Alpha methyl styrene	CCAL %D	31.0%	<30%	ND(0.0010) J	ND(4.8) J	
PTF04	BLDG59-SS-3	10/11/2007	Air	Tier II	Yes	Acetonitrile	CCAL %D	33.0%	<30%	ND(0.0020) J	ND(3.4) J	
						Alpha methyl styrene	CCAL %D	31.0%	<30%	0.00074 J	3.6 J	
PTF04	BLDG59-IA-3	10/11/2007	Air	Tier II	Yes	Acetonitrile	CCAL %D	36.0%	<30%	ND(0.0020) J	ND(3.4) J	
PTF04	SS-DUP-1	10/11/2007	Air	Tier II	Yes	Acetonitrile	CCAL %D	36.0%	<30%	ND(0.0020) J	ND(3.4) J	Parent Sample BLDG59-SS-3
PTF04	BLDG51-SS-1	10/11/2007	Air	Tier II	Yes	Acetonitrile	CCAL %D	36.0%	<30%	ND(0.0020) J	ND(3.4) J	
PTF04	BLDG51-IA-1	10/11/2007	Air	Tier II	Yes	Acetonitrile	CCAL %D	36.0%	<30%	ND(0.0020) J	ND(3.4) J	
PTF04	BLDG51-SS-2	10/11/2007	Air	Tier II	Yes	Acetonitrile	CCAL %D	36.0%	<30%	ND(0.0020) J	ND(3.4) J	
PTF04	BLDG51-IA-2	10/11/2007	Air	Tier II	Yes	Acetonitrile	CCAL %D	36.0%	<30%	ND(0.0020) J	ND(3.4) J	
PTF04	BLDG51-SS-3	10/11/2007	Air	Tier II	Yes	Acetonitrile	CCAL %D	36.0%	<30%	ND(0.0020) J	ND(3.4) J	
PTF04	BLDG51-IA-3	10/11/2007	Air	Tier II	Yes	Acetonitrile	CCAL %D	36.0%	<30%	0.0072 J	12 J	

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Attachment B

Sub-Slab Soil Gas Sampling Logs

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Building 51

Sub-Slab Sample Collection Log

 <i>Infrastructure, environment, facilities</i>		Sub-Slab Sample Collection Log	
		Sample ID:	BLDG51-SS-1
Client:	GE	Outdoor/Indoor:	Indoor
Project:	Bldg. 51/59 Soil Gas / Indoor Air Investigation	Sample Intake Height:	--
Location:	GMA3 – Building 51	Miscellaneous Equipment:	PID
Project #:	B0030905	Time On/Off:	1540 / 2255
Samplers:	SPS, JAP, GAR	Subcontractor:	--
Sample Point Location:	Bldg. 51 Chiller Room	Moisture Content of Sampling Zone	Dry
Sampling Depth:	~16" below floor	Approximate Purge Volume and Method:	
Time of Collection	7 hour, 15 minutes		

Instrument Readings:

Time	Canister Pressure (inches of HG)	Temperature (F or C)	Relative Humidity (%)	Air Speed (ft/min)	Pressure Differential (inches of H2O)	PID (ppm or ppb)
1540	-28.8					0.5
1616	-26.5					
1859	-15.5					
2055	-8.0					
2255	-2.0					

SUMMA Canister Information:

Size (circle one): 1 L 6 L


Canister ID: 322

Flow Controller ID: 11860

General Observations/Notes:

Please record current weather information including wind speed and direction, ambient temperature, barometric pressure, and relative humidity via suitable information source (e.g., weatherunderground.com).

Sub-Slab Sample Collection Log

 <i>Infrastructure, environment, facilities</i>		Sub-Slab Sample Collection Log	
		Sample ID:	BLDG51-SS-2
Client:	GE	Outdoor/Indoor:	Indoor
Project:	Bldg. 51/59 Soil Gas / Indoor Air Investigation	Sample Intake Height:	--
Location:	GMA3 – Building 51	Miscellaneous Equipment:	PID
Project #:	B0030905	Time On/Off:	1546 / 2346
Samplers:	SPS, JAP, GAR	Subcontractor:	--
Sample Point Location:	Bldg. 51 Records Area	Moisture Content of Sampling Zone	Dry
Sampling Depth:	~16½" below floor	Approximate Purge Volume and Method:	
Time of Collection	8 hour		

Instrument Readings:

Time	Canister Pressure (inches of HG)	Temperature (F or C)	Relative Humidity (%)	Air Speed (ft/min)	Pressure Differential (inches of H2O)	PID (ppm or ppb)
1546	-26.0					0.6
1621	-24.0					
1901	-15.5					
2057	-10.0					
2346	-1.5					

SUMMA Canister Information:

Size (circle one): 1 L **6 L**


Canister ID: 30

Flow Controller ID: 147725

General Observations/Notes:

Please record current weather information including wind speed and direction, ambient temperature, barometric pressure, and relative humidity via suitable information source (e.g., weatherunderground.com).

Sub-Slab Sample Collection Log

 <i>Infrastructure, environment, facilities</i>		Sub-Slab Sample Collection Log	
		Sample ID:	BLDG51-SS-3
Client:	GE	Outdoor/Indoor:	Indoor
Project:	Bldg. 51/59 Soil Gas / Indoor Air Investigation	Sample Intake Height:	--
Location:	GMA3 – Building 51	Miscellaneous Equipment:	PID
Project #:	B0030905	Time On/Off:	1542 / 2342
Samplers:	SPS, JAP, GAR	Subcontractor:	--
Sample Point Location:	Bldg. 51 Hall outside PS Office Area	Moisture Content of Sampling Zone	Dry
Sampling Depth:	~16 " below floor	Approximate Purge Volume and Method:	180 mLs w/60cc syringe
Time of Collection	8 hour		

Instrument Readings:

Time	Canister Pressure (inches of HG)	Temperature (F or C)	Relative Humidity (%)	Air Speed (ft/min)	Pressure Differential (inches of H2O)	PID (ppm or ppb)
1542	> -30					0.7
1619	-27.8					
1903	-20.5					
2058	-15.8					
2342	-8.0					

SUMMA Canister Information:

Size (circle one): 1 L 6 L

Canister ID: 231

Flow Controller ID: 11810


General Observations/Notes:

Please record current weather information including wind speed and direction, ambient temperature, barometric pressure, and relative humidity via suitable information source (e.g., weatherunderground.com).

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Building 59

Sub-Slab Sample Collection Log

 <i>Infrastructure, environment, facilities</i>		Sub-Slab Sample Collection Log	
		Sample ID:	BLDG59-SS-1
Client:	GE	Outdoor/Indoor:	Indoor
Project:	Bldg. 51/59 Soil Gas / Indoor Air Investigation	Sample Intake Height:	--
Location:	GMA3 – Building 59	Miscellaneous Equipment:	PID
Project #:	B0030905	Time On/Off:	1152 / 1952
Samplers:	SPS, JAP, GAR	Subcontractor:	--
Sample Point Location:	GE Facility Area	Moisture Content of Sampling Zone	Dry
Sampling Depth:	~12" below floor	Approximate Purge Volume and Method:	180mLs w/60cc syringe
Time of Collection	8 hour		

Instrument Readings:

Time	Canister Pressure (inches of HG)	Temperature (F or C)	Relative Humidity (%)	Air Speed (ft/min)	Pressure Differential (inches of H2O)	PID (ppm or ppb)
1152	-28.5					0
1345	-23.0					
1600	-18.0					
1752	-13.0					
1952	-8.5					

SUMMA Canister Information:

Size (circle one): 1 L 6 L

Canister ID: 63


Flow Controller ID: 154291

General Observations/Notes:

Sample taken between metal cabinet and printer.

Please record current weather information including wind speed and direction, ambient temperature, barometric pressure, and relative humidity via suitable information source (e.g., weatherunderground.com).

Sub-Slab Sample Collection Log

 <i>Infrastructure, environment, facilities</i>		Sub-Slab Sample Collection Log	
		Sample ID:	BLDG59-SS-2
Client:	GE	Outdoor/Indoor:	Indoor
Project:	Bldg. 51/59 Soil Gas / Indoor Air Investigation	Sample Intake Height:	--
Location:	GMA3 – Building 59	Miscellaneous Equipment:	PID
Project #:	B0030905	Time On/Off:	1147 / 1947
Samplers:	SPS, JAP, GAR	Subcontractor:	--
Sample Point Location:	Bldg. 59 Library – Outside MCC Room	Moisture Content of Sampling Zone	Dry
Sampling Depth:	~10" below floor	Approximate Purge Volume and Method:	80 mLs w/60cc syringe
Time of Collection	8 hour		

Instrument Readings:

Time	Canister Pressure (inches of HG)	Temperature (F or C)	Relative Humidity (%)	Air Speed (ft/min)	Pressure Differential (inches of H2O)	PID (ppm or ppb)
1147	-28.2					0
1352	-22.2					
1603	-16.2					
1756	-11.2					
1947	-6.0					

SUMMA Canister Information:

Size (circle one): 1 L 6 L


Canister ID: 75

Flow Controller ID: 12161

General Observations/Notes:

Please record current weather information including wind speed and direction, ambient temperature, barometric pressure, and relative humidity via suitable information source (e.g., weatherunderground.com).

Sub-Slab Sample Collection Log

 <i>Infrastructure, environment, facilities</i>		Sub-Slab Sample Collection Log	
		Sample ID:	BLDG59-SS-3 / SS-DUP-1
Client:	GE	Outdoor/Indoor:	Indoor
Project:	Bldg. 51/59 Soil Gas / Indoor Air Investigation	Sample Intake Height:	--
Location:	GMA3 – Building 59	Miscellaneous Equipment:	PID
Project #:	B0030905	Time On/Off:	1132 / 1932
Samplers:	SPS, JAP, GAR	Subcontractor:	--
Sample Point Location:	Bldg. 59 Office Area	Moisture Content of Sampling Zone	Dry
Sampling Depth:	~8" below floor	Approximate Purge Volume and Method:	80 mLs w/60cc syringe
Time of Collection	8 hour		

Instrument Readings:

Time	Canister Pressure (inches of HG)		Temperature (F or C)	Relative Humidity (%)	Air Speed (ft/min)	Pressure Differential (inches of H2O)	PID (ppm or ppb)
	BLDG59-SS-3	SS-DUP-1					
1132	> -30	> -30					0
1350	-23	-24					
1602	-15.5	-17.5					
1754	-10.0	-12.5					
1942	-4.5	-7.5					

SUMMA Canister Information:

Size (circle one): 1 L 6 L

Canister ID: 19 (BLDG59-SS-3) / 136 (SS-DUP-1)

Flow Controller ID: 138932 (BLDG59-SS-33) / 154293 (SS-DUP-1)

General Observations/Notes:

Sub-slab duplicate taken hear (SS-DUP-1); Canister #423 bad (stuck open),
replaced with #19.
Sample taken along conference room wall outside Richard Gates' office.

Please record current weather information including wind speed and direction, ambient temperature, barometric pressure, and relative humidity via suitable information source (e.g., weatherunderground.com).

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Attachment C

Indoor Air Sampling Logs

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Building 51

Indoor/Ambient Air Sample Collection Log

 <i>Infrastructure, environment, facilities</i>		Indoor/Ambient Air Sample Collection Log	
		Sample ID:	BLDG51-IA-1
Client:	GE	Outdoor/Indoor:	Indoor
Project:	Bldg. 51/59 Soil Gas/Indoor Air Investigation	Sample Intake Height:	~4'
Location:	GMA3 – Building 51 (Chiller Room)	Miscellaneous Equipment:	PID
Project #:	B0030905	Time On/Off:	1540/2340
Samplers:	SPS, JAP, GAR	Subcontractor:	--

Instrument Readings:

Time	Canister Pressure (inches of HG)	Temperature (F or C)	Relative Humidity (%)	Air Speed (ft/min)	Pressure Differential (inches of H2O)
1540	> -30				
1616	-29.2				
1858	-21.8				
2055	-17.5				
2340	-9.0				

SUMMA Canister Information:

Size (circle one): 1 L 6 L

Canister ID: 538


Flow Controller ID: W0119169

General Observations/Notes:

Garage Area (Off Chiller Room) Materials Inventory: Dianodic DN300 (white plastic drums)

Please record current weather information including wind speed and direction, ambient temperature, barometric pressure, and relative humidity via suitable information source (e.g., weatherunderground.com).

Indoor/Ambient Air Sample Collection Log

 <i>Infrastructure, environment, facilities</i>		Indoor/Ambient Air Sample Collection Log	
		Sample ID:	BLDG51-IA-2
Client:	GE	Outdoor/Indoor:	Indoor
Project:	Bldg. 51/59 Soil Gas/Indoor Air Investigation	Sample Intake Height:	~5'
Location:	GMA3 – Building 51 (Records Room)	Miscellaneous Equipment:	PID
Project #:	B0030905	Time On/Off:	1546/2346
Samplers:	SPS, JAP, GAR	Subcontractor:	--

Instrument Readings:

Time	Canister Pressure (inches of HG)	Temperature (F or C)	Relative Humidity (%)	Air Speed (ft/min)	Pressure Differential (inches of H2O)
1546	-25.0				
1621	-23.5				
1901	-16.0				
2057	-10.5				
2346	-2.5				

SUMMA Canister Information:

Size (circle one): 1 L 6 L


Canister ID: 0110

Flow Controller ID: 204848

General Observations/Notes:

Please record current weather information including wind speed and direction, ambient temperature, barometric pressure, and relative humidity via suitable information source (e.g., weatherunderground.com).

Indoor/Ambient Air Sample Collection Log

 <i>Infrastructure, environment, facilities</i>		Indoor/Ambient Air Sample Collection Log	
		Sample ID:	BLDG51-IA-3
Client:	GE	Outdoor/Indoor:	Indoor
Project:	Bldg. 51/59 Soil Gas/Indoor Air Investigation	Sample Intake Height:	~4.5'
Location:	GMA3 – Building 51 (Hall Outside PS Office Area)	Miscellaneous Equipment:	PID
Project #:	B0030905	Time On/Off:	1542 / 2342
Samplers:	SPS, GAR, JAP	Subcontractor:	--

Instrument Readings:

Time	Canister Pressure (inches of HG)	Temperature (F or C)	Relative Humidity (%)	Air Speed (ft/min)	Pressure Differential (inches of H2O)
1542	-29.0				
1619	-28.5				
1903	-21.0				
2058	-15.8				
2342	-8.0				

SUMMA Canister Information:

Size (circle one): 1 L 6 L

Canister ID: 540

Flow Controller ID: 11809


General Observations/Notes:

Please record current weather information including wind speed and direction, ambient temperature, barometric pressure, and relative humidity via suitable information source (e.g., weatherunderground.com).

ARCADIS

Building 59

Indoor/Ambient Air Sample Collection Log

		Indoor/Ambient Air Sample Collection Log	
		Sample ID:	BLDG59-IA-1
Client:	GE	Outdoor/Indoor:	Indoor
Project:	Bldg. 51/59 Soil Gas/Indoor Air Investigation	Sample Intake Height:	~4.5'
Location:	GMA3 – Building 59 (Facility Area)	Miscellaneous Equipment:	PID
Project #:	B0030905	Time On/Off:	1153/1953
Samplers:	SPS, JAP, GAR	Subcontractor:	--

Instrument Readings:

Time	Canister Pressure (inches of HG)	Temperature (F or C)	Relative Humidity (%)	Air Speed (ft/min)	Pressure Differential (inches of H2O)
1153	-29.0				
1345	-24.5				
1600	-16.5				
1752	-11.0				
1953	-5.0				

SUMMA Canister Information:

Size (circle one): 1 L **6 L**


Canister ID: 67

Flow Controller ID: 11842

General Observations/Notes:

Please record current weather information including wind speed and direction, ambient temperature, barometric pressure, and relative humidity via suitable information source (e.g., weatherunderground.com).

Indoor/Ambient Air Sample Collection Log

 <i>Infrastructure, environment, facilities</i>		Indoor/Ambient Air Sample Collection Log	
		Sample ID:	BLDG59-IA-2
Client:	GE	Outdoor/Indoor:	Indoor
Project:	Bldg. 51/59 Soil Gas/Indoor Air Investigation	Sample Intake Height:	~4'
Location:	GMA3 – Building 59 (Library Area Outside MCC Room)	Miscellaneous Equipment:	PID
Project #:	B0030905	Time On/Off:	1148/1948
Samplers:	SPS, JAP, GAR	Subcontractor:	--

Instrument Readings:

Time	Canister Pressure (inches of HG)	Temperature (F or C)	Relative Humidity (%)	Air Speed (ft/min)	Pressure Differential (inches of H2O)
1148	-27.5				
1352	-24.5				
1603	-19.0				
1756	-15.0				
1948	-10.5				

SUMMA Canister Information:

Size (circle one): 1 L **6 L**

Canister ID: 507


Flow Controller ID: W0112477

General Observations/Notes:

Duplicate for Indoor Air attempted here. Controller only set for 1-hour. Canister #343;
controller W0119829 shut off @ 2.5% @ 12:28; not submitted for analysis.

Please record current weather information including wind speed and direction, ambient temperature, barometric pressure, and relative humidity via suitable information source (e.g., weatherunderground.com).

Indoor/Ambient Air Sample Collection Log

 <i>Infrastructure, environment, facilities</i>		Indoor/Ambient Air Sample Collection Log	
		Sample ID:	BLDG59-IA-3
Client:	GE	Outdoor/Indoor:	Indoor
Project:	Bldg. 51/59 Soil Gas/Indoor Air Investigation	Sample Intake Height:	~4.5'
Location:	GMA3 – Building 59 (Office/Lobby Area)	Miscellaneous Equipment:	PID
Project #:	B0030905	Time On/Off:	1142/1942
Samplers:	SPS, JAP, GAR	Subcontractor:	--

Instrument Readings:

Time	Canister Pressure (inches of HG)	Temperature (F or C)	Relative Humidity (%)	Air Speed (ft/min)	Pressure Differential (inches of H2O)
1142	> - 30				
1350	-24				
1602	-17.8				
1754	-12.5				
1942	-7.5				

SUMMA Canister Information:

Size (circle one): 1 L 6 L

Canister ID: 512

Flow Controller ID: W0119684

General Observations/Notes:

Sample taken along conference room wall outside of Richard Gates' office.

Please record current weather information including wind speed and direction, ambient temperature, barometric pressure, and relative humidity via suitable information source (e.g., weatherunderground.com).

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Appendix F

Fall 2007 Groundwater -
Analytical Results

Table F-1
Fall 2007 Groundwater Analytical Results

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter	Sample ID: Date Collected:	6B-R 11/01/07	51-14 11/02/07	82B-R 11/01/07	114-A 11/02/07	114-BR 11/02/07
Volatile Organics						
1,1,1,2-Tetrachloroethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
1,1,1-Trichloroethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
1,1,2,2-Tetrachloroethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
1,1,2-Trichloroethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
1,1-Dichloroethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
1,1-Dichloroethene		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
1,2,3-Trichloropropane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
1,2-Dibromo-3-chloropropane		ND(3.2) J	ND(0.0050) J [ND(0.0050) J]	NA	NA	NA
1,2-Dibromoethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
1,2-Dichloroethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
1,2-Dichloropropane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
1,4-Dioxane		ND(64) J	ND(0.10) J [ND(0.10) J]	NA	NA	NA
2-Butanone		ND(3.2) J	ND(0.0050) J [ND(0.0050) J]	NA	NA	NA
2-Chloro-1,3-butadiene		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
2-Chloroethylvinylether		ND(8.0) J	ND(0.013) J [ND(0.013) J]	NA	NA	NA
2-Hexanone		ND(3.2)	ND(0.0050) [ND(0.0050)]	NA	NA	NA
3-Chloropropene		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
4-Methyl-2-pentanone		ND(3.2)	ND(0.0050) [ND(0.0050)]	NA	NA	NA
Acetone		ND(3.2) J	ND(0.0050) J [ND(0.0050) J]	NA	NA	NA
Acetonitrile		ND(13) J	ND(0.020) J [ND(0.020) J]	NA	NA	NA
Acrolein		ND(16) J	ND(0.025) J [ND(0.025) J]	NA	NA	NA
Acrylonitrile		ND(16) J	ND(0.025) J [ND(0.025) J]	NA	NA	NA
Benzene		15	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Bromodichloromethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Bromoform		ND(0.64) J	ND(0.0010) J [ND(0.0010) J]	NA	NA	NA
Bromomethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Carbon Disulfide		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Carbon Tetrachloride		ND(0.64)	0.00029 J [0.00039 J]	NA	NA	NA
Chlorobenzene		5.3	0.00056 J [0.00055 J]	NA	NA	NA
Chloroethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Chloroform		ND(0.64)	ND(0.0016) [ND(0.0015)]	NA	NA	NA
Chloromethane		ND(0.64)	0.00045 J [0.0015]	NA	NA	NA
cis-1,3-Dichloropropene		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Dibromochloromethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Dibromomethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Dichlorodifluoromethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Ethyl Methacrylate		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Ethylbenzene		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Iodomethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Isobutanol		ND(32) J	ND(0.050) J [ND(0.050) J]	NA	NA	NA
Methacrylonitrile		ND(6.4)	ND(0.010) [ND(0.010)]	NA	NA	NA
Methyl Methacrylate		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Methylene Chloride		0.49 J	0.00022 J [ND(0.0050)]	NA	NA	NA
Propionitrile		ND(13) J	ND(0.020) J [ND(0.020) J]	NA	NA	NA
Styrene		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Tetrachloroethene		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Toluene		0.15 J	ND(0.0010) [ND(0.0010)]	NA	NA	NA
trans-1,2-Dichloroethene		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
trans-1,3-Dichloropropene		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
trans-1,4-Dichloro-2-butene		ND(3.2)	ND(0.0050) [ND(0.0050)]	NA	NA	NA
Trichloroethene		ND(0.64)	0.0043 [0.0046]	NA	NA	NA
Trichlorofluoromethane		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Vinyl Acetate		ND(1.6)	ND(0.0025) [ND(0.0025)]	NA	NA	NA
Vinyl Chloride		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Xylenes (total)		ND(0.64)	ND(0.0010) [ND(0.0010)]	NA	NA	NA
Total VOCs		21 J	0.0058 J [0.0070 J]	NA	NA	NA

Table F-1
Fall 2007 Groundwater Analytical Results

Groundwater Quality and NAPL Monitoring Interim Report for Fall 2007
Groundwater Management Area 3
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter	Sample ID: Date Collected:	6B-R 11/01/07	51-14 11/02/07	82B-R 11/01/07	114-A 11/02/07	114-BR 11/02/07
PCBs-Filtered						
Aroclor-1016		NA	NA	ND(0.000065) [ND(0.000065) J]	ND(0.000065) J	ND(0.000065)
Aroclor-1221		NA	NA	ND(0.000065) [ND(0.000065) J]	ND(0.000065) J	ND(0.000065)
Aroclor-1232		NA	NA	ND(0.000065) [ND(0.000065) J]	ND(0.000065) J	ND(0.000065)
Aroclor-1242		NA	NA	ND(0.000065) [ND(0.000065) J]	ND(0.000065) J	ND(0.000065)
Aroclor-1248		NA	NA	ND(0.000065) [ND(0.000065) J]	ND(0.000065) J	ND(0.000065)
Aroclor-1254		NA	NA	ND(0.000065) [ND(0.000065) J]	ND(0.000065) J	ND(0.000065)
Aroclor-1260		NA	NA	ND(0.000065) [ND(0.000065) J]	ND(0.000065) J	ND(0.000065)
Total PCBs		NA	NA	ND(0.000065) [ND(0.000065) J]	ND(0.000065) J	ND(0.000065)

Notes:

1. Samples were collected by ARCADIS BBL, and submitted to SGS Environmental Services, Inc. for analysis of volatiles and PCBs (filtered).
2. Samples have been validated as per Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts, ARCADIS BBL (approved March 15, 2007 and re-submitted March 30, 2007).
3. NA - Not Analyzed.
4. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
5. Field duplicate sample results are presented in brackets.

Data Qualifiers:

Organics (volatiles, PCBs)

J - Indicates that the associated numerical value is an estimated concentration.

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Appendix G

Historical Groundwater Data

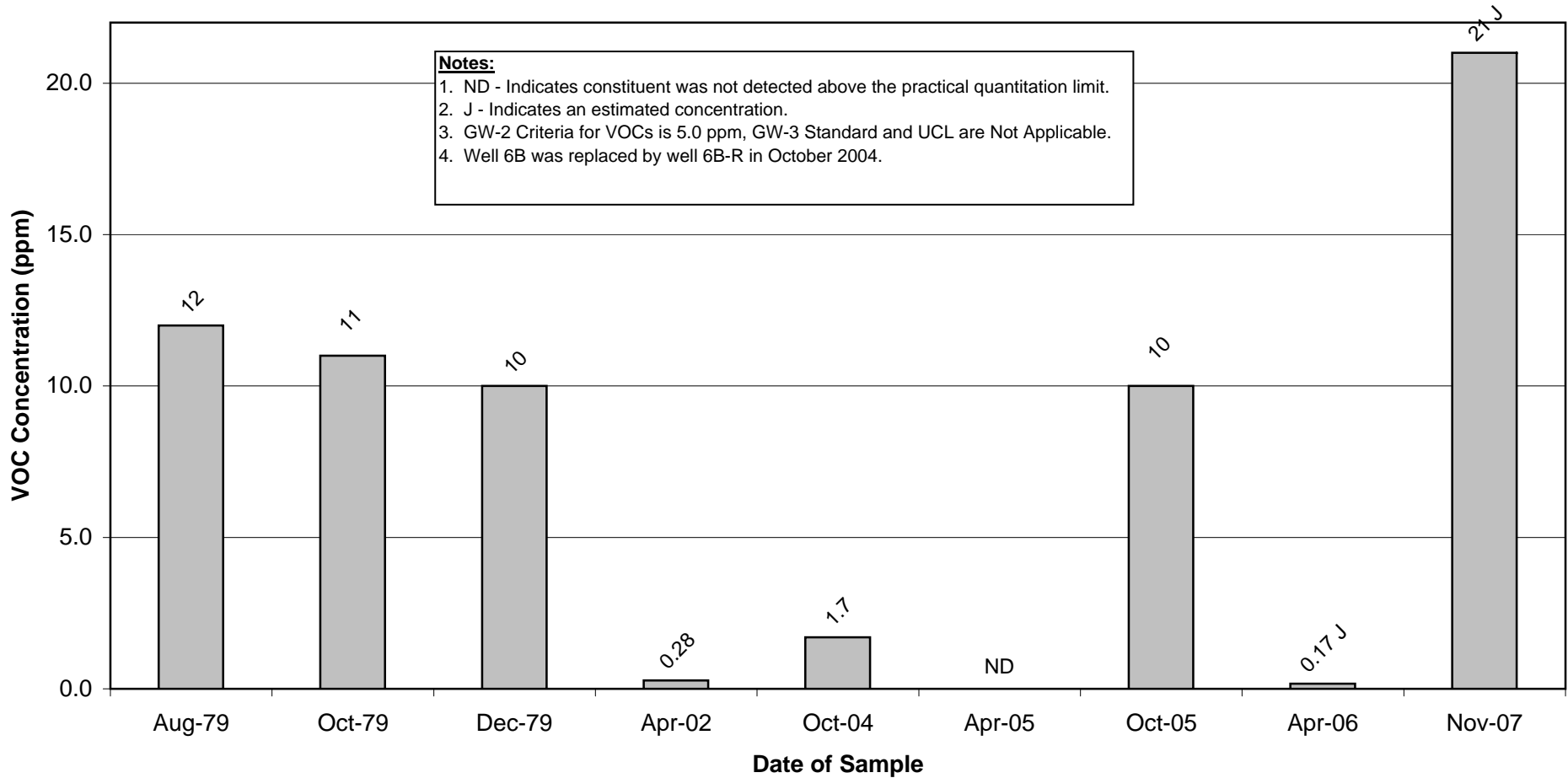
Historical Groundwater Data

Total VOC Concentrations –
Wells sampled in Fall 2007

Appendix G

Groundwater Management Area 3
General Electric Company
Pittsfield, Massachusetts

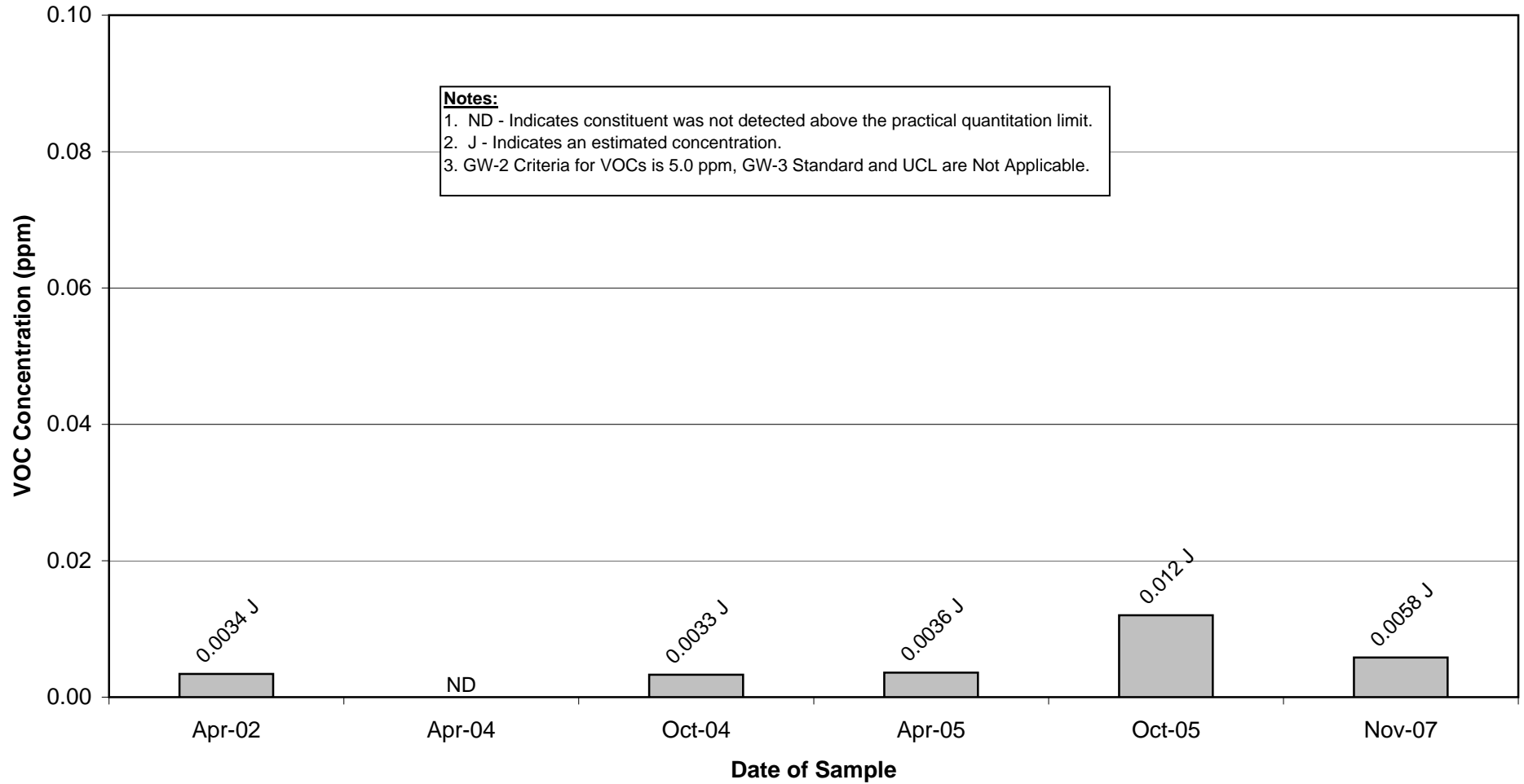
Well 6B/6B-R Historical Total VOC Concentrations



Appendix G

Groundwater Management Area 3 General Electric Company Pittsfield, Massachusetts

Well 51-14 Historical Total VOC Concentrations



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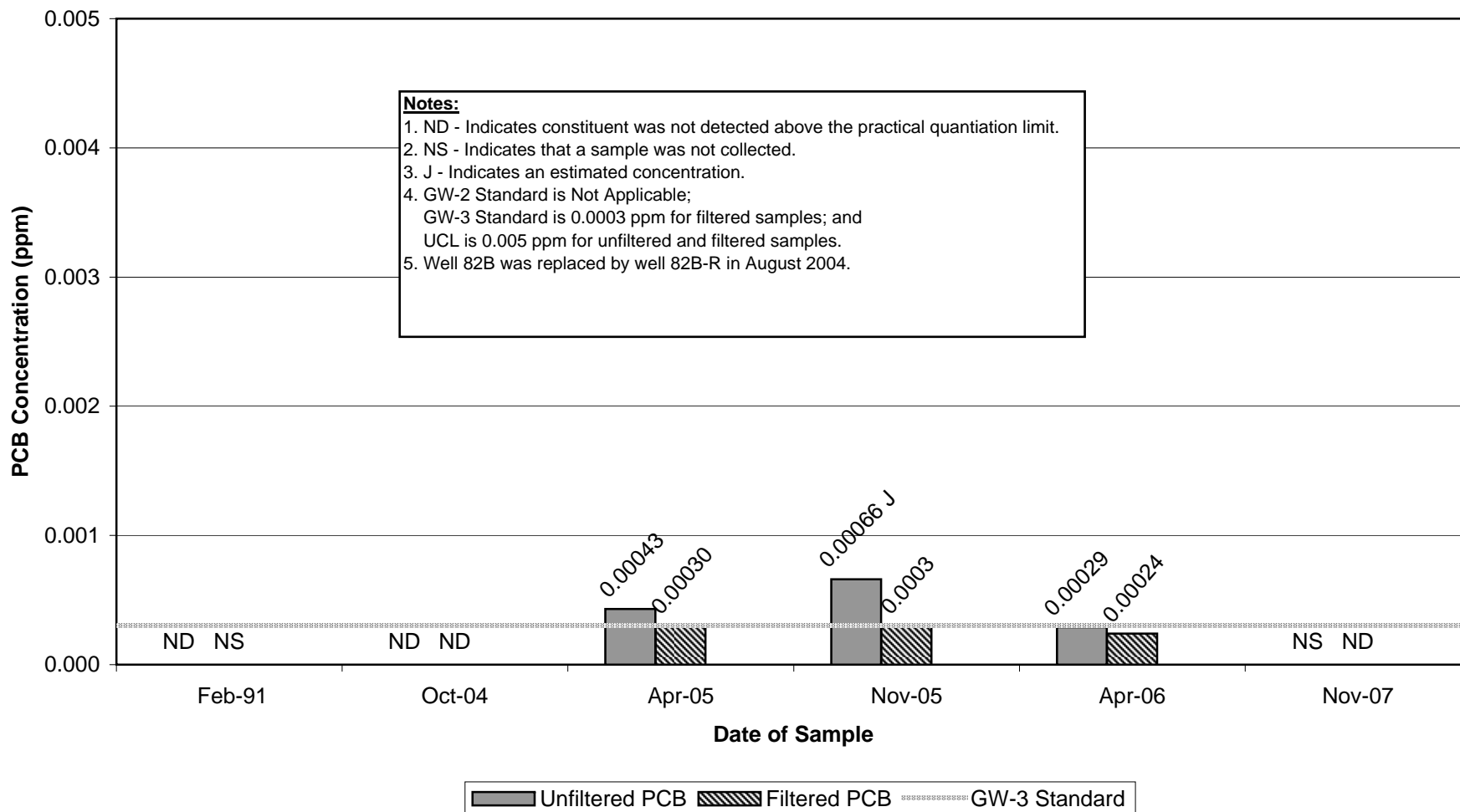
Historical Groundwater Data

PCB Concentrations –
Wells sampled in Fall 2007

Appendix G

Groundwater Management Area 3 General Electric Company Pittsfield, Massachusetts

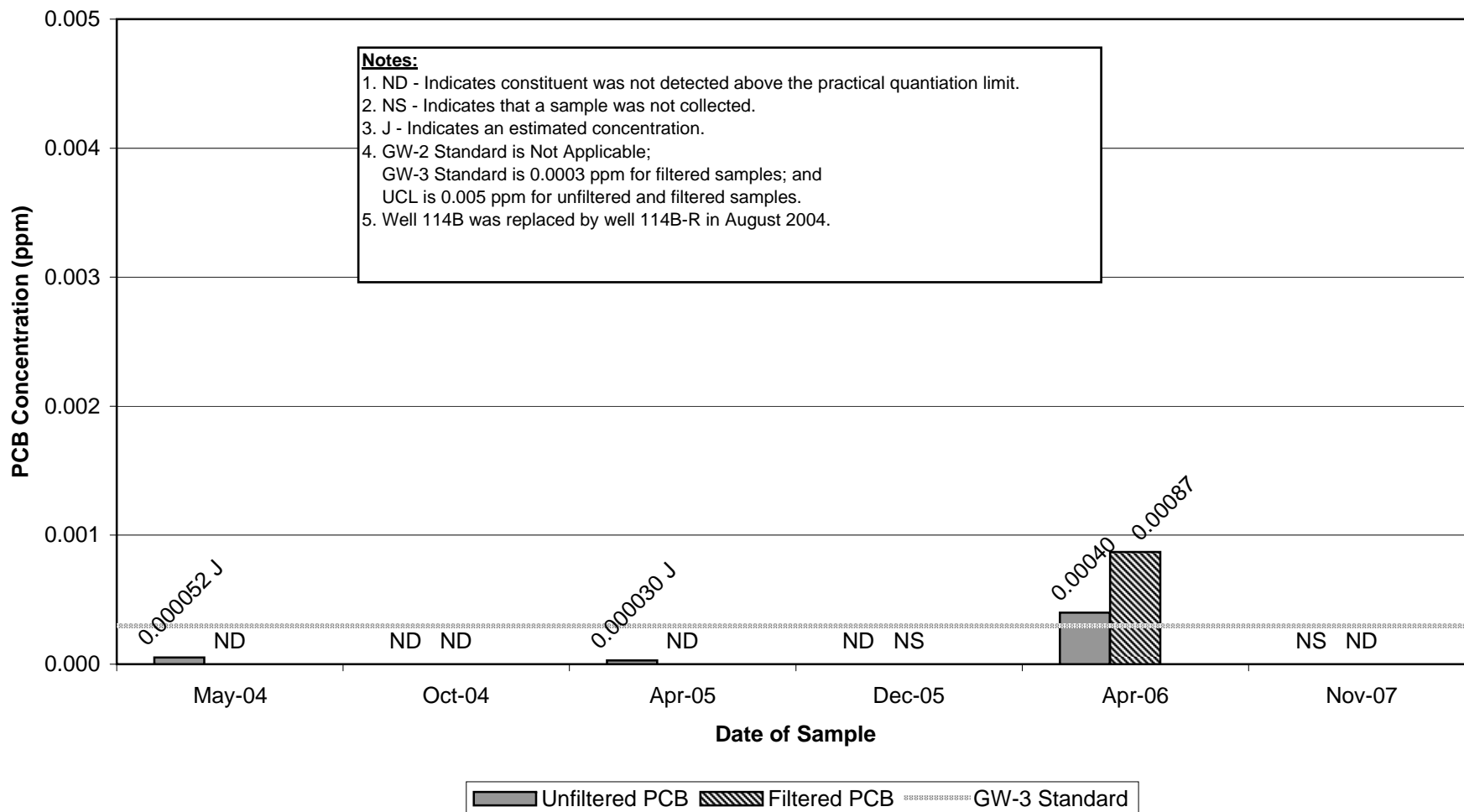
Well 82B/82B-R Historical Total PCB Concentrations



Appendix G

Groundwater Management Area 3
 General Electric Company
 Pittsfield, Massachusetts

Well 114B-R Historical Total PCB Concentrations



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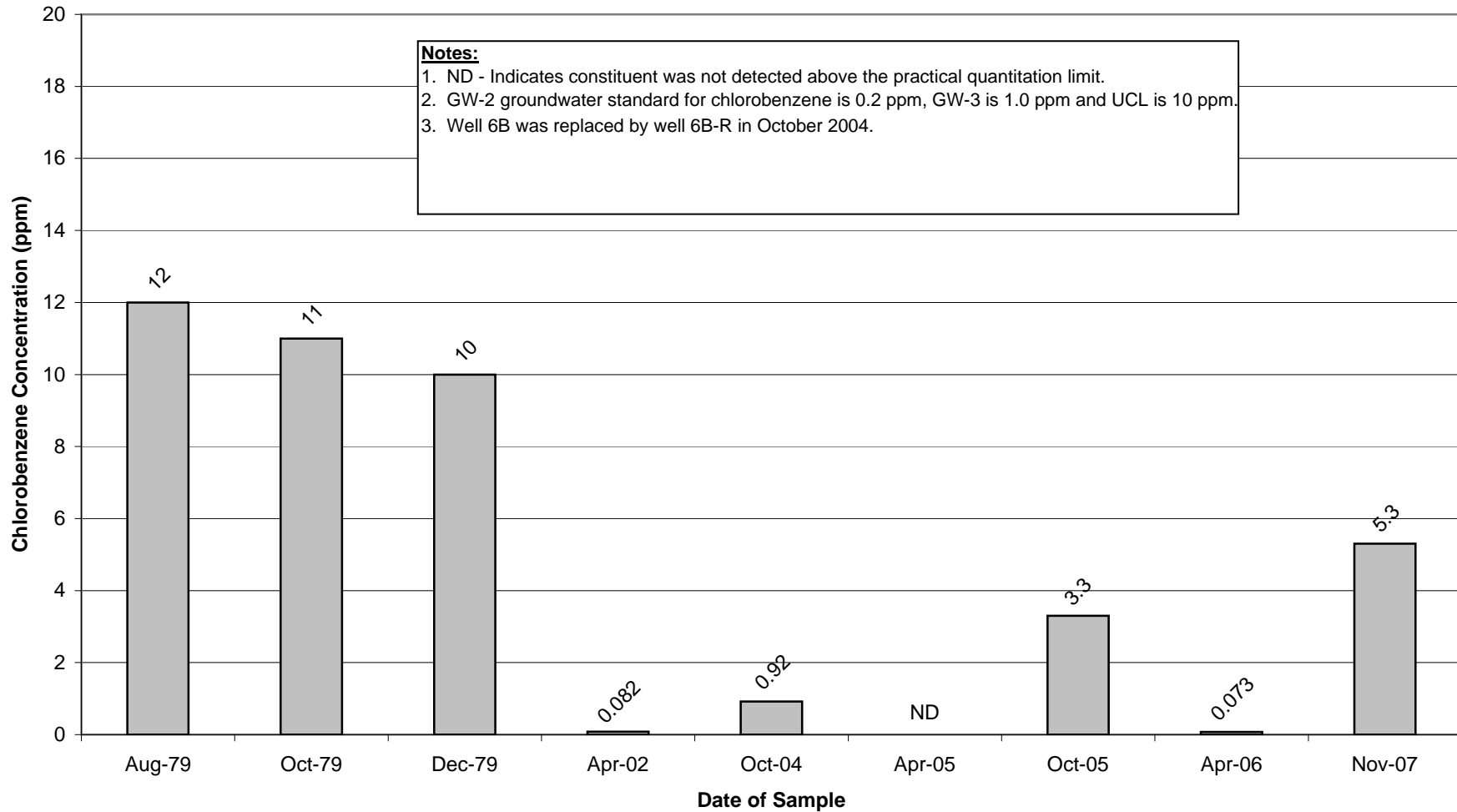
Historical Groundwater Data

Chlorobenzene –
Wells sampled in Fall 2007

Appendix G

Groundwater Management Area 3 General Electric Company Pittsfield, Massachusetts

Well 6B/6B-R Historical Chlorobenzene Concentrations



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Historical Groundwater Data

Benzene –
Wells sampled in Fall 2007

Appendix G

Groundwater Management Area 3 General Electric Company Pittsfield, Massachusetts

Well 6B/6B-R Historical Benzene Concentrations

