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Transmitted Via Overnight Courier

August 1, 2008

Mr. Richard Fisher
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 2 (GECD320)
Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008

Dear Mr. Fisher:

Enclosed is the *Groundwater Management Area 2 Long-Term Monitoring Program Monitoring Event Evaluation Report for Spring 2008* (GMA 2 Spring 2008 Monitoring Event Evaluation Report). This report was prepared in accordance with section 2.7 of the Statement of Work for Removal Action Outside the River (SOW) (Appendix E to the CD), with further details presented in Section 7.0 of Attachment H to the SOW (Groundwater/NAPL Monitoring Assessment , and Response Programs).

The GMA 2 Spring 2008 Monitoring Event Evaluation Report is the second report to be submitted as part of the long-term monitoring program for this GMA. It summarizes activities performed at GMA 2 (also known as the Former Oxbow Areas J and K GMA) during spring 2008, and presents the results of the latest round of sampling and analysis of groundwater performed as part of the groundwater quality monitoring program. In addition, several modifications to the long-term monitoring program at GMA 2 are proposed to address recent modifications made by MDEP to the Method 1 groundwater quality standards.

Please call Andrew Silfer or me if you have any questions regarding this report and proposal.

Sincerely,

Richard W. Gates

Richard W. Gates
Remediation Project Manager

Enclosure
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General Electric Company
Pittsfield, Massachusetts

Groundwater Management Area 2 Long-Term Monitoring Program Monitoring Event Evaluation Report for Spring 2008

August 2008

ARCADIS

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008

(GMA 2 Spring 2008 Monitoring Event Evaluation Report)

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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 soil, 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 RAAs at and near the GE Pittsfield facility have been divided into five separate 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 Former Oxbows J and K Groundwater Management Area, also known as and referred to herein as GMA 2.

The Consent Decree and Attachment H to the SOW specify a series of steps to be taken at each of the GMAs to investigate and, as appropriate, respond to groundwater conditions. These documents provide initially for the design and implementation of a baseline monitoring program at each of the GMAs. Pursuant to Section 1.1.1 of Attachment H, the objective of the baseline monitoring program was to establish existing conditions in order to assess whether the existing response actions are protecting surface water, groundwater and sediment quality, and human health in occupied buildings. Additionally, the baseline monitoring program provides the basis for evaluating the effectiveness of future response actions, including the identification of any additional response actions that may be necessary to attain the Performance Standards. The baseline data are to be used in the future for comparison with collected under the long-term monitoring program.

The baseline monitoring program consists of semi-annual groundwater quality sampling and quarterly elevation monitoring and generally lasts for a minimum two-year period, although Section 6.1.3 of Attachment H to the SOW allows for the modification and/or continuation of the baseline monitoring program if the two-year baseline period ends prior to the completion of soil-related response actions at all the RAAs in a GMA. At GMA 2, baseline monitoring was conducted from spring 2002 until spring 2007, shortly after the completion of the removal action for Former Oxbow Areas J and K comprising GMA 2. In June 2007, GE

submitted a *Baseline Assessment Final Report and Long-Term Monitoring Program Proposal for GMA 2* (GMA 2 Long-term Monitoring Proposal), which was conditionally approved by EPA on October 9, 2007. That report proposed a long-term groundwater monitoring program for GMA 2. This report constitutes the second monitoring event evaluation report submitted pursuant to the long-term groundwater quality monitoring program at GMA 2.

1.2 Background Information

1.2.1 Description of GMA 2

GMA 2 encompasses the Former Oxbow Areas J and K RAA, comprised of approximately 8.5 acres adjacent to the Housatonic River, located approximately 2,500 feet upstream of the Newell Street Bridge (Figures 1 and 2). This GMA contains a combination of non-GE-owned commercial areas, residential properties, and recreational areas. Certain portions of this GMA originally consisted of land associated with oxbows or low-lying areas of the Housatonic River. As shown on Figure 1 and 2, the Housatonic River flows through the central portion of this GMA, separating Former Oxbow Areas J and K. Re-channelization and straightening of the Housatonic River in the early 1940s by the City of Pittsfield and the United States Army Corps of Engineers (USACE) separated several such oxbows and low-lying areas from the active course of the river. These oxbows and low-lying areas were subsequently filled with various materials from a variety of sources, resulting in the current surface elevations and topography.

Former Oxbow Area J encompasses approximately 6 acres located north of the Housatonic River, south of East Street, and between Fasce Street and Commercial Street. Commercial businesses occupy a portion of this area along East Street. The west side of this portion of GMA 2 consists of a wooded recreational area and footpath, and the rights-of-way for undeveloped Longview Terrace and Zeno Street. The remainder of Former Oxbow Area J contains commercial properties and small, wooded recreational areas.

Former Oxbow Area K encompasses an area of approximately 2.5 acres south of the Housatonic River, across from the eastern portion of Former Oxbow Area J and generally to the northeast of Ventura Avenue. This area consists of a large open field on the south side of the river, and the right-of-way for Longview Terrace. The majority of this generally flat area is undeveloped and covered with grass and low brush. However, residential properties occupy a portion of this area along Ventura Avenue.

Removal Actions performed by GE at the Former Oxbow Areas J and K RAA were implemented between July and November 2006, and generally included site preparation, soil removal/replacement, and property restoration. The excavations were generally completed to depths of one to three feet, with the exceptions that one six-foot removal for PAHs was performed at Parcel K10-11-3 and one seven-foot removal for PCBs was performed at Parcel K10-10-6. The final limits of soil removal were completed to the general limits shown on the EPA-approved technical drawings included in the *Final Removal Design/Removal Action Work Plan for Former Oxbow Areas J and K* (September 2005), as modified in the *Addendum to Final Removal Design/Removal Action Work Plan for Former Oxbow Areas J and K* (April 2006). Overall, approximately 1,955 cubic yards of soil were removed from Former Oxbow Areas J and K and placed within the appropriate On-Plant Consolidation Area. The *Final Completion Report for Former Oxbow Areas J and K Removal* was submitted to EPA on May 13, 2008.

1.2.2 Overview of Hydrogeologic Conditions at the Site

In general, two unconsolidated hydrogeologic units are present within GMA 2. These units are briefly described below:

Surficial Deposits - This unit generally consists of heterogeneous fill materials and alluvial sands and gravels. These sands and sandy gravels are well-sorted and were deposited as glacial outwash and/or in association with recent depositional processes within the Housatonic River. Isolated peat deposits are also present, typically at depths corresponding to the bottom elevations of the river and the former oxbows. At certain locations within GMA 2, non-native fill materials are present above the alluvial deposits. These fill materials typically consist of sand, gravel, metallic debris, and wood.

The alluvial unit extends from ground surface to depths of at least 25 feet. Fill materials, where present, have been observed to depths down to 10 feet. From a hydrogeologic perspective, the fill and the sand/gravel deposits act as a single unit. The existing monitoring wells within GMA 2 are screened within this unit, as it is the upper and primary water-bearing unit within the GMA. Groundwater is encountered under unconfined conditions within this unit at depths between approximately 4 and 15 feet below ground surface.

Glacial Till - Based on boring results at nearby locations within East Street Area 1-South (within GMA 1), glacial till underlies the alluvial deposits and typically consists of dense silt containing varying amounts of clay, sand, and gravel. Till is generally encountered at depths ranging from approximately 10 to over 40 feet beneath East Street Area 1-South and East Street Area 2-South, further to the west.

The unconsolidated units at GMA 2 overlie bedrock. Based on information obtained from nearby areas, bedrock occurs at depths up to approximately 50 to 60 feet near the Housatonic River. The bedrock consists of white coarse-grained marble associated with the Stockbridge Formation.

Groundwater at GMA 2 generally flows toward the Housatonic River and is primarily influenced by the existing topography and the area's location (adjacent to the river). Figure 3 illustrates typical water table conditions, using groundwater data obtained during the spring 2008 groundwater monitoring event. In general, the depth to groundwater is greater on the northern side of the Housatonic River due to the presence of a steeper riverbank than on the south of the river. The average depth to groundwater at Former Oxbow Area J ranges from approximately 11 feet (in the center portion) to just under 15 feet (to the east and west of the former oxbow). The average depth to groundwater at Former Oxbow Area K ranges from approximately 4 feet (in the northern portion, adjacent to the Housatonic River) to approximately 10 feet (at the southernmost monitoring point).

Hydraulic conductivity data (as previously presented on Table 3 and Appendix C of the Groundwater Quality Monitoring Report for Spring 2002) indicate a wide range in conductivities at each former oxbow area. Hydraulic conductivities at Former Oxbow Area J ranged from 10.44 feet/day (at well GMA2-1) to 139.52 feet per day (at well GMA2-6), with a geometric mean of 45.57 feet per day. At Former Oxbow Area K, hydraulic conductivities varied from 7.98 feet/day (at well GMA2-9) to 138.47 feet per day (at well GMA2-5), with a geometric mean of 43.52 feet per day. The overall geometric mean of the calculated hydraulic conductivity values for GMA 2 is 44.65 feet per day.

Calculated groundwater velocities using the above-referenced hydraulic conductivities, as well as representative horizontal gradients and porosities, range from 0.84 feet per day to 16.74 feet per day to the north of the river, and from 0.53 feet per day to 13.85 feet per day in the southern portion of the GMA. The overall geometric mean of the calculated groundwater velocities at GMA 2 is 4.03 feet per day.

Two surface features may also affect groundwater flow within Former Oxbow Areas J and K. A drainage ditch is present along the western limb of Former Oxbow Area J that extends to the Housatonic River, while a small intermittent creek which extends between the Housatonic River and Goodrich Pond crosses the eastern portion of Former Oxbow Area K. The presence of these surface drainage features may locally influence groundwater flow in their immediate vicinity, but the overall groundwater flow direction is directed toward the Housatonic River.

Monitoring for the presence of NAPL is performed as part of the routine groundwater elevation monitoring activities at this GMA. NAPL has not been observed within any of the GE monitoring wells monitored to date at GMA 2.

1.2.3 Overview of the Nature and Extent of Substances in Groundwater at the Site

Based on current information, the principal potential constituent sources that could affect groundwater quality within GMA 2 appear to include the former oxbows and existing or historical commercial businesses located within or upgradient of this GMA. These potential sources are described below.

Former Oxbows - As a result of the straightening of the Housatonic River channel in the late 1930s and early 1940s, Former Oxbows J and K were isolated from the newly formed channel of the river. These oxbows were subsequently filled with materials originating from the GE facility as well as other sources. There are no available records that provide information regarding the specific type or origin of the fill materials, or parties involved in the filling activities. The former oxbow areas are labeled as "disposal areas" on re-channelization drawings developed by the City of Pittsfield in 1940. These areas were publicly accessible and it is likely that a variety of industries and/or individuals contributed fill material. Based on a review of available aerial photographs, it is unclear when these former oxbows were filled.

Other Sources - In addition to fill materials that have been placed within the former oxbows, it is possible that there are other potential contributing sources of groundwater constituents to GMA 2. Commercial businesses present within or upgradient of GMA 2 include a gas station, restaurant, and an automotive electrical repair shop located within Former Oxbow Area J.

Very few constituents were consistently detected in groundwater at GMA 2. At most locations, the observed detections were sporadic temporally and spatially, resulting in an apparent scattered distribution of isolated and occasionally-detected constituents. Low levels of certain VOCs and PCBs have been detected on a more frequent basis at isolated locations, generally in or near the western portion of Oxbow Areas J and K.

1.2.4 Overview of Groundwater Investigation Activities at GMA 2

In February 2001, GE submitted a *Baseline Monitoring Program Proposal for Former Oxbows J and K Groundwater Management Area* (GMA 2 Baseline Monitoring Proposal). The GMA 2 Baseline Monitoring Proposal summarized the hydrogeologic information available at that time for GMA 2 and proposed groundwater monitoring activities for the baseline monitoring period at this GMA. EPA provided conditional approval of the GMA 2

Baseline Monitoring Proposal by letter of September 6, 2001. Thereafter, certain modifications were made to the GMA 2 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.

The baseline monitoring program, which was initiated in spring 2002, consisted of four semi-annual groundwater quality sampling events (with intervening quarterly groundwater elevation monitoring) followed by preparation and submittal of semi-annual reports summarizing the groundwater monitoring results, comparing the groundwater results with applicable Performance Standards, and, as appropriate, proposing modifications to the monitoring program. The fourth baseline monitoring report for GMA 2 entitled *Groundwater Management Area 2 Baseline Groundwater Quality Interim Report for Fall 2003* (Fall 2003 GMA 2 Groundwater Quality Report), was submitted to EPA on January 30, 2004**.**

As noted above, Section 6.1.3 of Attachment H to the SOW provides that if the two-year baseline monitoring period ends prior to the completion of soil-related response actions at all the RAAs in 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 2 Baseline Monitoring Proposal also allowed 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 RAA within GMA 2 were not yet complete, the Fall 2003 GMA 2 Groundwater Quality Report included a proposal to modify and extend baseline groundwater quality monitoring activities at GMA 2 (under a program referred to as the interim monitoring program) until such time as the soil-related Removal Actions at the GMA 2 RAA were completed and the needs for a long-term groundwater quality monitoring program were fully delineated.

EPA conditionally approved the Fall 2003 GMA 2 Groundwater Quality Report in a letter dated May 13, 2004. Under the approved interim monitoring program, annual water quality sampling (alternating between the spring and fall seasons) and semi-annual water level monitoring at selected GMA 2 wells was initiated in spring 2004. Subsequent interim sampling events were conducted in fall 2005 and spring 2006.

The results of the round of interim groundwater sampling activities performed at this GMA in spring 2006 were provided in GE's July 2006 *Groundwater Management Area 2 Groundwater Quality Interim Report for Spring 2006* (Spring 2006 GMA 2 Groundwater Quality Report), which proposed to perform supplemental sampling activities in fall 2006 at one monitoring well (GMA2-1) where anomalous concentrations of PCBs were detected in spring 2006. That report was conditionally approved by EPA in a letter dated November 16, 2006. In that letter, EPA required GE to collect an additional sample from well GMA2-1 in

spring 2007 and, since soil-related Removal Actions at Former Oxbow Areas J and K were completed in November 2006, to submit a final baseline assessment report and proposal for long-term groundwater quality monitoring at GMA 2.

GE conducted the required spring 2007 groundwater elevation monitoring and sampling activities and submitted the GMA 2 Long-term Monitoring Proposal to EPA in June 2007. The GMA 2 Long-Term Monitoring Proposal provided a summary of the sampling activities conducted in spring 2007 at GMA 2, evaluated the overall groundwater quality at the GMA pursuant to the requirements of Attachment H of the SOW, and contained a proposal for long-term groundwater quality monitoring activities. Locations were considered for inclusion in the long-term program if:

- Exceedances of applicable MCP GW-2 or GW-3 standards were reported during the baseline monitoring program.

- The well is located downgradient of a location where exceedances of applicable MCP GW-2 or GW-3 standards were reported during the baseline monitoring program.

- A review of the available data indicates the potential presence of an increasing trend in the concentrations of certain constituents at levels approaching the applicable MCP GW-2 or GW-3 standards

In that report, as a result of the evaluations, GE proposed to conduct long term groundwater monitoring at seven wells in GMA 2 (i.e., wells GMA2-1, GMA2-2, GMA2-3, GMA2-4, GMA2-6, GMA2-9, and J-1R). In EPA's October 9, 2007 conditional approval letter, EPA directed GE to install one new monitoring well (GMA 2-10) and add that well, plus existing well OJ-MW-2, to the long-term monitoring program.

GE conducted the initial round of the required long-term groundwater elevation monitoring and sampling activities in fall 2007, including the installation and sampling of the new well. The results of those activities were described in the *Groundwater Management Area 2 Long-Term Monitoring Program Monitoring Event Evaluation Report for Fall 2007* (Fall 2007 Monitoring Event Evaluation Report) submitted to EPA on March 20, 2008 and conditionally approved on April 15, 2008. In response to conditions contained in EPA's April 15, 2008 letter, an *Addendum Monitoring Event Evaluation Report for Fall 2007* (Fall 2007 Addendum) was submitted to EPA on May 14, 2008 and conditionally approved on July 30, 2008.

As no modifications to the long-term monitoring program field activities were proposed in the Fall 2007 Monitoring Event Evaluation Report or required by EPA in its conditional approval letter related to that report, GE performed the spring 2008 field activities prior to

submittal of the Fall 2007 Addendum. Specifically, GE conducted the spring 2008 groundwater elevation monitoring on April 16, 2008 and sampling activities between April 25 and 28, 2008. A description of those activities, the results obtained, and GE's assessments of those results, including proposals to modify the long-term monitoring program at GMA 2, are contained in this *Groundwater Management Area 2 Long-Term Monitoring Program Monitoring Event Evaluation Report for Spring 2008* (Spring 2008 Monitoring Event Evaluation Report).

1.3 Format of Document

The remainder of this report is presented in five sections. Section 2 describes the groundwater-related activities performed at GMA 2 in spring 2008. Section 3 presents the analytical results obtained during the spring 2008 sampling event, including a summary of the applicable groundwater quality Performance Standards identified in the CD and SOW, and a comparison of the spring 2008 results to those Performance Standards. Section 4 provides an overall assessment of groundwater quality at GMA 2 since initiation of baseline monitoring activities in spring 2002, including an evaluation of the analytical dataset for the wells that were sampled as part of the spring 2008 sampling event, and an assessment of the need for follow-up investigations or response actions Finally, Section 5 presents a discussion of the implications of the new MDEP groundwater quality standards on the long-term groundwater quality monitoring program, proposes several modifications to that groundwater monitoring program, and summarizes the schedule for future field and reporting activities related to groundwater quality at GMA 2.

2. Spring 2008 Field and Analytical Procedures

2.1 General

The activities conducted as part of the baseline/interim groundwater monitoring program in spring 2008, and summarized herein, involved the measurement of groundwater levels and the collection and analysis of groundwater samples at select monitoring wells within GMA 2 as summarized in Table 1. A summary of construction details for the GMA 2 wells that were monitored and/or sampled during spring 2008 is provided in Table 2. The field sampling data for the spring 2008 sampling event are presented in Appendix A. This section discusses the field procedures used to perform the activities listed above, as well as the methods used to analyze the groundwater samples. All activities were performed in accordance with GE's approved *Field Sampling Plan/Quality Assurance Project Plan* (FSP/QAPP).

2.2 Groundwater Elevation Monitoring

Groundwater elevations were collected from the 13 wells listed in Table 3, plus one Housatonic River surface water monitoring point, during the spring 2008 groundwater monitoring elevation event performed on April 16, 2008. Groundwater elevations in spring 2008 were, on average, approximately 0.44 feet lower than the elevations measured during spring 2007 for wells gauged during both monitoring events. The spring 2008 data presented in Table 3 were used to prepare a detailed groundwater elevation contour map for spring 2008 (Figure 3). Those groundwater contours are also illustrated on Figure 4, along with groundwater elevation data obtained in spring 2008 from areas adjacent to GMA 2. A summary of all groundwater elevation data collected in spring 2008 is contained in Appendix D.

As shown on Figure 3 and consistent with prior monitoring data, groundwater flow patterns at GMA 2 generally reflect the topography of the site with flow towards the Housatonic River. Overall, the hydraulic gradient to the south of the river is relatively flat in comparison to the portion of GMA 2 located north of the river. In particular, a relatively steep groundwater gradient is observed at the northeast corner of the Former Oxbow J Area as a result of a change in topography between well OJ-MW-1 and wells GMA2-7 and OJ-MW-2.

As shown on Figure 4, the northern (Former Oxbow Area J) portion of GMA 2 is downgradient from parts of both GMA 1 and GMA 4. Specifically, groundwater from the eastern portion of GMA 1 appears to flow toward the Housatonic River across the western portion of GMA 2, while groundwater from the western and central portions of GMA 4 flows across the central and eastern sections of GMA 2. A groundwater divide generally extending north to south has been identified along the southern boundary of GMA 4, with its

high point at well 78-5R. This divide appears to extend southward to East Street, as evidenced by a three- to four-foot groundwater elevation difference between wells OJ-MW-1 and GMA4-5. This groundwater divide serves to limit groundwater migration from the eastern portion of GMA 4 toward GMA 2.

In addition, monitoring for the potential presence of NAPL was performed as part of these well gauging events. No NAPL was observed during these monitoring events or any of the previous monitoring events conducted by GE at GMA 2.

2.3 Groundwater Sampling and Analysis

Groundwater samples were collected from the nine existing GMA 2 wells subject to long term monitoring between April 25 and 29, 2008. Samples were collected for analysis for the constituents shown in Table 1.

Low-flow sampling techniques using a bladder pump or peristaltic pump were utilized for purging the wells and collection of groundwater samples during this sampling event. Each monitoring well was purged utilizing low-flow sampling techniques until field parameters (including temperature, pH, specific conductivity, oxidation-reduction potential, dissolved oxygen, and turbidity) stabilized. Field parameters were measured in combination with the sampling activities at the monitoring wells. The field parameter measurements are presented in Table 4 and the field sampling records are provided in Appendix A. A general summary of the field measurement results during the spring 2008 monitoring event is provided below:

Parameter	Units	Range
Turbidity	Nephelometric turbidity units (NTU)	1 to 13
pH	pH units	6.65 to 7.49
Specific Conductivity	Millisiemens per centimeter	0.338 to 4.693
Oxidation-Reduction Potential	Millivolts	-41.0 to 217.2
Dissolved Oxygen	Milligrams per liter	0.45 to 5.62
Temperature	Degrees Celsius	7.23 to 10.08

As shown above, for this sampling event, none of the groundwater extracted from the monitoring wells had turbidity levels greater than 13 NTU. These results indicate that the 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) in Wilmington, North Carolina for laboratory analysis. The samples from wells GMA2-10, and OJ-MW-2 were analyzed for VOCs (using EPA method 8260B) while filtered samples from wells GMA2-1, GMA2-2, GMA2-3, GMA2-4, GMA2-6, GMA2-9, and J1-R were analyzed for PCBs (using EPA method 8082).

Following receipt of the analytical data on the GE samples from the laboratory, the preliminary results were reviewed for completeness and compared to the Massachusetts Contingency Plan (MCP) Method 1 GW-2 (where applicable) and GW-3 standards, and to the MCP Upper Concentration Limits (UCLs) for groundwater. The preliminary analytical results were presented in the next monthly report on overall activities at the GE-Pittsfield/Housatonic River Site, along with the identification, when applicable, of sample results above the applicable MCP Method 1 standards and/or UCLs.

Finally, the data were validated in accordance with the FSP/QAPP and the validated results were utilized in the preparation of this report. As discussed in the validation report provided as Appendix D, 99.9% of the spring 2008 groundwater quality data are considered to be useable, which is greater than the minimum required usability of 90% as specified in the FSP/QAPP. The PCB sample results were found to be 100% usable. VOC sample results were found to be 99.7% usable. The only rejected data were the VOC results for 2-chloroethylvinylether from one groundwater sample (OJ-MW-2), which was rejected due to MS/MSD recovery deviations.

3. Spring 2008 Groundwater Analytical Results

3.1 General

A description of the spring 2008 groundwater analytical results is presented in this section. Tables 5 and 6 provide a comparison of the concentrations of all detected constituents with the currently applicable groundwater quality Performance Standards established in the CD and SOW, while Table 7 presents a comparison of the concentrations of detected constituents with the UCLs for groundwater. These Performance Standards are described in Section 3.2 below and an assessment of the spring 2008 results relative to those groundwater quality Performance Standards and the UCLs is provided in Section 3.4.

3.2 Groundwater Quality Performance Standards

The Performance Standards applicable to response actions for groundwater at GMA 2 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 2 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 (bgs) 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 ultimately discharge to surface water. In accordance with the CD and SOW, all groundwater at GMA 2 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 2. The current MCP Method 1 GW-2 and GW-3 standards for the constituents detected in the spring 2008 sampling event are listed in Tables 5 and 6, respectively.

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.

In its October 9, 2007 conditional approval letter, EPA required GE to discuss the baseline analytical results for two inorganic constituents for which Method 1 GW-3 standards do not exist and to either develop Method 2 GW-3 standards for those constituents or explain why such standards are not necessary. Specifically, in the Fall 2007 Monitoring Report, and addressed further in the Fall 2007 Addendum, GE calculated low-, mid-, high-range guidance values for copper and cobalt to approximate potential ranges of Method 2 GW-3 standards for these substances and demonstrated that the establishment of definitive Method 2 GW-3 standards for these substances is not necessary at this GMA since a comparison of the of these guidance values with the baseline monitoring results shows that the maximum cobalt and copper concentrations observed at GMA 2 were well below the most conservative potential low-range guidance values that were calculated. Those values are as follows:

Constituent	Low-Range Guidance Value	Mid-Range Guidance Value	High-Range Guidance Value
Copper	0.225 mg/L	2.25 mg/L	9 mg/L
Cobalt	0.075 mg/L	0.75 mg/L	3 mg/L

In its July 30, 2008 conditional approval letter, EPA concurred with GE's conclusion that no additional monitoring related to cobalt or copper is warranted at GMA 2, but also specified that the low-range guidance values should represent the Method 2 GW-3 standards for these metals at all of the GE Pittsfield GMAs.

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.

On February 14, 2008 MDEP implemented revised Method 1 numerical standards for a number of constituents in groundwater, and this report constitutes the first report at this GMA for which those standards will be applied.

Based on consideration of the above points, the specific groundwater quality Performance Standards for GMA 2 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);

    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. Those compliance wells that are sampled under the long-term monitoring program are identified in Table 1. As shown in that table, compliance with the applicable performance standards at several other wells has been verified during performance of the baseline monitoring program at GMA 2.

In addition to the Performance Standards described above, analytical results from all groundwater monitoring wells sampled during the spring 2008 sampling event were compared to the MCP UCLs for groundwater.

3.3 Spring 2008 Groundwater Quality Results

The following subsections provide an overview of the spring 2008 analytical results from the GMA 2 monitoring wells for each constituent group that was analyzed.

3.3.1 VOC Results

Groundwater samples collected from two groundwater quality monitoring wells were analyzed for VOCs during the spring 2008 sampling event. The VOC analytical results are summarized in Table 7 (for detected constituents compared to MCP UCLs for groundwater) and Table B-1 of Appendix B (for all constituents analyzed). No VOCs were detected at well GMA2-10 during the spring 2008 sampling event. Trichloroethene (TCE) and vinyl chloride were detected at well OJ-MW-2 at a concentration of 0.012 parts per million (ppm), and an estimated concentration of 0.00095 ppm, respectively. This is the first time that vinyl chloride has been detected in well OJ-MW-2 (although at an extremely low level). As shown in Tables 5 and 6 and discussed below, no VOCs were detected at levels exceeding the applicable Method 1 GW-2 or Method 1 GW-3 standards during the spring 2008 sampling round.

3.3.2 PCB Results

Filtered groundwater samples from seven wells were analyzed for PCBs as part of the spring 2008 sampling event. The PCB analytical results are presented in Tables 7 and Table B-1 of Appendix B. PCBs were not detected at any of the seven sampling locations.

3.4 Evaluation of Groundwater Quality – Spring 2008

For the purpose of assessing current groundwater conditions, the analytical results from the spring 2008 groundwater sampling event were compared to the applicable groundwater Performance Standards for GMA 2. These Performance Standards are described in Section 3.2 above and are currently based on the MCP Method 1 GW-2 and/or GW-3 standards. The following subsections discuss the spring 2008 groundwater analytical results in relation to these Performance Standards, as well as in relation to the MCP UCLs for groundwater. In support of those discussions, Tables 5 and 6 provide a comparison of the concentrations of detected constituents with the currently applicable GW-2 and GW-3 standards, respectively, while Table 7 presents a comparison of the concentrations of detected constituents with the groundwater UCLs.

3.4.1 Spring 2008 Groundwater Results Relative to GW-2 Performance Standards

During the spring 2008 interim groundwater quality monitoring event at GMA 2, groundwater samples collected from two wells designated as GW-2 monitoring locations (i.e., wells GMA2-10 and OJ-MW-2) were analyzed for VOCs to assess compliance with the GW-2 Performance Standards. In addition, wells GMA2-2 and GMA2-3, which are designated as GW-2/GW-3 monitoring locations, were scheduled for sampling and analysis for PCBs (for which an associated GW-2 standard was promulgated by MDEP in February 2008) under this long-term monitoring program due to their GW-3 designation. Therefore, in light of the new MCP Method 1 GW-2 standard for PCBs, and pursuant to discussions with EPA, a comparison of the filtered PCB results from these wells to the new GW-2 PCB standard was also performed.

The spring 2008 groundwater analytical results for all detected constituents subject to MCP Method 1 GW-2 standards are presented in Table 5, along with a comparison of those results to the applicable GW-2 standards. No VOCs were detected in well GMA 2-10. TCE, and vinyl chloride were the only VOCs detected in well OJ-MW-2, at concentrations well below their respective GW-2 standards. No PCBs were detected at wells GMA2-2 or GMA2-3.

Neither of the two GW-2 wells analyzed for VOCs exhibited total VOC concentrations above 5 ppm (the level specified in the SOW as a notification level for GW-2 wells located within 30 feet of a school or occupied residential structure and as a trigger level for the proposal of interim response actions).

3.4.2 Spring 2008 Groundwater Results Relative GW-3 Performance Standards

Groundwater samples were collected from nine wells designated as GW-3 monitoring points during the spring 2008 interim sampling event. The spring 2008 groundwater analytical results for all constituents detected in these wells and a comparison of those results with MCP Method 1 GW-3 standards are presented in Table 6 (although Method 2 GW-3 standards have been developed and implemented for cobalt and copper as discussed in Section 3.2, there was no need to analyze groundwater samples for those constituents at GMA 2). The comparisons set forth in Table 6 show that no constituents were found at levels above their respective MCP Method 1 GW-3 standards in groundwater samples collected in spring 2008. It should be noted that the MCP GW-3 standard for PCBs was increased from 0.0003 ppm to 0.01 ppm as part of the February 14, 2008 revisions. Although no PCBs were detected in any filtered samples analyzed in spring 2008, all prior results from GMA 2 that were recorded as exceedances of the prior standard are well below the new standard of 0.01 ppm.

3.4.3 Comparison of Spring 2008 Groundwater Results to Upper Concentration Limits

In addition to comparing the spring 2008 groundwater analytical results with applicable MCP Method 1 GW-2 and GW-3 standards, the analytical results from all wells that were sampled were compared with the UCLs for groundwater specified in the MCP (310 CMR 40.09996(7)). These comparisons, presented in Table 7, show that none of the detected constituents exceeded its respective UCL.

3.5 NAPL Evaluation

Consistent with prior monitoring results, no NAPL was observed in any of the GMA 2 monitoring wells during the groundwater elevation and sampling activities conducted in spring 2008.

During the Long-Term Monitoring Program, if NAPL is observed to be discharging to any surface water or creating a sheen on the water in a location in which such NAPL discharge was not previously observed or measures are not in place to effectively contain the sheen, GE will notify EPA and MDEP within two hours of obtaining knowledge of such observation. This will be followed by written notice to EPA within seven (7) days. The written notification will include a proposal to EPA for interim response actions to contain such discharge. Upon EPA approval, GE will conduct the approved interim response actions to contain the NAPL discharge.

Also under the approved GMA 2 Long-Term Monitoring Proposal, if NAPL is observed to be discharging to any surface water or creating a sheen on the water in a location in which such NAPL discharge was previously observed and measures are in place to contain the sheen, GE will notify EPA of the continued presence of such NAPL in the next monthly progress report for overall work at the Site.

For groundwater, if a NAPL thickness of greater than or equal to 1/2-inch is observed in any monitoring well, GE will notify EPA and MDEP within seventy-two hours of obtaining knowledge of such a condition, unless such conditions are consistent with the types, nature, and quantities of NAPL which were previously observed and reported to the Agencies. This notification will be followed by written notice to the EPA within 60 days. The written notification will include a proposal to EPA for interim response actions to be conducted which may include NAPL sampling, additional assessment/monitoring, or NAPL removal activities. Upon EPA approval, GE will conduct the approved interim response actions. If a NAPL thickness of greater than or equal to 1/8-inch, but less than 1/2-inch is observed in a monitoring well, GE will notify EPA and MDEP in the next monthly progress report, unless the results are consistent with the types, nature, and quantities of NAPL which have previously been observed and reported to the Agencies.

4. Assessment of Groundwater Quality

4.1 General

This report constitutes the second monitoring event evaluation report submitted since commencement of the GMA 2 long-term groundwater monitoring program. The information presented herein is based on the laboratory results obtained during the course of the GMA 2 baseline and long-term groundwater monitoring programs.

For the purpose of assessing overall groundwater conditions at GMA 2, the analytical results from the spring 2008 groundwater sampling event were compared to the applicable groundwater Performance Standards for GMA 2, as described in Section 3.4 above. In addition, GE has compared the spring 2008 results to prior data to evaluate variations and/or potential trends in constituent concentrations in GMA 2 groundwater.

The following sections present the results of those overall assessments of groundwater quality, including an evaluation of the need for follow-up investigations, assessments, interim response actions, or other modifications to the long-term monitoring program.

4.2 Evaluation of Variations in Groundwater Quality

For the purpose of assessing current groundwater conditions, the analytical results from the spring 2008 groundwater sampling event were compared to prior baseline and long-term sampling events. In addition, the variability of the data was evaluated. The results of these comparisons are described below.

4.2.1 Comparison of Spring 2008 Analytical Results to Prior Data

Graphs illustrating historical total VOC and total PCB concentrations for all wells sampled and analyzed for those constituents during spring 2008 at GMA 2 are presented in Appendix D. In addition, Appendix D contains a graph of historical concentrations of historical TCE concentrations at well OJ-MW-2, as this well is included in the long-term monitoring program primarily to assess TCE concentrations in that portion of the GMA.

VOCs have been detected at well OJ-MW-2 during each monitoring round since the inception of the baseline monitoring program in fall 2002. During the spring 2008 sampling event, vinyl chloride was detected in well OJ-MW-2 for the first time. However, the concentration of vinyl chloride was at an estimated concentration of 0.00095 ppm, an order of magnitude below the GW-2 standard of 0.002 ppm. Previously, TCE was the only VOC detected at this well. The spring 2008 concentration of TCE (0.012 ppm) is within the range observed during prior baseline and long-term sampling events (i.e., 0.0029 ppm to 0.015

ppm) and is slightly above the average observed concentration of 0.0103 ppm. No VOCs were detected at well GMA2-10 in spring 2008; compared to the initial sampling event at this well in fall 2007, when trans-1,2-dichloroethene and vinyl chloride were detected at estimated concentrations of 0.00034 ppm and 0.00047 ppm, respectively.

PCBs were not detected at any of the wells where filtered samples were analyzed for PCBs during the spring 2008 sampling event. As illustrated on the graphs contained in Appendix D, all prior detections of PCBs have been significantly below the new MCP GW-2 standard (where applicable) and revised MCP GW-3 standard for PCBs.

4.2.2 Comparison of Spring 2008 Analytical Results to Previous Sampling Round

Table D-2 in Appendix D presents a comparison of the spring 2008 analytical results to the most recent spring sampling data collected from each well for constituents that were analyzed during the spring 2008 sampling event. Since some, but not all, wells were sampled during the interim monitoring program, the historical data used in these comparisons did not originate from the same sampling event at all locations. Well GMA2-10 is not included in that table since the spring 2008 results represented the initial spring sampling round at that location.

As seen in Table D-2, total VOC (0.013 ppm) and TCE (0.012 ppm) concentrations in well OJ-MW-2 in spring 2008 are slightly lower than the last sampling event, during fall 2007, and the historical highs of 0.015 ppm (for both total VOCs and TCE). The spring 2008 total VOC concentration was slightly higher than the historical average of 0.0105 ppm. TCE comprises 0.012 ppm of the total 0.013 ppm VOCS in this well in spring 2008, as discussed further in Section 4.3. Generally, there have been no significant changes in TOC or TCE concentrations in this well.

Table D-2 also compares the spring 2008 PCB results to the most recent prior spring sampling events. As discussed above, PCBs were not detected during the spring 2008 event, which is consistent with the most recent spring data from wells GMA2-1 (spring 2007) and well GMA2-4 (spring 2006). All of the remaining wells had PCB detections in the prior spring sampling events conducted in 2003 (wells GMA2-2, GMA2-3, GMA2-6, and J-1R) or 2006 (well GMA2-9). As seen in that table and on the historical PCB concentration graphs presented in Appendix D, the spring 2008 PCB concentrations were significantly less than the prior spring sampling events at locations where PCBs had been detected.

4.2.3 Evaluation of Variability in Data

To evaluate the potential presence of seasonal trends in the groundwater quality data at GMA 2, GE has reviewed the analytical data from the wells included in the long-term monitoring program. Inspection of the historical concentration graphs contained in Appendix D indicates that the variabilities in the data collected in the spring vs. fall seasons at GMA 2 are within the same order of magnitude for TCE, total PCBs, and total VOCs. Based on these preliminary evaluations, it does not appear that seasonal variability is significantly affecting the results at GMA 2.

4.3 Statistical Assessment of Data

To assess potential trends in groundwater constituent concentrations over time (i.e., long-term increasing or decreasing concentrations) as well as seasonal cycles, various statistical methods can be utilized depending on the extent of the overall sampling period and the frequency of sampling events within the sampling period. Graphical representations such as a simple plot of concentration data versus time may reveal long-term cyclical patterns as well as pulses, both of which may explain temporal trends. As described in the GMA 2 Long-Term Monitoring Proposal, three statistical techniques may be utilized to evaluate temporal trends in GMA 2 groundwater and to determine the statistical significance of any potential trends that are identified: (1) Mann-Kendall Test; (2) Sen's slope estimator; and (3) Seasonal Kendall Tau estimator. The need for such statistical evaluations will be assessed as the long-term monitoring program progresses and will be summarized in the Long-Term Trend Evaluation Reports for GMA 5 as appropriate.

In addition to the concentration versus time graphs discussed above, GE has prepared a general summary of the analytical results for all wells/constituents included in the long-term monitoring program. The summary statistics of the analytical data for the GMA 2 wells where long-term monitoring is being conducted are contained in Appendix E and are discussed below.

Two monitoring wells (GMA2-10 and OJ-MW-2) are analyzed for VOCs as part of the long-term monitoring program. As well GMA2-10 was just installed in fall 2007, the statistical summary shown in Table E-7 of Appendix E is limited to the first two monitoring events performed at that well. The two VOCs that have been detected at this well were observed at concentrations an order of magnitude or more below the applicable GW-2 standards. As shown in Table E-9 in Appendix E, TCE has been detected at well OJ-MW-2 during each of six sampling events that have been conducted and, until spring 2008, was the only VOC that has been found at this location. The maximum TCE concentration observed (0.015 ppm) is equal to one-half of the applicable GW-2 standard for this constituent (0.03 ppm). The average TCE concentration at well OJ-MW-2 (0.0103) is less than one-half of that

standard and similar to the concentration observed in spring 2008. Vinyl chloride was detected at this well for the first time in spring 2008 at an estimated concentration of 0.00095 ppm, which is an order of magnitude below the applicable GW-2 standard of 0.002 ppm for this constituent.

As shown in the statistical breakdown tables presented in Appendix E, PCBs have been detected during approximately one-third to one-half of the sampling events conducted at each of the seven wells included in the long-term monitoring program for that constituent. No PCBs were detected in any of these wells in spring 2008. The maximum detected concentrations of PCBs are at least an order of magnitude below the new GW-2 (where applicable) and revised GW-3 standards (0.005 ppm and 0.010 ppm, respectively) at all GMA 2 wells.

4.4 Overall Assessment of Groundwater Quality Data

A limited number of constituents have been sporadically detected in groundwater at GMA 2. Specifically, low levels of certain VOCs and PCBs are detected at several locations in GMA 2. In general, higher constituent concentrations and more frequent detections have been observed in the central and western portions of Oxbow Areas J and K (although PCBs and inorganic constituents were detected at various locations within each former oxbow area). The long-term groundwater quality monitoring program is focused on those areas.

The following subsections provide an overview of the groundwater quality data at GMA 2, focused on the constituents and locations that are included in the long-term monitoring program and/or were sampled in spring 2008. In addition, the spring 2008 results at GMA 2 are assessed relative to monitoring results from the portions of GMA 1 and GMA 4 that are adjacent to and upgradient of GMA 2 and were also sampled in spring 2008. Specifically, available VOC and PCB data from wells from the eastern portion of GMA 1 (i.e., wells ES1-5 and GMA1-18) and the western portion of GMA 4 (i.e., well H78B-13R) were compared with data from the western portion of the Former Oxbow Area J portion of GMA 2 (i.e., wells GMA2-1, GMA2-2, GMA2-3, GMA2-6, GMA2-10, and J-1R) and downgradient data from the central (i.e., well OPCA-MW-3) and eastern (i.e., wells H78B-16, and H78B-17R) portions of GMA 4 were compared with data from the eastern portion of the Former Oxbow Area J portion of GMA 2 (i.e., well OJ-MW-2). Although groundwater from wells H78B-16 and H78B-17R most likely does not flow across GMA 2 due to the presence of a groundwater divide between the two areas, GE has included these wells in its analysis as a conservative measure. Well OPCA-MW-3 is also located along the center to western portion of this divide, but is the nearest well to the central region of GMA 4 that was sampled in spring 2008, as well OPCA-MW-2 was decommissioned prior to the spring 2008 sampling event. A replacement well (OPCA-MW-2R) was installed in July 2008 and will be used to represent this area in future comparisons with downgradient data at GMA 2. The

spring 2008 analytical results for total PCBs (filtered samples), total VOCs, and selected VOCs utilized in this assessment are summarized on Figure 5, along with average historical concentrations of those constituents and the regional groundwater flow contours (also presented on Figure 4).

4.4.1 VOCs

Two wells were included in the spring 2008 long-term sampling event for VOC analysis (i.e., well GMA2-10, located in the western portion of Former Oxbow Area J and well OJ-MW-2, located in the eastern portion of Former Oxbow Area J). Well GMA2-10 was installed and sampled for the first time in fall 2007 to satisfy an EPA requirement to assess groundwater conditions near an existing building in this area. No VOCs were detected in well GMA2-10 during the spring 2008 sampling event, compared to fall 2007, where trace concentrations of two VOCs (trans-1,2-dichloroethene and vinyl chloride) were detected in the samples analyzed from this well, each at levels well below the applicable GW-2 standard.

No wells in the portions of adjacent GMAs 1 or 4 upgradient from well GMA2-10 were analyzed for VOCs in spring 2008. However, trans-1,2-dichloroethene and vinyl chloride have been detected at GMA 1 well ES1-5 (at levels well below the applicable Performance Standards) during each of four prior sampling events were VOC analyses were performed. These VOCs have never been detected at GMA 4 well H78B-13 or H78B-13R.

Total VOC concentrations at well OJ-MW-2 represent the combined concentrations of TCE and vinyl chloride, the two volatile constituents detected in this well in spring 2008. TCE has been detected in well OJ-MW-2 during each sampling round, as shown in the graph in Appendix D. The concentration of TCE detected in this well has never exceeded the GW-2 standard of 0.03 ppm and was detected at approximately the average historical concentration in spring 2008. Vinyl chloride was detected at this well for the first time in spring 2008 at an estimated concentration of 0.00095 ppm, well below the GW-2 criteria of 0.002 ppm. This well currently meets the criterion for demonstrating achievement of the Performance Standards, as there have been four consecutive sampling events showing results below the applicable standards. However, GE will continue to collect additional VOC data from this well during the long-term monitoring program.

The only well in the central portion of GMA 4 upgradient from well OJ-MW-2 that was analyzed for VOCs in spring 2008 was well OPCA-MW-3. No VOCs were detected in that sample and neither TCE or vinyl chloride has ever been detected at that well. As shown on Figure 5, TCE was detected in the two most downgradient wells sampled to the east of the groundwater divide at GMA 4 (i.e., wells H78B-16 and H78B-17R) in spring 2006. The spring 2008 TCE concentrations at those GMA 4 wells were approximately three to seven times greater than observed at GMA 2 and a comparison of the historical average TCE

concentrations shows a slightly greater disparity between the two areas. Well H78B-16 also contained detectable levels of several other VOCs, including vinyl chloride. Although these wells appear to be hydraulically separated from GMA 2, GE will continue to assess the concentrations of VOCs at these wells relative to the eastern portion of GMA 2 in future monitoring event evaluation reports during which the wells are sampled.

4.4.2 PCBs

Seven wells were included in the spring 2008 long-term sampling event for PCB analysis. No PCBs were detected in filtered samples analyzed from any of these wells. As discussed in Section 4.3 above, PCBs have been detected during approximately one-third to one-half of the sampling events conducted at these wells, where samples have been analyzed for PCBs during four to eleven prior sampling events. No PCBs were detected in any of these wells in spring 2008. The maximum detected concentrations of PCBs are at least an order of magnitude below the new GW-2 (where applicable) and revised GW-3 standards (0.005 ppm and 0.010 ppm, respectively) at all GMA 2 wells.

Three wells in the portions of adjacent GMA 1 (i.e., wells ES1-5 and GMA1-18) and GMA 4 (i.e., well H78B-13R) upgradient from the western portion of the Former Oxbow Area J portion of GMA 2 were analyzed for PCBs in spring 2008. As at GMA 2, no PCBs were detected in any of those locations, nor at well OPCA-MW-3 within the central portion of GMA 4. The nearest upgradient detection of PCBs was at GMA 4 well OPCA-MW-6, where the total PCB concentration was well below the applicable Method 1 standard. This well is located to the east of the groundwater divide across GMA 4 and approximately 500 feet from the downgradient boundary of that GMA.

4.5 Evaluation of the Need for Follow-up Investigations, Assessments, or Interim Response Actions

As stated in the GMA 2 Long-Term Monitoring Proposal, the analytical data obtained during the baseline monitoring programs did not reveal any significant data gaps concerning groundwater quality that would suggest the need for any further investigations or assessments, other than the installation of new well GMA2-10 near the building to the east of GW-2 sentinel well GMA2-6. Likewise, a review of the spring 2008 long-term monitoring data does not indicate the need for additional actions beyond the approved long-term monitoring activities.

In spring 2008, the detected concentrations were generally very low in relation to any applicable GW-2 or GW-3 standards, and PCBs were not detected at all. Based on the results during the spring 2008 sampling round, there have been no wells at which any detected concentration suggests the need for an interim response action apart from

continued long-term monitoring at certain of these locations. If any exceedances of the groundwater-related Performance Standards are observed at GMA 2, GE will evaluate the need for appropriate response actions and will propose any necessary actions for EPA approval.

The following subsections contain GE's evaluation of the effect on the long-term groundwater quality monitoring program of the recent revisions to the MCP Method 1 standards and UCLs for groundwater that became effective on February 14, 2008, and a description of GE's proposed modifications to the monitoring program. In light of the new standards, GE has re-evaluated the analytical results from all GMA 2 monitoring wells to determine whether, and, if so, how the new Performance Standards should alter the wells and/or parameters included in the long-term monitoring program. The results of that evaluation and resulting proposed program modifications are discussed below.

4.5.1 Proposed Monitoring Program Modifications

In the GMA 2 Long-term Monitoring Proposal, GE presented an evaluation of the baseline monitoring results from GMA 2 and proposed to retain certain wells for selected analyses in the long-term monitoring program in order to confirm whether or not the Performance Standards have been attained at this GMA. Specifically, locations were proposed for inclusion in this program if:

- Exceedances of applicable MCP GW-2 or GW-3 standards were reported during the baseline monitoring program.

- The well is located downgradient of a location where exceedances of applicable MCP GW-2 or GW-3 standards were reported during the baseline monitoring program.

- A review of the available data indicates the potential presence of an increasing trend in the concentrations of certain constituents at levels approaching the applicable MCP GW-2 or GW-3 standards

Additional monitoring locations were added to the long-term monitoring program as a result of EPA requirements contained in its conditional approval of the GMA 2 Long-term Monitoring Proposal.

Section 7.3 of Attachment H to the SOW states that GE may discontinue long-term monitoring at particular wells within any GMA if the results of four consecutive groundwater monitoring events show no exceedances of the relevant Performance Standards and other reasons do not exist for retaining the wells in the long-term monitoring program (e.g., presence of NAPL in the well or constituent concentrations exceeding the applicable

Performance Standards in upgradient groundwater). This provision of Attachment H therefore provides the basis upon which GE initially identified monitoring points and constituents to be analyzed in the long-term monitoring program.

In light of the recent revisions to the MCP that became effective on February 14, 2008, GE has repeated this evaluation, comparing all baseline and long-term groundwater quality data to the new MCP Method 1 Standards. As a result, GE has identified several locations that consistently meet the revised Performance Standards and therefore proposes to remove those locations from the long-term monitoring program. These modifications are discussed below. In particular, a comparison to the new Method 1 GW-3 standard for PCBs (0.010 ppm) demonstrates that all locations comply with with the GW-3 standard. Therefore, there is no need for further GW-3 monitoring for PCBs, as proposed below.

In addition, as a new Method 1 GW-2 standard for PCBs has been promulgated in the 2008 MCP revision, GE evaluated the existing data from the GW-2 wells at GMA 2 to determine if additional sampling would be required to verify compliance with this new standard. As agreed with EPA, GE used filtered PCB results for this comparison. GE found that the existing PCB database for several monitoring wells was sufficient, but that one well monitored solely for GW-2 compliance has not been analyzed for PCBs. As such, GE proposes below to conduct additional sampling for PCBs at that location. A summary of the proposed modified long-term sampling program for GMA 2 is provided in Table 8, and the locations where sampling is proposed are illustrated on Figure 6.

For PCBs, the interim monitoring program is proposed to be modified, as discussed below, based upon the revisions to the Method 1 standards.

- Average (and maximum) filtered PCB concentrations are well below the new MCP GW-3 standard (and below the GW-2 standard, where applicable) at all of the wells that are currently analyzed for PCBs under the long-term monitoring program. As such, GE proposes that PCB analyses be discontinued at all of these locations (i.e., wells GMA2-1, GMA2-2, GMA2-3, GMA2-4, GMA2-6, GMA2-9, and J-1R) that had been included in the long-term monitoring program because particular samples exceeded the the prior GW-3 standard for PCBs, and three monitoring wells located downgradient of those locations (i.e., wells GMA2-2 and GMA2-6, located downgradient from well GMA2-1, and well J-1R, located downgradient from well GMA2-3).

- For all monitoring wells monitored for comparison to both GW-2 and GW-3 standards (i.e., wells GMA2-2, GMA2-3, GMA2-5, and OJ-MW-2), sufficient historical PCB data (i.e., at least four sampling events) exist to evaluate the wells against the new MCP GW-2 standard for PCBs. All filtered PCB concentrations from these locations are well below this new standard and no additional PCB sampling is proposed based on the promulgation of the GW-2 standard at these wells.

- PCB sampling is proposed at GW-2 monitoring well GMA2-10. This well was installed in fall 2007 and has been sampled solely for VOCs during the initial two rounds of the long-term monitoring program. As such, this well is proposed to be sampled and analyzed for PCBs for comparison to the new GW-2 standard on a semi-annual basis until four sets of PCB data have been collected. At that time, GE will evaluate the data and propose whether to continue long-term monitoring for PCBs. As agreed with EPA, GE will analyze filtered groundwater samples for comparison with the GW-2 standard.

With regard to GW-2 standards, no exceedances of the revised GW-2 standards were observed at any of the GMA 2 GW-2 wells during the baseline or long-term monitoring periods. Therefore, there is no basis for modifying the long-term monitoring program based on GW-2 considerations, other than as specified above. Although the historical VOC concentrations from wells GMA2-10 and OJ-MW-2 are also below the revised GW-2 standards for all constituents detected, GE will continue to perform sampling and VOC analyses during future long-term sampling events at these wells.

Likewise, with regard to GW-3 standards, GE has reviewed the historical groundwater quality data at GMA 2 and has confirmed that all wells comply with the GW-3 Performance Standards based on the revised Method 1 standards. As such, no additional GW-3-based sampling is proposed during the long-term monitoring program. However, VOC data from GW-2/GW-3 well OJ-MW-2 collected to assess compliance with the GW-2 Performance Standard will also continue to be compared to the the GW-3 Performance Standards in future monitoring event evaluation reports.

Finally, GE will continue to monitor groundwater elevations at the GMA 2 wells and river gauge on a semi-annual basis. In addition, in order to further assess groundwater flow conditions in the vicinity of GMA 2, GE will collect groundwater elevation data from selected wells at adjacent GMAs on the same date that the GMA 2 monitoring is performed. The wells to be monitored concurrently with GMA 2 include:

- GMA 1 wells: 139R, ES1-5, ES1-20, and GMA1-18.
- GMA 4 wells: 78-4, 78-5R, GMA4-1, GMA4-4, H78B-13R, H78B-15, H78B-16, H78B-17R, NY-2, OPCA-MW-1RR, OPCA-MW-2R, OPCA-MW-3, OPCA-MW-4, and OPCA-MW-6.
- Commercial Street Site well GMA4-5.

5. Schedule of Future Activities

5.1 Field Activities Schedule

If approved by EPA, GE will conduct the fall 2008 long-term groundwater quality sampling event at the locations listed in Table 8 in October/November 2008. A round of groundwater elevation monitoring at the GMA 2 wells where such monitoring is required will also be performed at that time.

Prior to performance of these field activities, GE will provide EPA with 7 days advance notice to allow the assignment of oversight personnel. The schedule discussed above was developed under the assumption that GE will be able to obtain permission from the owners of the properties that comprise GMA 2 to conduct the monitoring and sampling activities in advance of their estimated performance dates. If that is not the case, GE will notify EPA of potential schedule impacts due to delays in obtaining such access to the properties.

5.2 Reporting Schedule

GE will continue to provide the results of preliminary groundwater analytical data in its monthly reports on overall activities at the GE-Pittsfield/Housatonic River Site. Those reports will also document the schedules for submittal of the Monitoring Event Evaluation Reports and Long-Term Trend Evaluation Reports, which are contingent upon receipt of the final analytical data packages from the groundwater sampling events, as discussed below.

In accordance with the previously-approved reporting schedule for this GMA, GE proposes to submit the Fall 2008 Monitoring Event Evaluation Report for GMA 2 within 60 days following receipt of the final analytical data packages from the event. That report will present the final, validated fall 2008 sampling results and a brief discussion of the results, including the evaluations of the data and any proposals to further modify the long-term monitoring program, if necessary.

Subsequent semi-annual Monitoring Event Evaluation Reports for GMA 2 will be submitted within 60 days following receipt of the final analytical data packages from each event.

In addition, as previously approved by EPA, a Long-Term Trend Evaluation Report will be submitted in place of a Monitoring Event Evaluation Report, at the completion of the fall 2009 sampling round. Subsequent Long-Term Trend Evaluation Reports for GMA 2 will be prepared at two-year intervals over the duration of the long-term monitoring program at GMA 2. Each such report will be submitted within 75 days following receipt of the final analytical data packages from the latest monitoring event included in the two-year evaluation cycle.

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Tables

Table 1
Spring 2008 Groundwater Quality Monitoring Program

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts

Well Number	Monitoring Well Usage	Sampling Schedule	Spring 2008 Analyses	Comments
GMA2-1	GW-3 Perimeter (GW-3 Compliance Well)	Semi-Annual	PCB	Long-term monitoring conducted to verify attainment of GW-3 Performance Standards for PCBs
GMA2-2	GW-2 Sentinel/GW-3 Perimeter (GW-3 Compliance Well)	Semi-Annual	PCB	Long-term monitoring conducted to verify attainment of GW-3 Performance Standards for PCBs
GMA2-3	GW-2 Sentinel/GW-3 Perimeter (Upgradient Well)	Semi-Annual	PCB	Long-term monitoring conducted to verify attainment of GW-3 Performance Standards for PCBs
GMA2-4	GW-3 Perimeter (GW-3 Compliance Well)	Semi-Annual	PCB	Long-term monitoring conducted to verify attainment of GW-3 Performance Standards for PCBs
GMA2-5	Groundwater Elevation Monitoring	None	None	Attainment of GW-2 and GW-3 Performance Standards verified during baseline monitoring program - no additional groundwater quality monitoring required.
GMA2-6	GW-3 Perimeter (GW-3 Compliance Well)	Semi-Annual	PCB	Long-term monitoring conducted to verify attainment of GW-3 Performance Standards for PCBs
GMA2-7	Groundwater Elevation Monitoring	None	None	Attainment of GW-3 Performance Standards verified during baseline monitoring program - no additional groundwater quality monitoring required.
GMA2-8	Groundwater Elevation Monitoring	None	None	Attainment of GW-3 Performance Standards verified during baseline monitoring program - no additional groundwater quality monitoring required.
GMA2-9	GW-3 Perimeter (GW-3 Compliance Well)	Semi-Annual	PCB	Long-term monitoring conducted to verify attainment of GW-3 Performance Standards for PCBs
GMA2-10	GW-2 Sentinel (GW-2 Compliance Well)	Semi-Annual	VOC	Long-term monitoring conducted to verify attainment of GW-2 Performance Standards for VOCs.
J-1R	GW-3 Perimeter (GW-3 Compliance Well)	Semi-Annual	PCB	Long-term monitoring conducted to verify attainment of GW-3 Performance Standards for PCBs
OJ-MW-1	Groundwater Elevation Monitoring (Upgradient well)	None	None	Utilized solely as groundwater elevation monitoring point.
OJ-MW-2	GW-2 Sentinel/GW-3 Perimeter (GW-2/GW-3 Compliance Well)	Semi-Annual	VOC	Long-term monitoring conducted to verify attainment of GW-2 Performance Standards for VOCs.
Staff Gauge	Surface Water Elevation Monitoring	None	None	Utilized solely as surface water elevation monitoring point.

Notes:

1. The above wells were sampled for the listed parameters during the long-term groundwater quality sampling event conducted in spring 2008.
2. The remaining wells and staff gauge were utilized for groundwater and surface water elevation monitoring only.

Table 2
Monitoring Well Construction

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts

Well Number	Survey Coordinates		Well Diameter (inches)	Ground Surface Elevation (feet AMSL)	Measuring Point Elevation (feet AMSL)	Depth to Top of Screen (feet BGS)	Screen Length (feet)	Top of Screen Elevation (feet AMSL)	Base of Screen Elevation (feet AMSL)	Average Depth to Groundwater (feet BGS)	Average Groundwater Elevation (feet AMSL)
	Northing	Easting									
GMA2-1	534402.60	135510.20	2.00	988.30	991.36	13.80	10.00	974.50	964.50	12.25	976.05
GMA2-2	534264.30	135725.00	2.00	988.10	991.19	12.94	10.00	975.16	965.16	13.94	974.16
GMA2-3	534303.30	135295.50	2.00	991.59	991.48	8.59	10.00	983.00	973.00	14.66	976.93
GMA2-4	534167.60	135730.00	2.00	980.30	983.41	5.20	10.00	975.10	965.10	5.56	974.74
GMA2-5	533956.60	135712.80	2.00	986.11	985.85	5.98	10.00	980.13	970.13	9.97	976.14
GMA2-6	534296.40	135526.00	2.00	986.30	989.73	10.13	10.00	976.17	966.17	11.45	974.85
GMA2-7	534452.30	136034.50	2.00	989.84	989.64	8.49	10.00	981.35	971.35	14.78	975.06
GMA2-8	534235.50	135923.10	2.00	978.70	982.30	4.00	10.00	974.70	964.70	4.44	974.26
GMA2-9	534006.00	135431.40	2.00	978.10	981.29	4.00	10.00	974.10	964.10	4.10	974.00
GMA2-10	534313.80	135583.00	2.00	987.70	990.03	9.00	10.00	978.70	968.70	12.64	975.06
J-1R	534035.60	135266.60	2.00	988.61	988.25	11.55	10.00	977.06	967.06	14.92	973.69
OJ-MW-1	534463.40	136305.70	1.00	994.68	994.47	9.30	10.00	985.38	975.38	12.71	981.97
OJ-MW-2	534318.38	136180.30	1.00	991.90	991.64	9.60	10.00	982.30	972.30	14.41	977.49
Staff Gauge	--	--	--	--	989.82	--	--	--	--	--	973.07

Notes:

1. feet AMSL = feet above mean sea level.
2. feet BGS = feet below ground surface.
3. -- indicates that a value does not apply.

Table 3
Groundwater Elevation Data - Spring 2008

Groundwater Managment Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts

Well Number	Location	Spring 2008 [(1)] Groundwater Elevation (feet AMSL)
GMA2-1	Oxbow Area J	976.61
GMA2-2	Oxbow Area J	975.11
GMA2-3	Oxbow Area J	978.89
GMA2-4	Oxbow Area K	975.86
GMA2-5	Oxbow Area K	977.89
GMA2-6	Oxbow Area J	976.05
GMA2-7	Oxbow Area J	976.88
GMA2-8	Oxbow Area K	975.34
GMA2-9	Oxbow Area K	974.98
GMA2-10	Oxkbow Area J	975.94
J-1R	Oxbow Area J	974.72
OJ-MW-1	Oxbow Area J	984.22
OJ-MW-2	Oxbow Area J	978.68
Staff Gauge	Housatonic River	974.14

Notes:

1. Spring 2008 groundwater and river elevation elevation data was collected on April 16, 2008.
2. feet AMSL = feet above mean sea level.

Table 4
Field Parameter Measurements - Spring 2008

Groundwater Managment Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
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)
GMA 2-1	12	7.74	6.66	2.073	171.1	0.62
GMA 2-2	6	8.64	6.95	1.639	-34.4	0.52
GMA 2-3	5	10.08	6.80	4.693	158.9	3.54
GMA 2-4	4	8.99	7.04	0.603	-41.0	0.45
GMA 2-6	4	7.51	6.70	1.341	4.5	0.67
GMA 2-9	13	7.23	7.49	0.338	217.2	5.62
GMA2-10	8	7.94	6.80	1.357	14.9	0.77
J-1R	5	8.98	6.65	0.982	114.7	1.35
OJ-MW-2	1	7.76	6.81	0.923	114	1.88

Notes:

1. Measurements collected during spring 2008 groundwater sampling event performed between April 25 and 29, 2008.
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 5
Comparison of Groundwater Analytical Results to MCP Method 1 GW-2 Standards

Groundwater Managment Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	Method 1 GW-2 Standards	GMA2-2 04/28/08	GMA2-3 04/29/08	GMA2-10 04/28/08	OJ-MW-2 04/29/08
Volatile Organics					
Trichloroethene	0.03	NA	NA	ND(0.0010) [ND(0.0010)]	0.012
Vinyl Chloride	0.002	NA	NA	ND(0.0010) [ND(0.0010)]	0.00095 J
Total VOCs	5	NA	NA	ND(0.10) [ND(0.10)]	0.013 J
PCBs-Filtered					
None Detected	0.005	--	--	NA	NA

Notes:

1. Samples were collected by ARCADIS, 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 (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. Only those constituents detected in one or more samples are summarized.
6. Field duplicate sample results are presented in brackets.
7. -- Indicates that all constituents for the parameter group were not detected.

Data Qualifiers:

Organics (volatiles, PCBs)

J - Indicates that the associated numerical value is an estimated concentration.
R - Data was rejected due to a deficiency in the data generation process.

Table 6
Comparison of Groundwater Analytical Results to MCP Method 1 GW-3 Standards

Groundwater Managment Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	Method 1 GW-3 Standards	GMA2-1 04/29/08	GMA2-2 04/28/08	GMA2-3 04/29/08	GMA2-4 04/25/08	GMA2-6 04/28/08	GMA2-9 04/29/08
Volatile Organics							
Trichloroethene	5	NA	NA	NA	NA	NA	NA
Vinyl Chloride	50	NA	NA	NA	NA	NA	NA
PCBs-Filtered							
None Detected	0.010	--	--	--	--	--	--

Table 6
Comparison of Groundwater Analytical Results to MCP Method 1 GW-3 Standards

Groundwater Managment Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	Method 1 GW-3 Standards	GMA2-10 04/28/08	J-1R 04/28/08	OJ-MW-2 04/29/08
Volatile Organics				
Trichloroethene	5	ND(0.0010) [ND(0.0010)]	NA	0.012
Vinyl Chloride	50	ND(0.0010) [ND(0.0010)]	NA	0.00095 J
PCBs-Filtered				
None Detected	0.010	NA	--	NA

Notes:

1. Samples were collected by ARCADIS, 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 (approved March 15, 2007 and re-submitted March 30,
3. 2007).
4. NA - Not Analyzed.
5. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
6. Field duplicate sample results are presented in brackets.
7. Only those constituents detected in one or more samples are summarized.
   -- Indicates that all constituents for the parameter group were not detected.

Data Qualifiers:

Organics (volatiles, PCBs)

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

Table 7
Comparison of Groundwater Analytical Results to MCP UCLs for Groundwater

Groundwater Managment Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	MCP UCL for GroundWater	GMA2-1 04/29/08	GMA2-2 04/28/08	GMA2-3 04/29/08	GMA2-4 04/25/08	GMA2-6 04/28/08	GMA2-9 04/29/08
Volatile Organics							
Trichloroethene	50	NA	NA	NA	NA	NA	NA
Vinyl Chloride	100	NA	NA	NA	NA	NA	NA
PCBs-Filtered							
None Detected	0.100	--	--	--	--	--	--

Table 7
Comparison of Groundwater Analytical Results to MCP UCLs for Groundwater

Groundwater Managment Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	MCP UCL for GroundWater	GMA2-10 04/28/08	J-1R 04/28/08	OJ-MW-2 04/29/08
Volatile Organics				
Trichloroethene	50	ND(0.0010) [ND(0.0010)]	NA	0.012
Vinyl Chloride	100	ND(0.0010) [ND(0.0010)]	NA	0.00095 J
PCBs-Filtered				
None Detected	0.100	NA	--	NA

Notes:

1. Samples were collected by ARCADIS, 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 (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. Only those constituents detected in one or more samples are summarized.
7. -- Indicates that all constituents for the parameter group were not detected.

Data Qualifiers:

Organics (volatiles, PCBs)

J - Indicates that the associated numerical value is an estimated concentration.
R - Data was rejected due to a deficiency in the data generation process.

Table 8
Proposed Long Term Groundwater Quality Monitoring Program Activities - Fall 2008

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts

Well Number	Monitoring Well Usage	Current Semi-Annual Analyses	Proposed Semi-Annual Analyses	Comments
GMA2-1	GW-3 Perimeter (GW-3 Compliance Well)	PCB	None	All historical results are well below revised GW-3 Performance Standards for PCBs (and other constituents). No further sampling proposed.
GMA2-2	GW-2 Sentinel/GW-3 Perimeter (GW-3 Compliance Well)	PCB	None	All historical results are well below new/revised GW-2/GW-3 Performance Standards for PCBs (and other constituents). No further sampling proposed.
GMA2-3	GW-2 Sentinel/GW-3 Perimeter (Upgradient Well)	PCB	None	All historical results are well below new/revised GW-2/GW-3 Performance Standards for PCBs (and other constituents). No further sampling proposed.
GMA2-4	GW-3 Perimeter (GW-3 Compliance Well)	PCB	None	All historical results are well below revised GW-3 Performance Standards for PCBs (and other constituents). No further sampling proposed.
GMA2-5	GW-2 Sentinel/GW-3 Perimeter (Upgradient Well)	None	None	All historical results are well below new/revised GW-2/GW-3 Performance Standards. No further sampling proposed.
GMA2-6	GW-3 Perimeter (GW-3 Compliance Well)	PCB	None	All historical results are well below revised GW-3 Performance Standards for PCBs (and other constituents). No further sampling proposed.
GMA2-7	GW-3 Perimeter (GW-3 Compliance Well)	None	None	All historical results are well below revised GW-3 Performance Standards. No further sampling proposed.
GMA2-8	GW-3 Perimeter (GW-3 Compliance Well)	None	None	All historical results are well below revised GW-3 Performance Standards. No further sampling proposed.
GMA2-9	GW-3 Perimeter (GW-3 Compliance Well)	PCB	None	All historical results are well below revised GW-3 Performance Standards for PCBs (and other constituents). No further sampling proposed.
GMA2-10	GW-2 Sentinel (GW-2 Compliance Well)	VOC	VOC/PCB	Additional long-term sampling to be conducted to verify attainment of GW-2 Performance Standards for VOCs and new GW-2 Performance Standard for PCBs.
J-1R	GW-3 Perimeter (GW-3 Compliance Well)	PCB	None	All historical results are well below revised GW-3 Performance Standards for PCBs (and other constituents). No further sampling proposed.
OJ-MW-2	GW-2 Sentinel/GW-3 Perimeter (GW-2/GW-3 Compliance Well)	VOC	VOC	Additional long-term sampling to be conducted to verify attainment of GW-2 Performance Standards for VOCs.

Notes:

1. The wells proposed for long-term groundwater quality sampling under a semi-annual schedule will be sampled for the listed parameters during the spring and fall seasons, generally during the months of April and October. The next scheduled sampling round is proposed to be conducted in fall 2008.
2. Only wells subject to long-term groundwater quality sampling are listed above. The remaining wells and staff gauge listed in Table 1 will continue to be utilized for groundwater and surface water elevation monitoring only.

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Figures

LEGEND:

GMA1	GMA 1–PLANT SITE 1
GMA2	GMA 2–FORMER OXBOWS J&K
GMA3	GMA 3–PLANT SITE 2
GMA4	GMA 4–PLANT SITE 3
GMA5	GMA 5–FORMER OXBOWS A&C

NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. – FLOWN IN APRIL 1990; DATA PROVIDED BY GENERAL ELECTRIC COMPANY; AND BLASLAND & BOUCK ENGINEERS, P.C. CONSTRUCTION PLANS.
2. NOT ALL PHYSICAL FEATURES SHOWN.
3. SITE BOUNDARIES/LIMITS ARE APPROXIMATE.

0 500' 1000'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
GMA 2 GROUNDWATER QUALITY MONITORING PROGRAM

GROUNDWATER MANAGEMENT AREAS

ARCADIS

FIGURE
1

CITY: SYRACUSE, NY DIV/GROUP: 141/ENV DB: PGL RGB DMW KLS LD: DMW PIC: PM: K. CORNWELL TM: LYR: ON=*OFF=*REF*
G:\CAD\GE-CADNA-ACT\B0030\154100\00\004\DWG\SPRING08\30154B11.DWG LAYOUT: 1 SAVED: 7/30/2008 3:37 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: D2B-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 7/30/2008 3:37 PM BY: SARTORI, KATHERINE
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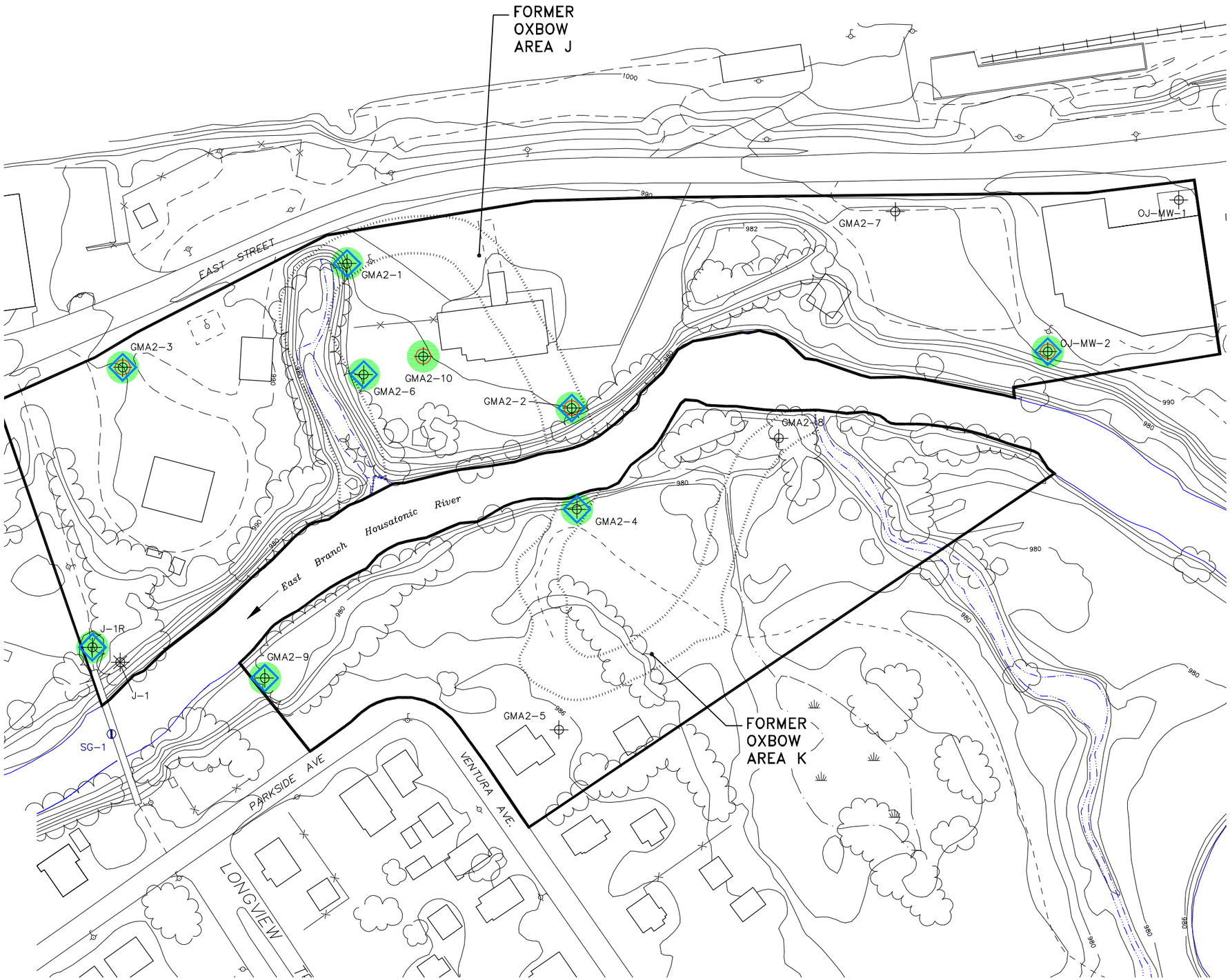

LEGEND:

- GMA 2 BOUNDARY
- FORMER OXBOW/LOW-LYING AREA
- FENCE
- MONITORING WELL
- STAFF GUAGE
- GW-2 SENTINEL/COMPLIANCE WELL
- GW-3 PERIMETER WELL
- GW-3 COMPLIANCE POINT
- WELL SAMPLED IN SPRING 2008
- DECOMMISIONED MONITORING WELL

NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. FLOWN IN APRIL 1990; DATA PROVIDED BY GENERAL ELECTRIC COMPANY AND BLASLAND AND BOUCK ENGINEERS, P.C. CONSTRUCTION PLANS.
2. FORMER RIVER CHANNEL AND LOWLAND AREAS DELINEATED USING THE CITY OF PITTSFIELD'S RECHANNELIZATION MAPPING, 1940.
3. NOT ALL PHYSICAL FEATURES SHOWN.
4. SITE PROPERTY BOUNDARIES ARE APPROXIMATE.
5. ALL MONITORING WELL LOCATIONS ARE APPROXIMATE.

0 50' 100'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
GMA 2 GROUNDWATER QUALITY MONITORING PROGRAM

MONITORING WELL LOCATIONS

ARCADIS

FIGURE
2

CITY: SYRACUSE, N.Y. DIV/GROUP:141/ENV DB: PGL LAF RGB KLS LD: DMW PIC: PM: K. CORNWELL TM: LYR: ON=*;OFF=*REF*
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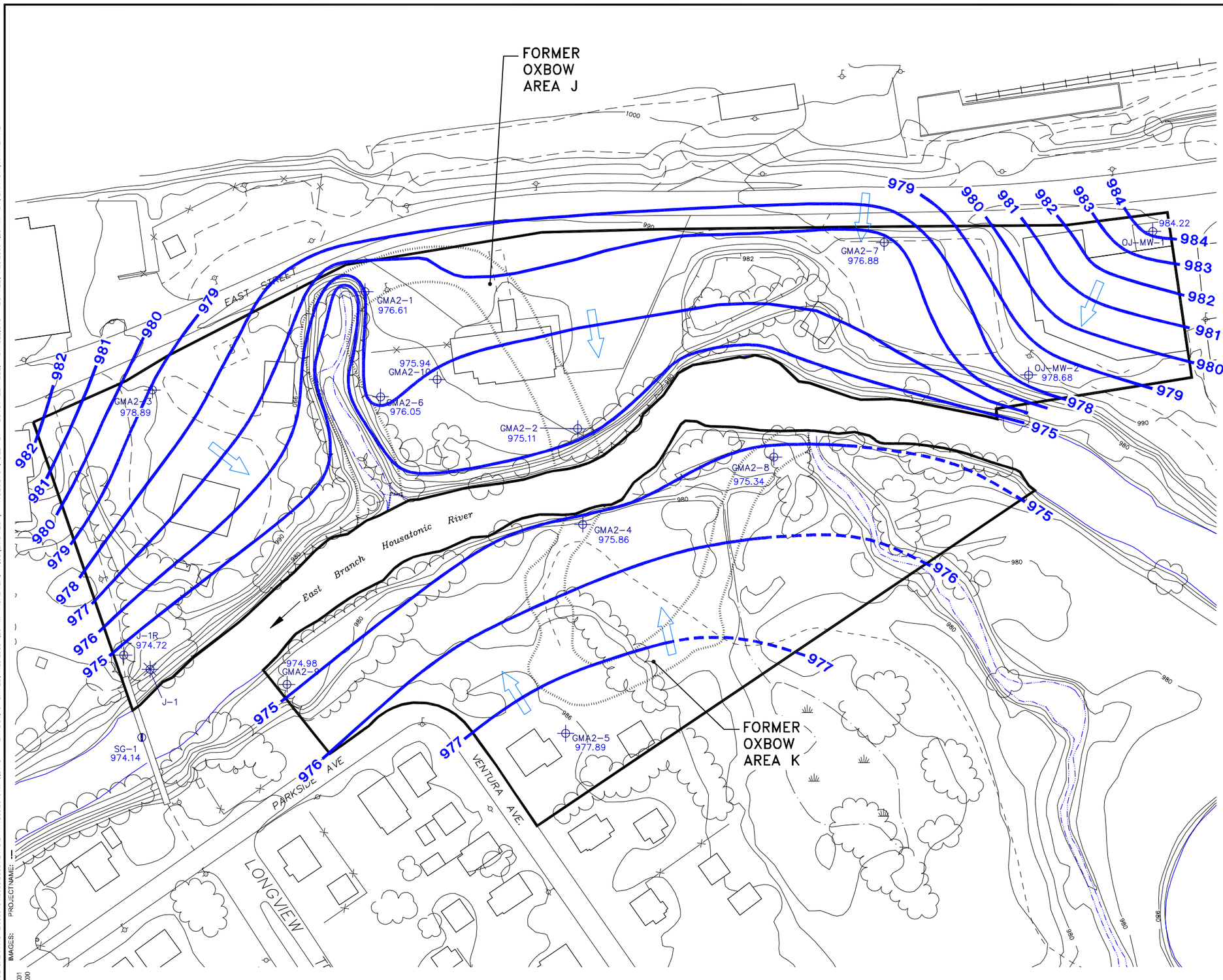
XREFS: 30154X01 30154X00
IMAGES: PROJECTNAME: --



LEGEND:

- GMA 2 BOUNDARY
- FORMER OXBOW/LOW-LYING AREA
- FENCE
- MONITORING WELL
- STAFF GAUGE
- DECOMMISIONED MONITORING WELL
- 976.05 GROUNDWATER ELEVATION (FT AMSL)
- 976 GROUNDWATER ELEVATION CONTOUR (FT AMSL), DASHED WHERE INFERRED
- GROUNDWATER FLOW

NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. FLOWN IN APRIL 1990; DATA PROVIDED BY GENERAL ELECTRIC COMPANY AND BLASLAND AND BOUCK ENGINEERS, P.C. CONSTRUCTION PLANS.
2. FORMER RIVER CHANNEL AND LOWLAND AREAS DELINEATED USING THE CITY OF PITTSFIELD'S RECHANNELIZATION MAPPING, 1940.
3. NOT ALL PHYSICAL FEATURES SHOWN.
4. SITE PROPERTY BOUNDARIES ARE APPROXIMATE.
5. ALL MONITORING WELL LOCATIONS ARE APPROXIMATE.
6. GROUNDWATER AND RIVER LEVEL MEASUREMENTS OBTAINED APRIL 16, 2008.

0 50' 100'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
GMA 2 GROUNDWATER QUALITY MONITORING PROGRAM

WATER TABLE CONTOUR MAP - SPRING 2008

ARCADIS

FIGURE
3

CITY: SYRACUSE DIV/GROUP: 141 DB: PGL DMW KFS LD: DMW PIC: PM: K. CORNWELL TM: LYR:ON=*;OFF=*REF* G:\CAD\GE-CAD\ACTIVE\30154\000\00004\DWG\SPRING08\30154W18.DWG LAYOUT: 3 SAVED: 7/28/2008 4:23 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: D2B-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 7/28/2008 4:25 PM BY: SARTORI, KATHERINE
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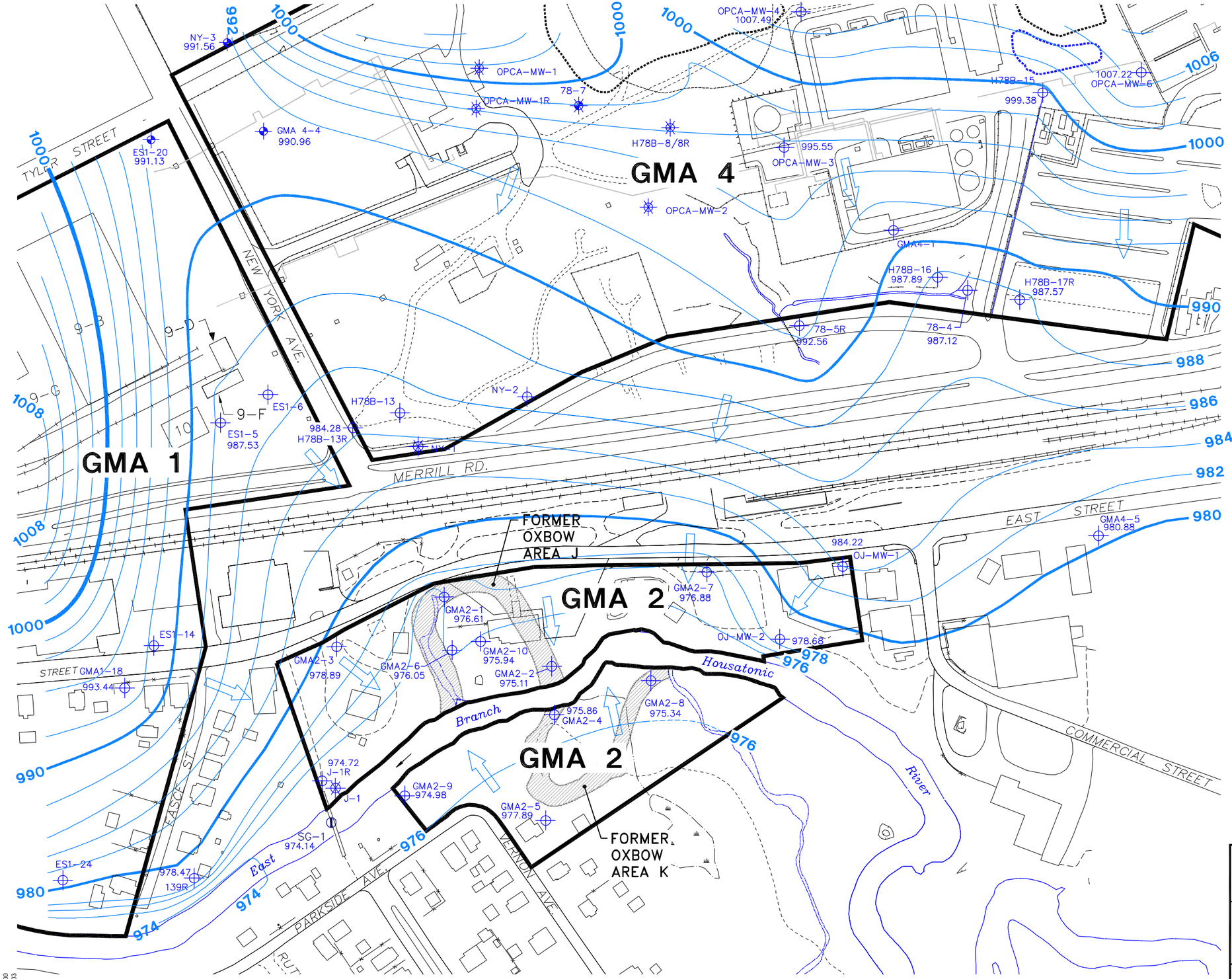

LEGEND:

- GMA BOUNDARY
- FORMER OXBOW/LOW-LYING AREA
- FENCE
- MONITORING WELL
- STAFF GAUGE
- DECOMMISIONED MONITORING WELL
- 975.34 GROUNDWATER ELEVATION (FT AMSL)
- 976 GROUNDWATER ELEVATION CONTOUR (FT AMSL) (SPRING 2008)
- GROUNDWATER FLOW

NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. FLOWN IN APRIL 1990; DATA PROVIDED BY GENERAL ELECTRIC COMPANY AND BLASLAND AND BOUCK ENGINEERS, P.C. CONSTRUCTION PLANS.
2. FORMER RIVER CHANNEL AND LOWLAND AREAS DELINEATED USING THE CITY OF PITTSFIELD'S RECHANNELIZATION MAPPING, 1940.
3. NOT ALL PHYSICAL FEATURES SHOWN.
4. SITE PROPERTY BOUNDARIES ARE APPROXIMATE.
5. ALL MONITORING WELL LOCATIONS ARE APPROXIMATE.
6. GROUNDWATER AND RIVER LEVEL MEASUREMENTS OBTAINED APRIL 14-21, 2008.

0 100' 200'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
GMA 2 GROUNDWATER QUALITY MONITORING PROGRAM

AREA WATER TABLE CONTOUR MAP - SPRING 2008

ARCADIS

FIGURE 4

CITY: SYRACUSE DIV/GROUP: 85 DB: PGL DMW KFS LD: DMW PIC: PM: K. CORNWELL TM: LYR:ON=*;OFF=*REF* ACADVER: 17.0S (LMS TECH)
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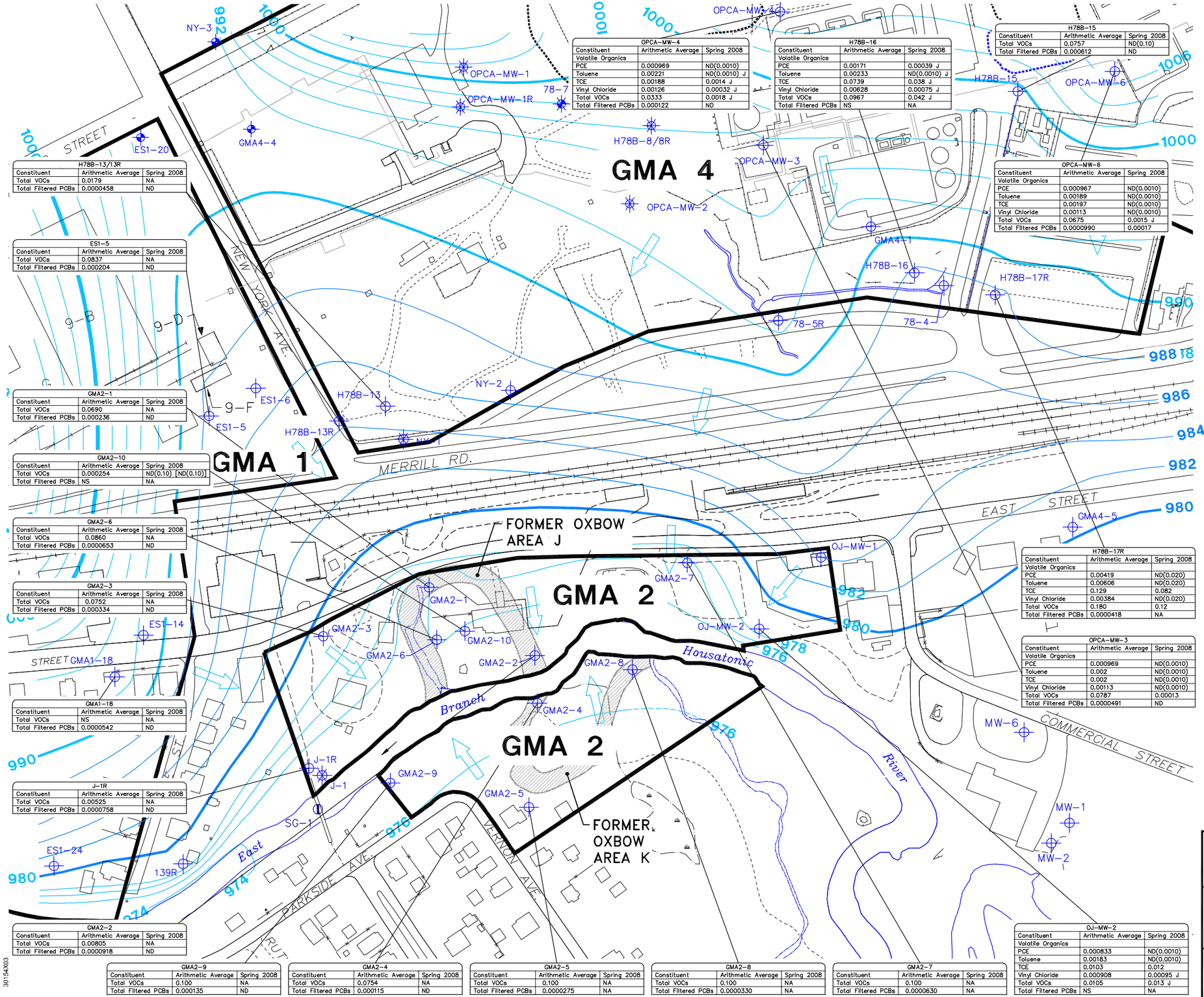


OPCA-MW-4		
Constituent	Arithmetic Average	Spring 2008
Volatile Organics		
PCE	0.000969	ND(0.0010)
Toluene	0.00221	ND(0.0010) J
TCE	0.00188	0.0014 J
Vinyl Chloride	0.00126	0.00032 J
Total VOCs	0.0333	0.0018 J
Total Filtered PCBs	0.000122	ND

H78B-16		
Constituent	Arithmetic Average	Spring 2008
Volatile Organics		
PCE	0.00171	0.00039 J
Toluene	0.00233	ND(0.0010) J
TCE	0.0739	0.038 J
Vinyl Chloride	0.00628	0.00075 J
Total VOCs	0.0967	0.042 J
Total Filtered PCBs	NS	NA

H78B-15		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	0.0757	ND(0.10)
Total Filtered PCBs	0.000612	ND

OPCA-MW-6		
Constituent	Arithmetic Average	Spring 2008
Volatile Organics		
PCE	0.000967	ND(0.0010)
Toluene	0.00189	ND(0.0010)
TCE	0.00197	ND(0.0010)
Vinyl Chloride	0.00113	ND(0.0010)
Total VOCs	0.0675	0.0015 J
Total Filtered PCBs	0.0000990	0.00017

H78B-13/13R		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	0.0179	NA
Total Filtered PCBs	0.0000458	ND

ES1-5		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	0.0837	NA
Total Filtered PCBs	0.000204	ND

GMA2-1		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	0.0690	NA
Total Filtered PCBs	0.000236	ND

GMA2-10		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	0.000254	ND(0.10) [ND(0.10)]
Total Filtered PCBs	NS	NA

GMA2-6		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	0.0860	NA
Total Filtered PCBs	0.0000653	ND

GMA2-3		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	0.0752	NA
Total Filtered PCBs	0.000334	ND

GMA1-18		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	NS	NA
Total Filtered PCBs	0.0000542	ND

J-1R		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	0.00525	NA
Total Filtered PCBs	0.0000758	ND

GMA2-2		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	0.00805	NA
Total Filtered PCBs	0.0000918	ND

GMA2-9		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	0.100	NA
Total Filtered PCBs	0.000135	ND

GMA2-4		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	0.0754	NA
Total Filtered PCBs	0.000115	ND

GMA2-5		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	0.100	NA
Total Filtered PCBs	0.0000275	NA

GMA2-8		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	0.100	NA
Total Filtered PCBs	0.0000330	NA

GMA2-7		
Constituent	Arithmetic Average	Spring 2008
Total VOCs	0.100	NA
Total Filtered PCBs	0.0000630	NA

H78B-17R		
Constituent	Arithmetic Average	Spring 2008
Volatile Organics		
PCE	0.00419	ND(0.020)
Toluene	0.00606	ND(0.020)
TCE	0.129	0.082
Vinyl Chloride	0.00384	ND(0.020)
Total VOCs	0.180	0.12
Total Filtered PCBs	0.0000418	NA

OPCA-MW-3		
Constituent	Arithmetic Average	Spring 2008
Volatile Organics		
PCE	0.000969	ND(0.0010)
Toluene	0.002	ND(0.0010)
TCE	0.002	ND(0.0010)
Vinyl Chloride	0.00113	ND(0.0010)
Total VOCs	0.0787	0.00013
Total Filtered PCBs	0.0000491	ND

OJ-MW-2		
Constituent	Arithmetic Average	Spring 2008
Volatile Organics		
PCE	0.000833	ND(0.0010)
Toluene	0.00183	ND(0.0010)
TCE	0.0103	0.012
Vinyl Chloride	0.000908	0.00095 J
Total VOCs	0.0105	0.013 J
Total Filtered PCBs	NS	NA

LEGEND:

- GMA BOUNDARY
- FORMER OXBOW/LOW-LYING AREA
- FENCE
- MONITORING WELL
- STAFF GAUGE
- DECOMMISIONED MONITORING WELL
- 976 GROUNDWATER ELEVATION CONTOUR (SPRING 2008) (FT AMSL)
- GROUNDWATER FLOW

NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. FLOWN IN APRIL 1990; DATA PROVIDED BY GENERAL ELECTRIC COMPANY AND BLASLAND AND BOUCK ENGINEERS, P.C. CONSTRUCTION PLANS.
2. FORMER RIVER CHANNEL AND LOWLAND AREAS DELINEATED USING THE CITY OF PITTSFIELD'S RECHANNELIZATION MAPPING, 1940.
3. NOT ALL PHYSICAL FEATURES SHOWN.
4. SITE PROPERTY BOUNDARIES ARE APPROXIMATE.
5. ALL MONITORING WELL LOCATIONS ARE APPROXIMATE.
6. GROUNDWATER AND RIVER LEVEL MEASUREMENTS OBTAINED APRIL 14–21, 2008.
7. RESULTS SHOWN FOR WELLS SAMPLED IN SPRING 2008.
8. ARITHMETIC AVERAGE BASED ON LAST DATE OF SAMPLING.
9. ALL RESULTS ARE IN ppm.
10. PCE – TETRACHLOROETHENE
    TCE – TRICHLOROETHENE
11. DATA QUALIFIERS:
    J: INDICATES AN ESTIMATED VALUE LESS THAN THE PRACTICAL QUANTITATION LIMIT (PQL).
    NA: NOT ANALYZED.
    NS: NOT SAMPLED.
    ND: NOT DETECTED.

0 100' 200'
GRAPHIC SCALE

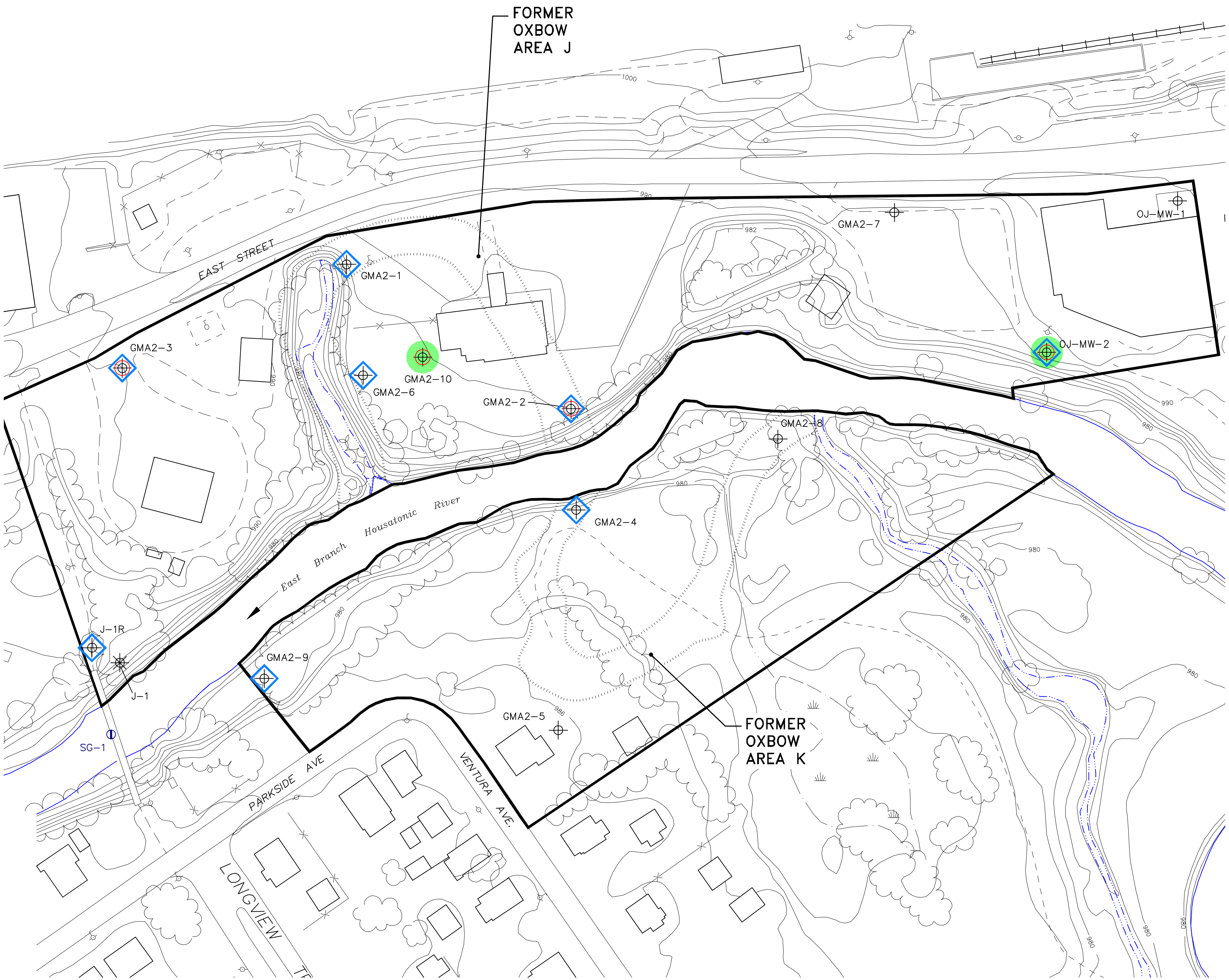
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
GMA 2 GROUNDWATER QUALITY MONITORING PROGRAM

COMPARISON OF SPRING 2008 RESULTS WITH AVERAGE CONCENTRATIONS - SELECTED VOCs & PCBs

ARCADIS

FIGURE 5

CITY: SYRACUSE, N.Y. GROUP: ENV-141 DB: PGL KFS KLS LD: DMW PM: N. SMITH TM: R. BATES LYR: ON=*;OFF=*REF;(FRZ)
G:\CADVGE-CADN-ACT\B0030154000000004\DWGS\PRNG080015401R.DWG LAYOUT: 5 SAVED: 7/31/2008 11:49 AM BY: SARTORI, KATHERINE
PLOTTED: 7/31/2008 11:49 AM BY: SARTORI, KATHERINE
PLOTSTYLETABLE: PLTFULL.CTB PAGESETUP: D2B-PDF ACADVER: 17.0S (LMS TECH)
PROJECTNAME: —
IMAGES:
XREFS:
30154X00
30154X03



LEGEND:

- GMA 2 BOUNDARY
- FORMER OXBOW/LOW-LYING AREA
- FENCE
- MONITORING WELL
- STAFF GUAGE
- GW-2 SENTINEL/COMPLIANCE WELL
- GW-3 PERIMETER WELL
- GW-3 COMPLIANCE POINT
- PROPOSED SEMI-ANNUAL SAMPLING LOCATION
- DECOMMISSIONED MONITORING WELL

NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. FLOWN IN APRIL 1990; DATA PROVIDED BY GENERAL ELECTRIC COMPANY AND BLASLAND AND BOUCK ENGINEERS, P.C. CONSTRUCTION PLANS.
2. FORMER RIVER CHANNEL AND LOWLAND AREAS DELINEATED USING THE CITY OF PITTSFIELD'S RECHANNELIZATION MAPPING, 1940.
3. NOT ALL PHYSICAL FEATURES SHOWN.
4. SITE PROPERTY BOUNDARIES ARE APPROXIMATE.
5. ALL MONITORING WELL LOCATIONS ARE APPROXIMATE.

0 50' 100'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
GMA 2 GROUNDWATER QUALITY MONITORING PROGRAM

PROPOSED FALL 2008 MONITORING WELL LOCATIONS

ARCADIS

FIGURE
6

Appendices

ARCADIS

Appendix A

Field Sampling Data

Table A-1
Summary of Groundwater Sampling Methods

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts

Well ID	Sampling Method										
	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2005	Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008
GMA2-1	BP	PP	PP	BP	BP	BP	BP	BP	BP	BP	BP
	Spring 2007: Field parameters stabilized, but affected by extreme cold temperatures on the date of sampling (wind chill of negative 15 to 20 degrees Fahrenheit). Fall 2002: Flow-through turbidity meter malfunction; Hach meter used to measure turbidity.										
GMA2-2	PP/BA	PP	BP	BP	NS	NS	NS	NS	NS	BP	BP
	Fall 2002: Flow-through turbidity meter malfunction; Hach meter used to measure turbidity. Spring 2002: VOCs collected with a disposable teflon bailer.										
GMA2-3	PP/BA	PP	PP	PP	NS	NS	NS	NS	NS	PP	PP
	Spring 2002: VOCs collected with a disposable teflon bailer.										
GMA2-4	PP	PP	PP	PP	BP	BP	BP	NS	NS	BP	BP
	Spring 2006: 4/11/2006 sample mishandled by laboratory. Well re-sampled on 4/19/2006. Fall 2002: Dissolved oxygen meter malfunction. Spring 2002: Dissolved oxygen meter malfunction.										
GMA2-6	PP	PP	PP	PP	NS	NS	NS	NS	NS	PP	PP
	Spring 2002: Dissolved oxygen meter malfunction.										
GMA2-9	BP	PP	PP	PP	BP	BP	BP	NS	NS	BP	BP
	Spring 2002: Flow-through turbidity meter malfunction; Hach meter used to measure turbidity.										
GMA2-10	NS	NS	NS	NS	NS	NS	NS	NS	NS	BP	BP
	Fall 2007: Well installed and added to monitoring program.										
J-1R	BP	PP	PP	PP	NS	NS	NS	NS	NS	PP	PP
	Fall 2002: Dissolved oxygen meter malfunction. Spring 2002: Dissolved oxygen meter malfunction; Hach meter used to measure turbidity.										

Table A-1
Summary of Groundwater Sampling Methods

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts

Well ID	Sampling Method										
	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2005	Spring 2006	Fall 2006	Spring 2007	Fall 2007	Spring 2008
OJ-MW-2	PP/BA	PP	NS	PP	PP	NS	NS	NS	NS	PP	PP
	Fall 2007: Water level too close to pump intake to measure during purging. Well dried during purging, sample collected after recharge. Spring 2003: Access to well was denied by property owner. Fall 2002: Well went dry during sampling. Several visits required to collect full sample volume. Spring 2002: VOCs collected with a disposable teflon bailer.										

Notes:

1. Sampling method abbreviations:
   BP - Bladder Pump.
   PP - Peristaltic Pump.
   PP/BA - Peristaltic Pump with Bailer used for VOC sample collection.
   NS - Not Sampled.
2. Baseline monitoring program conducted from spring 2002 to fall 2003.
3. Interim/baseline sampling conducted at select wells from spring 2004 to spring 2007.
4. Long-term monitoring program initiated in fall 2007.

GROUNDWATER SAMPLING LOG

Well No. GMA2-1
Key No. EX-37
PID Background (ppm) --
Well Headspace (ppm) --

Site/GMA Name GMA2 - GE PITTSFIELD
Sampling Personnel D. ADAMS
Date 4/29/08
Weather CLOUDY 45°

WELL INFORMATION

Reference Point Marked? (Y) N
Height of Reference Point ____ Meas. From ____
Well Diameter 2"
Screen Interval Depth 13.8-23.8 Meas. From Ground
Water Table Depth ~~14.01~~ 15.01 Meas. From TIC
Well Depth 27.04 Meas. From TIC
Length of Water Column 12.03
Volume of Water in Well 1.96 gallons
Intake Depth of Pump/Tubing 19 Meas. From TIC

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

Redevelop? Y (N)

Sample Time 11:15
Sample ID GMA2-1
Duplicate ID -
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)	( )

EVACUATION INFORMATION

Pump Start Time 10:05
Pump Stop Time 11:30
Minutes of Pumping 85
Volume of Water Removed ~~2.75~~ 2.25 gallons
Did Well Go Dry? Y (N)

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

Water Quality Meter Type(s) / Serial Numbers: YSI 556 MPS #4, ~~090~~ 03M0230AC

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]*
10:10	100	0.13	15.11	-	-	-	9	-	-
10:15	100	0.26	15.11	8.83	6.84	1.950	9	8.72	156.1
10:20	175	0.49	15.11	8.77	6.80	1.961	41	2.01	161.9
10:25	100	0.62	15.12	8.50	6.79	1.981	37	1.63	163.8
10:30	100	0.76	15.12	8.29	6.72	2.007	29	1.34	168.7
10:35	100	0.89	15.13	8.14	6.68	2.028	22	1.08	170.4
10:40	100	1.02	15.13	7.98	6.68	2.047	20	0.95	171.4
10:45	100	1.15	15.13	7.95	6.66	2.052	17	0.82	171.2

* 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 INITIAL PURGE CLEAR, NO ODOR

FINAL PURGE CLEAR, NO ODOR

SAMPLE DESTINATION

Laboratory: SGS
Delivered Via: UPS
Airbill #: —

Field Sampling Coordinator: [signature]

GROUNDWATER SAMPLING LOG

Well No. GMA2-1

Site/GMA Name GMA2 GE Pittsfield
Sampling Personnel D. Arnaiti
Date 4/29/08
Weather Clear, 45°

WELL INFORMATION - See Page 1

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]*
10:50	100	1.28	15.14	7.89	6.67	2.061	16	0.74	171.5
10:55	100	1.42	15.14	7.87	6.66	2.063	15	0.68	171.9
11:00	100	1.55	15.15	7.79	6.63	2.070	13	0.67	172.7
11:05	100	1.68	15.15	7.77	6.65	2.071	12	0.65	171.8
11:10	100	1.81	15.16	7.74	6.66	2.073	12	0.62	171.1
11:15	SAMPLE								

* 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

GROUNDWATER SAMPLING LOG

Well No. _____
Key No. _____
PID Background (ppm) _____
Well Headspace (ppm) _____

Site/GMA Name GE Pittsfield - GMA-2
Sampling Personnel GAR
Date 4/29/08
Weather —

WELL INFORMATION

Reference Point Marked? Y N
Height of Reference Point _____ Meas. From _____
Well Diameter _____
Screen Interval Depth _____ Meas. From _____
Water Table Depth _____ Meas. From _____
Well Depth _____ Meas. From _____
Length of Water Column _____
Volume of Water in Well _____
Intake Depth of Pump/Tubing _____ Meas. From _____

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

Redevelop? Y N

Sample Time 11:30
Sample ID GMA2-RB-1
Duplicate ID —
MS/MSD —
Split Sample ID —

Required	Analytical Parameters:	Collected
(X)	VOCs (Std. list)	(X)
( )	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 _____
Pump Stop Time _____
Minutes of Pumping _____
Volume of Water Removed _____
Did Well Go Dry? Y N

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

Water Quality Meter Type(s) / Serial Numbers: _____

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]*

* 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

An equipment rinse blank was collected by pouring distilled water over a decanned inner stainless steel components of a Marschulk bladder pump then into lab supplied sample containers

SAMPLE DESTINATION

Laboratory: SGS
Delivered Via: UPS
Airbill #: —

Field Sampling Coordinator: [signature]

GROUNDWATER SAMPLING LOG

Well No. GMA2-2
Key No. EX-37
PID Background (ppm) —
Well Headspace (ppm) —

Site/GMA Name GMA 2, GE Pittsfield
Sampling Personnel R. Adanti
Date 4/28/08
Weather Rain, 45°F

WELL INFORMATION

Reference Point Marked? (Y) N
Height of Reference Point ____ Meas. From ____
Well Diameter 2"
Screen Interval Depth 12.94 - 22.94 Meas. From Ground
Water Table Depth 17.18 Meas. From TIC
Well Depth 25.05 Meas. From TIC
Length of Water Column 7.87
Volume of Water in Well 1.28 gallons
Intake Depth of Pump/Tubing 20' Meas. From TIC

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

Redevelop? Y (N)

Sample Time 12:40
Sample ID GMA2-2
Duplicate ID —
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)	( )

EVACUATION INFORMATION

Pump Start Time 11:30
Pump Stop Time 13:00
Minutes of Pumping 90
Volume of Water Removed ~4.0 gallons
Did Well Go Dry? Y (N)

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

Water Quality Meter Type(s) / Serial Numbers: YSI 556 MPS #4, 03M0230 AC

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]*
11:40	100	0.26	17.18	—	—	—	56	—	—
11:45	200	0.53	17.18	—	—	—	24	—	—
11:55	200	0.79	17.18	10.17	6.64	1.873	13	11.81	-12.0
12:00	200	1.05	17.19	9.39	6.56	1.852	15	1.19	-18.1
12:05	175	1.28	17.18	9.26	6.78	1.791	12	0.94	-25.0
12:10	175	1.51	17.18	9.02	6.97	1.748	10	0.79	-36.4
12:15	175	1.74	17.19	8.92	6.99	1.714	9	0.70	-36.9
12:20	175	1.97	17.18	8.80	6.97	1.675	8	0.63	-34.9

* 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

Initial purge slightly orange, no odor.

SAMPLE DESTINATION

Laboratory: SGS
Delivered Via: UPS
Airbill #: —

Field Sampling Coordinator:

GROUNDWATER SAMPLING LOG

Well No. GMA2-2

Site/GMA Name GMA2; GE PITTSFIELD
Sampling Personnel D. ADAMS
Date 4/28/08
Weather RAINY, 45°

WELL INFORMATION - See Page 1

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]*
12:25	175	2.20	17.18	8.76	6.98	1.666	7	0.59	-35.5
12:30	175	2.43	17.17	8.68	6.90	1.648	6	0.55	-31.9
12:35	175	2.66	17.17	8.64	6.95	1.639	6	0.52	-34.4
12:40	SAMPLE								

* 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 FINAL PURGE WAS CLEAR, NO ODOR

GROUNDWATER SAMPLING LOG

Well No. GMA2-3
Key No.
PID Background (ppm) N/A
Well Headspace (ppm) N/A

Site/GMA Name GMA-2
Sampling Personnel D.Z.
Date 4/29/08
Weather Overcast, Lt Rain, 45°F

WELL INFORMATION

Reference Point Marked? (Y) N
Height of Reference Point ____ Meas. From TIC
Well Diameter 2"
Screen Interval Depth 8.54-18.54 Meas. From TIC
Water Table Depth 13.38 Meas. From TOC (PVC)
Well Depth 18.33 Meas. From TIC
Length of Water Column ~~4.95~~ 4.95'
Volume of Water in Well 0.81 gallons
Intake Depth of Pump/Tubing 17' Meas. From ~~TOC~~ TIC (PVC)

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

Redevelop? Y (N)

Sample Time 1105
Sample ID GMA2-3
Duplicate ID N/A
MS/MSD N/A
Split Sample ID N/A

Required	Analytical Parameters:	Collected
( )	VOCs (Std. list)	( )
( )	VOCs (Exp. list)	( )
( )	SVOCs	( )
(X)	PCBs (Total)	(X)
( )	PCBs (Dissolved)	( )
( )	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 ~~0952~~ 1000
Pump Stop Time 11:15
Minutes of Pumping ~~75~~ 75
Volume of Water Removed ~~3.0~~ 3.0 gallons
Did Well Go Dry? Y (N)

Evacuation Method: Bailer ( ) Bladder Pump ( )
Peristaltic Pump (X) Submersible Pump ( ) Other/Specify ( )
Pump Type: Geo Pump 2
Samples collected by same method as evacuation? (Y) N (specify)

Water Quality Meter Type(s) / Serial Numbers: 0360392 AE #2 YSI 556 MPS

Time	Pump Rate mL/min (1 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]*
1000	—	—	13.60	—	—	—	70/55/44/40/37		—
1020	100	0.53	13.91	10.36	6.78	4.522	44	10.12	163.6
1025	100	0.66	13.96	10.33	6.76	4.561	29	6.43	162.8
1030	150	0.86	13.99	10.25	6.76	4.583	21	4.36	162.6
1035	150	1.06	14.03	10.17	6.79	4.625	16	3.94	163.1
1040	150	1.25	14.03	10.19	6.79	4.633	12	3.92	162.2
1045	150	1.45	14.05	10.12	6.80	4649	9	3.67	161.1
1050	150	~~1.65~~ 1.65	14.05	10.12	6.79	4.669	7	3.63	161.1

* 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: STL
Delivered Via: UPS
Airbill #: —

Field Sampling Coordinator:

GROUNDWATER SAMPLING LOG

Well No. GMA2-3

Site/GMA Name GMA2 GE Pittsfield

Sampling Personnel DZ

Date 4/29/08

Weather Rain, 45°F

WELL INFORMATION - See Page 1

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]*
1055	~~0.08~~	1.85	14.05	10.08	6.81	4.683	6	3.58	159.8
1100	150	2.05	14.05	10.03	6.81	4.692	6	3.57	158.8
1103	—	~~2.17~~	14.05	10.08	6.80	4.693	5	3.54	158.9

* 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

GROUNDWATER SAMPLING LOG

Well No. GMA2-4
Key No. Rx-37
PID Background (ppm) —
Well Headspace (ppm) —

Site/GMA Name GMA2/GE Pittsfield.
Sampling Personnel KIC
Date 4/26/08
Weather Sunny, slight breeze, 60s

WELL INFORMATION

Reference Point Marked? (Y) N
Height of Reference Point ~3' Meas. From TOC
Well Diameter 2"
Screen Interval Depth 6.2-16.2 Meas. From BGS
Water Table Depth 8.30 Meas. From ~~Pipe~~ TIC (D)
Well Depth 17.75 Meas. From ~~TOC~~ TIC
Length of Water Column 9.45
Volume of Water in Well 1.54
Intake Depth of Pump/Tubing ~12' Meas. From TOC

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

Redevelop? Y (N)

Sample Time 1040
Sample ID GMA2-4
Duplicate ID —
MS/MSD GMA2-4MS/MSD
Split Sample ID —

Required	Analytical Parameters:	Collected
( )	VOCs (Standard List)	( )
( )	VOCs (Expanded List)	( )
( )	SVOCs	( )
( )	PCBs (Unfiltered)	( )
(X)	PCBs (Filtered)	(X)
( )	Metals/Inorganics (Unfiltered)	( )
( )	Metals/Inorganics (Filtered)	( )
( )	Total Cyanide (Unfiltered)	( )
( )	Total Cyanide (Filtered)	( )
( )	PAC Cyanide (Filtered)	( )
( )	PCDDs/PCDFs	( )
( )	Pesticides/Herbicides	( )
( )	Natural Attenuation	( )
( )	Other (Specify)	( )

EVACUATION INFORMATION

Pump Start Time 1005
Pump Stop Time 1130
Minutes of Pumping 85
Volume of Water Removed 3.5 gallons
Did Well Go Dry? (Y) N

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

Water Quality Meter Type(s) / Serial Numbers: 2100P HACH turb. 03M0230AC YSI 5666MPS ID4

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]*
1008	250	0.20	—	~~10.2~~	—	—	28	—	—
* 1015	150	0.40	8.38	10.34	7.02	0.617	9	1.40	-24.4
1020	150	0.60	8.34	9.28	7.04	0.606	6	0.73	-27.1
1025	150	0.79	8.37	9.35	7.02	0.605	5	0.68	-31.9
1030	150	0.99	8.35	8.90	7.02	0.6066	5	0.45	-37.2
1033	150	1.11	8.38	8.96	7.02	0.604	5	0.38	-38.1
1036	150	1.23	8.34	8.99	7.04	0.603	4	0.45	-41.0
1040	→ Sampled @ 1040 ←								

* 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 Initial purge clear, slight odor
* Hooked up YSI @ 1010
Flow through cell in shade, and covered w/ Kim-wipe.
1030 started to three minute intervals, parameters almost stable.

SAMPLE DESTINATION

Laboratory: SGS
Delivered Via: Fed-Ex
Airbill #: —

Field Sampling Coordinator: [signature]

GROUNDWATER SAMPLING LOG

Well No. GMA2-6
Key No. —
PID Background (ppm) —
Well Headspace (ppm) —

Site/GMA Name GMA2 GE Pittsfield
Sampling Personnel KLC, DAZ
Date 4/28/08
Weather 60's, slight rain

WELL INFORMATION

Reference Point Marked? Y N
Height of Reference Point ~ 36" Meas. From Grade
Well Diameter 2"
Screen Interval Depth 10.13-20.13 Meas. From BGS
Water Table Depth 14.63 Meas. From TIC
Well Depth 23.43 Meas. From TIC
Length of Water Column 8.80
Volume of Water in Well 1.44 gallons
Intake Depth of Pump/Tubing ~ 19 Meas. From TIC

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

Redevelop? Y (N)

Sample Time 1250
Sample ID GMA2-6
Duplicate ID —
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)	( )

EVACUATION INFORMATION

Pump Start Time 1130
Pump Stop Time 1300
Minutes of Pumping 90
Volume of Water Removed 4.75 gallons
Did Well Go Dry? Y (N)

Evacuation Method: Bailer ( ) Bladder Pump ( )
Peristaltic Pump (X) Submersible Pump ( ) Other/Specify ( )
Pump Type: GEO Pump 2
Samples collected by same method as evacuation? (Y) N (specify)

Water Quality Meter Type(s) / Serial Numbers: 2100P HACH Turb., YSI 556 MPS # 2 03C0392 AE

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]*
1135	100	0.13	14.68	—	—	—	194	—	—
1138	200	0.29	14.68	—	—	—	44	—	—
* 1142	—	—	14.68	8.09	7.10	1.257	38	9.17	33.9
1148	200	0.71	14.68	7.82	6.68	1.243	31	2.73	20.0
1153	200	0.97	14.68	7.66	6.65	1.242	27	2.15	18.0
1158	200	1.24	14.68	7.64	6.66	1.255	38	1.94	18.30
1203	200	1.50	14.68	7.56	6.65	1.252	35	1.72	13.9
1208	200	1.77	14.68	7.56	6.65	1.265	23	1.62	12.9

* 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 - Initial purge cloudy yellowish
1143 - pump shut-off, ~2min until back on - bad connection.
1145 - pump on
Yellow precipitates collecting in bottom of flow through cell

SAMPLE DESTINATION

Laboratory: SGS
Delivered Via: UPS
Airbill #: —

Field Sampling Coordinator:

GROUNDWATER SAMPLING LOG

Well No. GMA2-6

Site/GMA Name GE Pittsfield/GMA2
Sampling Personnel KLC, DAE
Date 4/28/08
Weather 50's, rain

WELL INFORMATION - See Page 1

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]*
1213	200	2.03	14.68	7.51	6.66	1.272	27	1.69	~~1.272~~ 10.
1218	200	2.30	14.68	7.51	6.66	1.278	12	1.00	~~1.277~~ 8.
1223	200	2.56	14.68	7.51	6.68	1.295	8	0.90	8.4
1228	200	2.82	14.68	7.53	6.68	1.303	6	0.83	7.5
1233	200	3.09	14.68	7.55	6.69	1.316	5	0.80	7.9
1238	200	3.35	14.68	7.57	6.69	1.328	4	0.73	6.4
1243	200	3.62	14.68	7.57	6.71	1.329	4	0.68	5.5
1248	200	3.79	14.68	7.51	6.70	1.341	4	0.67	4.5
1250 →	Sampled @ 1250 ←								

* 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

GROUNDWATER SAMPLING LOG

Well No. GMA2-9
Key No. EX-37
PID Background (ppm) –
Well Headspace (ppm) –

Site/GMA Name GMA2 · GE Pittsfield
Sampling Personnel D. Adams, D. Zoch
Date 4/29/09
Weather Cloudy, 45°

WELL INFORMATION

Reference Point Marked? Y N
Height of Reference Point _____ Meas. From _____
Well Diameter 2"
Screen Interval Depth 4-14 Meas. From BGS
Water Table Depth 6.40 Meas. From TIC
Well Depth 17.86 Meas. From TIC
Length of Water Column 11.46
Volume of Water in Well 1.87 gallons
Intake Depth of Pump/Tubing ~11 Meas. From TIC

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

Redevelop? Y (N)

Sample Time 13:40
Sample ID GMA2-9
Duplicate ID –
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)	( )

EVACUATION INFORMATION

Pump Start Time 12:50
Pump Stop Time 13:45
Minutes of Pumping 55
Volume of Water Removed [redacted] 2.25 gallons
Did Well Go Dry? Y (N)

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

Water Quality Meter Type(s) / Serial Numbers: YSI 556 MPS #4, 03M0230 AC

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]*
13:00	125	0.33	6.80	–	–	–	46	–	–
13:05	150	0.53	6.86	7.86	7.78	0.356	"	10.90	259.2
13:10	150	0.73	6.46	7.66	7.52	0.341	34	6.81	229.4
13:15	150	0.92	7.06	7.58	7.47	0.338	15	6.45	226.0
13:20	150	1.12	6.53	7.50	7.53	0.338	12	5.68	221.9
13:25	150	1.32	6.55	7.29	7.48	0.338	12	5.67	219.5
13:30	150	1.52	6.54	7.23	7.53	0.339	12	5.71	217.1
13:35	150	1.72	6.47	7.23	7.49	0.338	13	5.62	217.2

* 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 Initial purge was clear, no odor. Water level rising due to very high initial pump setting of ~450 mL/min. After low-flow and rate.

SAMPLE DESTINATION

Laboratory: SGS
Delivered Via: UPS
Airbill #: ——

Field Sampling Coordinator: [signature]

GROUNDWATER SAMPLING LOG

Well No. GMA2-10
Key No. #2537
PID Background (ppm) –
Well Headspace (ppm) –

Site/GMA Name GMA2 GE Pittsfield
Sampling Personnel P. Adanti
Date 4/25/03
Weather Rainy, 45°F

WELL INFORMATION

Reference Point Marked? Y (N)
Height of Reference Point _____ Meas. From _____
Well Diameter 2"
Screen Interval Depth 9-19 Meas. From Ground
Water Table Depth 15.10 Meas. From TIC
Well Depth 21.22 Meas. From TIC
Length of Water Column 6.12
Volume of Water in Well 1.00 gallon
Intake Depth of Pump/Tubing 18 Meas. From TIC

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

Redevelop? Y (N)

Sample Time 15:35
Sample ID GMA2-10
Duplicate ID GMA2-DUP1
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)	( )

EVACUATION INFORMATION

Pump Start Time 14:20
Pump Stop Time 15:50
Minutes of Pumping 90
Volume of Water Removed ~~~~ 4.75 gallons
Did Well Go Dry? Y (N)

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

Water Quality Meter Type(s) / Serial Numbers: YSI 556 MPS #4, 03M0230 AC

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]*
14:25	75	0.10	15.15	–	–	–	685	–	–
14:30	100	0.23	15.15	–	–	–	292	–	–
14:35	200	0.49	15.16	–	–	–	86	–	–
14:40	200	0.76	15.16	–	–	–	62	–	–
14:45	200	1.02	15.16	–	–	–	50	–	–
14:50	200	1.29	15.16	8.20	6.85	1.367	46	7.34	30.0
14:55	200	1.55	15.16	8.08	6.89	1.367	37	2.36	21.0
15:00	200	1.82	15.16	8.05	6.81	1.364	29	1.28	20.2

* 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 Initial Purge was orange and cloudy w/ no odor

Final purge clear

SAMPLE DESTINATION

Laboratory: SGS
Delivered Via: UPS
Airbill #: _____

Field Sampling Coordinator: _____

C:\WORK\GE\monitoring\554199\Attachment\D-2

GROUNDWATER SAMPLING LOG

Well No. GMA2-10

Site/GMA Name GMA2
Sampling Personnel D. Adams
Date 4/23/08
Weather Rainy, 45°F

WELL INFORMATION - See Page 1

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]*
15:05	200	2.08	15.15	8.03	6.83	1.363	17	1.02	18.1
15:10	200	2.34	15.15	7.99	6.84	1.362	14	0.90	17.0
15:15	200	2.61	15.15	7.93	6.82	1.360	11	0.82	16.3
15:20	200	2.87	15.15	7.94	6.82	1.359	9	0.77	15.4
15:25	200	3.14	15.15	7.93	6.80	1.358	8	0.75	15.3
15:30	200	3.40	15.15	7.94	6.80	1.357	8	0.77	14.9
15:35	SAMPLE AND DUP COLLECTED								

* 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

GROUNDWATER SAMPLING LOG

Well No. J-1R
Key No. —
PID Background (ppm) —
Well Headspace (ppm) —

Site/GMA Name GMA2, GG Pits Rd 2
Sampling Personnel KLC, DAZ
Date 4/28/08
Weather cloudy, rain, 50's

WELL INFORMATION

Reference Point Marked? Y N
Height of Reference Point ____ Meas. From ____
Well Diameter 2"
Screen Interval Depth 11.65-21.55 Meas. From BGS
Water Table Depth 14.58 Meas. From TIC
Well Depth 21.05 Meas. From TIC
Length of Water Column 6.47'
Volume of Water in Well 1.06 gallons
Intake Depth of Pump/Tubing ~20 Meas. From TIC

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

Redevelop? Y (N)

Sample Time 1600
Sample ID J-1R
Duplicate ID GMA2, 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)	( )

EVACUATION INFORMATION

Pump Start Time 1440
Pump Stop Time 1620
Minutes of Pumping 100
Volume of Water Removed 5.25 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: 2100P HACH Turb, YSI 556 MPS #2 03C0392 A E

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]*
1450	200	0.53	14.58	—	—	—	78	—	—
1455	200	0.79	14.68	—	—	—	57	—	—
1500	200	1.06	14.58	—	—	—	47	—	—
1505	200	1.32	14.58	8.96	7.06	1.020	46	3.12	85.7
1510	200	1.58	14.58	8.96	6.97	1.013	33	2.13	92.1
1515	200	1.85	14.58	8.97	6.94	1.010	25	1.99	95.6
1520	200	2.11	14.58	8.98	6.90	1.003	19	1.77	100.0
1525	200	2.38	14.58	8.98	6.89	0.999	12	1.71	103.4

* 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

Initial purge, a little bit cloudy no noticable odor.

SAMPLE DESTINATION

Laboratory: SGS
Delivered Via: UPS
Airbill #: —

Field Sampling Coordinator:

GROUNDWATER SAMPLING LOG

Well No. J-12

Site/GMA Name GMA 2 - GE Pittsfield

Sampling Personnel ICIC, DAZ

Date 4/28/08

Weather Rain, 50's cloudy

WELL INFORMATION - See Page 1

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]*
~~1230~~ 1530	200	2.64	14.58	9.00	*	0.990	10	1.81	117.0
1535	200	2.91	14.58	9.00		0.998	8	1.54	114.3
1540	200	3.17	14.58	8.99	5.93	0.987	6	1.49	113.6
1545	200	3.43	14.57	8.96	6.55	0.984	5	1.38	113.6
1550	200	3.70	14.57	8.97	6.67	0.984	5	1.38	114.1
1555	200	3.96	14.57	8.98	6.65	0.982	5	1.35	114.7
1600	→	→	Sampled	←	←	←	←	←	←

* 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

* pH probe malfunction, reading stabilized before 1530

* Redox new J-Plug

* @ 1540, pH began functioning, wet/damp connection suspected.

GROUNDWATER SAMPLING LOG

Well No. OS-MW-2
Key No. —
PID Background (ppm) —
Well Headspace (ppm) —

Site/GMA Name GMA 2, GE Pittsfield
Sampling Personnel Y.C., D.A.Z.
Date 4/29/08
Weather Cool, Rainy SDS

WELL INFORMATION

Reference Point Marked? (Y) N
Height of Reference Point 2.5" Meas. From BGS
Well Diameter 1"
Screen Interval Depth 8.56-18.56 Meas. From Ground
Water Table Depth 14.05 Meas. From TIC
Well Depth 17.70 Meas. From TIC
Length of Water Column 3.65'
Volume of Water in Well 0.15 gallons
Intake Depth of Pump/Tubing ~16' Meas. From BE TIC

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

Redevelop? Y (N)

Sample Time 1500
Sample ID OS-MW-2
Duplicate ID —
MS/MSD OS-MW2-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)	( )

EVACUATION INFORMATION

Pump Start Time 1345
Pump Stop Time 1510
Minutes of Pumping 85
Volume of Water Removed 3-2.5 gallons
Did Well Go Dry? Y (N)

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

Water Quality Meter Type(s) / Serial Numbers: 03CO392 AE (#2) YSI 556 MPS

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]*
1350	150	0.20	15.05				68		
1355		0.40	15.05	7.69	7.35	1.040	3	9.10	70.2
1400		0.59	15.05	7.72	7.03	0.932	1	5.49	86.9
1405		0.79	15.08	7.76	6.88	0.924	1	4.18	93.9
1410		0.99	15.05	7.80	6.83	0.922	1	3.33	98.6
1414		1.15	15.05	7.81	6.88	0.922	1	2.55	102.2
1420		1.39	15.18	7.84	6.88	0.922	1	2.30	104.1
1425		1.59	15.21	7.83	6.77	0.921	1	2.00	107.5

* 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:

GROUNDWATER SAMPLING LOG

Well No. 05-MW-2

Site/GMA Name BMA2, GE Pittsfield
Sampling Personnel KC, DAZ
Date 4/29/08
Weather Cool, Rainy 50's

WELL INFORMATION - See Page 1

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	150	1.78	15.25	7.84	6.77	0.922	1	1.91	109.5
1433	150	1.90		7.83	6.83	0.921	1	1.81	111
1436	↓	2.02	15.28	7.83	6.83	0.921	1	1.88	113
1439	↓	2.14	15.30	7.86	6.81	0.923	1	1.88	114
1442			↓						
Sampled @		1500							

* 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

ARCADIS

Appendix B

Validated Groundwater
Analytical Results – Spring 2008

Table B-1
Spring 2008 Groundwater Analytical Results

Groundwater Managment Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	GMA2-1 04/29/08	GMA2-2 04/28/08	GMA2-3 04/29/08	GMA2-4 04/25/08	GMA2-6 04/28/08
Volatile Organics					
1,1,1,2-Tetrachloroethane	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA	NA	NA
1,1-Dichloroethene	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	NA	NA	NA	NA	NA
1,2-Dibromo-3-chloropropane	NA	NA	NA	NA	NA
1,2-Dibromoethane	NA	NA	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA	NA	NA
1,4-Dioxane	NA	NA	NA	NA	NA
2-Butanone	NA	NA	NA	NA	NA
2-Chloro-1,3-butadiene	NA	NA	NA	NA	NA
2-Chloroethylvinylether	NA	NA	NA	NA	NA
2-Hexanone	NA	NA	NA	NA	NA
3-Chloropropene	NA	NA	NA	NA	NA
4-Methyl-2-pentanone	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA
Acetonitrile	NA	NA	NA	NA	NA
Acrolein	NA	NA	NA	NA	NA
Acrylonitrile	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA
Bromoform	NA	NA	NA	NA	NA
Bromomethane	NA	NA	NA	NA	NA
Carbon Disulfide	NA	NA	NA	NA	NA
Carbon Tetrachloride	NA	NA	NA	NA	NA
Chlorobenzene	NA	NA	NA	NA	NA
Chloroethane	NA	NA	NA	NA	NA
Chloroform	NA	NA	NA	NA	NA
Chloromethane	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA	NA	NA
Dibromochloromethane	NA	NA	NA	NA	NA
Dibromomethane	NA	NA	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA	NA	NA
Ethyl Methacrylate	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA
Iodomethane	NA	NA	NA	NA	NA
Isobutanol	NA	NA	NA	NA	NA
Methacrylonitrile	NA	NA	NA	NA	NA
Methyl Methacrylate	NA	NA	NA	NA	NA
Methylene Chloride	NA	NA	NA	NA	NA
Propionitrile	NA	NA	NA	NA	NA
Styrene	NA	NA	NA	NA	NA
Tetrachloroethene	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA
trans-1,4-Dichloro-2-butene	NA	NA	NA	NA	NA
Trichloroethene	NA	NA	NA	NA	NA
Trichlorofluoromethane	NA	NA	NA	NA	NA
Vinyl Acetate	NA	NA	NA	NA	NA
Vinyl Chloride	NA	NA	NA	NA	NA
Xylenes (total)	NA	NA	NA	NA	NA
Total VOCs	NA	NA	NA	NA	NA

Table B-1
Spring 2008 Groundwater Analytical Results

Groundwater Managment Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	GMA2-1 04/29/08	GMA2-2 04/28/08	GMA2-3 04/29/08	GMA2-4 04/25/08	GMA2-6 04/28/08
PCBs-Filtered					
Aroclor-1016	ND(0.000068)	ND(0.000066)	ND(0.000068)	ND(0.000067) J	ND(0.000066)
Aroclor-1221	ND(0.000068)	ND(0.000066)	ND(0.000068)	ND(0.000067) J	ND(0.000066)
Aroclor-1232	ND(0.000068)	ND(0.000066)	ND(0.000068)	ND(0.000067) J	ND(0.000066)
Aroclor-1242	ND(0.000068)	ND(0.000066)	ND(0.000068)	ND(0.000067) J	ND(0.000066)
Aroclor-1248	ND(0.000068)	ND(0.000066)	ND(0.000068)	ND(0.000067) J	ND(0.000066)
Aroclor-1254	ND(0.000068)	ND(0.000066)	ND(0.000068)	ND(0.000067) J	ND(0.000066)
Aroclor-1260	ND(0.000068)	ND(0.000066)	ND(0.000068)	ND(0.000067) J	ND(0.000066)
Total PCBs	ND(0.000068)	ND(0.000066)	ND(0.000068)	ND(0.000067) J	ND(0.000066)

Table B-1
Spring 2008 Groundwater Analytical Results

Groundwater Managment Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	GMA2-9 04/29/08	GMA2-10 04/28/08	J-1R 04/28/08	OJ-MW-2 04/29/08
Volatile Organics				
1,1,1,2-Tetrachloroethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
1,1,1-Trichloroethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
1,1,2,2-Tetrachloroethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
1,1,2-Trichloroethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
1,1-Dichloroethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
1,1-Dichloroethene	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
1,2,3-Trichloropropane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
1,2-Dibromo-3-chloropropane	NA	ND(0.0050) J [ND(0.0050) J]	NA	ND(0.0050) J
1,2-Dibromoethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
1,2-Dichloroethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
1,2-Dichloropropane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
1,4-Dioxane	NA	ND(0.10) J [ND(0.10) J]	NA	ND(0.10) J
2-Butanone	NA	ND(0.0050) J [ND(0.0050) J]	NA	ND(0.0050) J
2-Chloro-1,3-butadiene	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
2-Chloroethylvinylether	NA	ND(0.013) J [ND(0.013) J]	NA	R
2-Hexanone	NA	ND(0.0050) J [ND(0.0050) J]	NA	ND(0.0050) J
3-Chloropropene	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
4-Methyl-2-pentanone	NA	ND(0.0050) [ND(0.0050)]	NA	ND(0.0050)
Acetone	NA	ND(0.0050) [ND(0.0050)]	NA	ND(0.0050)
Acetonitrile	NA	ND(0.020) J [ND(0.020) J]	NA	ND(0.020) J
Acrolein	NA	ND(0.025) J [ND(0.025) J]	NA	ND(0.025) J
Acrylonitrile	NA	ND(0.025) J [ND(0.025) J]	NA	ND(0.025) J
Benzene	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Bromodichloromethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Bromoform	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Bromomethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Carbon Disulfide	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Carbon Tetrachloride	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Chlorobenzene	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Chloroethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Chloroform	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Chloromethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
cis-1,3-Dichloropropene	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Dibromochloromethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Dibromomethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Dichlorodifluoromethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Ethyl Methacrylate	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Ethylbenzene	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Iodomethane	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Isobutanol	NA	ND(0.050) J [ND(0.050) J]	NA	ND(0.050) J
Methacrylonitrile	NA	ND(0.010) [ND(0.010)]	NA	ND(0.010)
Methyl Methacrylate	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Methylene Chloride	NA	ND(0.0050) J [ND(0.0050) J]	NA	ND(0.0050) J
Propionitrile	NA	ND(0.020) J [ND(0.020) J]	NA	ND(0.020) J
Styrene	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Tetrachloroethene	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Toluene	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
trans-1,2-Dichloroethene	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
trans-1,3-Dichloropropene	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
trans-1,4-Dichloro-2-butene	NA	ND(0.0050) J [ND(0.0050) J]	NA	ND(0.0050) J
Trichloroethene	NA	ND(0.0010) [ND(0.0010)]	NA	0.012
Trichlorofluoromethane	NA	ND(0.0010) J [ND(0.0010) J]	NA	ND(0.0010) J
Vinyl Acetate	NA	ND(0.0025) [ND(0.0025)]	NA	ND(0.0025)
Vinyl Chloride	NA	ND(0.0010) [ND(0.0010)]	NA	0.00095 J
Xylenes (total)	NA	ND(0.0010) [ND(0.0010)]	NA	ND(0.0010)
Total VOCs	NA	ND(0.10) [ND(0.10)]	NA	0.013 J

Table B-1
Spring 2008 Groundwater Analytical Results

Groundwater Managment Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	GMA2-9 04/29/08	GMA2-10 04/28/08	J-1R 04/28/08	OJ-MW-2 04/29/08
PCBs-Filtered				
Aroclor-1016	ND(0.000066)	NA	ND(0.000072) [ND(0.000071)]	NA
Aroclor-1221	ND(0.000066)	NA	ND(0.000072) [ND(0.000071)]	NA
Aroclor-1232	ND(0.000066)	NA	ND(0.000072) [ND(0.000071)]	NA
Aroclor-1242	ND(0.000066)	NA	ND(0.000072) [ND(0.000071)]	NA
Aroclor-1248	ND(0.000066)	NA	ND(0.000072) [ND(0.000071)]	NA
Aroclor-1254	ND(0.000066)	NA	ND(0.000072) [ND(0.000071)]	NA
Aroclor-1260	ND(0.000066)	NA	ND(0.000072) [ND(0.000071)]	NA
Total PCBs	ND(0.000066)	NA	ND(0.000072) [ND(0.000071)]	NA

Notes:

1. Samples were collected by ARCADIS, 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 (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.
R - Data was rejected due to a deficiency in the data generation process.

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Appendix C

Data Validation Report – Spring 2008

Appendix C
Groundwater Sampling Data Validation Report
Groundwater Management Area 2 – Spring 2008

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 groundwater samples collected in April 2008 as part of groundwater quality monitoring activities conducted at Groundwater Management Area 2, located within 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 nine PCB samples and five 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 (as submitted by GE on March 30, 2007 following approval by EPA on March 15, 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 C-1. Each sample subject to evaluation is listed in Table C-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	7	1	1	9
VOCs	0	0	0	2	1	2	5
Total	**0**	**0**	**0**	**9**	**2**	**3**	**14**

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	5	J
	1,4-Dioxane	5	J
	2-Butanone	5	J
	2-Chloroethylvinylether	4	J
	Acetonitrile	5	J
	Acrolein	5	J
	Acrylonitrile	5	J
	Isobutanol	5	J
	Propionitrile	5	J
	trans-1,4-Dichloro-2-butene	5	J

Several of the organic compounds (including the compounds presented in the above tables detailing RRF deviations) exhibit instrument response factors (RFs) below the USEPA Region I minimum value of 0.05, but meet the analytical method criterion, which does not specify minimum RFs for these compounds. These compounds were analyzed by the laboratory at a higher concentration than the compounds that normally exhibit RFs greater than the USEPA Region I minimum value of 0.05 in an effort to demonstrate acceptable response. USEPA Region I guidelines state that non-detect compound results associated with a RF less than the minimum value of 0.05 are to be rejected (R). However, in the case of these select organic compounds, the RF is an inherent problem with the current analytical methodology; therefore, the non-detect sample results were qualified as estimated (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 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
VOCs	2-Hexanone	5	J
	Methylene Chloride	5	J
	Trichlorofluoromethane	5	J

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

Compound Qualified Due to MS/MSD RPD Deviations

Analysis	Compound	Number of Affected Samples	Qualification
VOCs	2-Chloroethylvinylether	1	R

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

Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis recovery criteria for organics must be within the laboratory-generated QC acceptance limits specified on the LCS/LCSD reporting. Organic sample results associated with the LCS/LCSD that exceeded laboratory-generated QC acceptance limits were qualified as estimated (J). The compounds that did not meet LCS/LCSD recovery criteria and the number of samples qualified due to those deviations are presented in the following table.

Compounds Qualified Due to LCS 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	99.7	A total of one sample result was rejected due to MS/MSD recovery deviations.

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

5.1 Precision

Precision measures the reproducibility of measurements under a given set of conditions. Specifically, it is a quantitative measure of the variability of a group of measurements compared to their average value. For this investigation, precision was defined as the RPD between duplicate sample results. The duplicate samples used to evaluate precision included field duplicates, MS/MSD samples, and LCS/LCSD samples. For this analytical program, 2.3% 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, internal standards, and surrogate compound recoveries. For this analytical program, 18.1% of the data required qualification due to instrument calibration deviations, 2.3% of the data required qualification due to LCS/LCSD recovery deviations, and 0.28% of the data required qualification due to MS/MSD recovery deviations. None of the data required qualification for internal standard or surrogate compound recovery deviations.

5.3 Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness is a qualitative parameter, which is most concerned with the proper design of the sampling program. The representativeness criterion is best satisfied by making certain that sampling locations are selected properly and a sufficient number of samples are collected. This parameter has been addressed by collecting samples at locations specified in 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 in April 2008 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. The actual completeness of this analytical data set ranged from 99.7% to 100% for individual analytical parameters and had an overall usability of 99.9%, which is greater than the minimum required usability of 90% as specified in the FSP/QAPP.

Table C-1
Analytical Data Validation Summary
Groundwater Management Area 2 - Spring 2008

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											
G135-653	GMA2-4 (Filtered)	4/25/2008	Water	Tier II	Yes	Aroclor-1016	LCS %R	53.0%	70.0% to 130%	ND(0.000067) J	
						Aroclor-1016	MS/MSD RPD	16.6%	<12%	ND(0.000067) J	
						Aroclor-1221	LCS %R	53.0%	70.0% to 130%	ND(0.000067) J	
						Aroclor-1221	MS/MSD RPD	16.6%	<12%	ND(0.000067) J	
						Aroclor-1232	LCS %R	53.0%	70.0% to 130%	ND(0.000067) J	
						Aroclor-1232	MS/MSD RPD	16.6%	<12%	ND(0.000067) J	
						Aroclor-1242	LCS %R	53.0%	70.0% to 130%	ND(0.000067) J	
						Aroclor-1242	MS/MSD RPD	16.6%	<12%	ND(0.000067) J	
						Aroclor-1248	LCS %R	53.0%	70.0% to 130%	ND(0.000067) J	
						Aroclor-1248	MS/MSD RPD	16.6%	<12%	ND(0.000067) J	
						Aroclor-1254	LCS %R	53.0%	70.0% to 130%	ND(0.000067) J	
						Aroclor-1254	MS/MSD RPD	16.6%	<12%	ND(0.000067) J	
						Aroclor-1260	LCS %R	53.0%	70.0% to 130%	ND(0.000067) J	
						Aroclor-1260	MS/MSD RPD	16.6%	<12%	ND(0.000067) J	
						Total PCBs	LCS %R	53.0%	70.0% to 130%	ND(0.000067) J	
						Total PCBs	MS/MSD RPD	16.6%	<12%	ND(0.000067) J	
G135-655	GMA2-1 (Filtered)	4/29/2008	Water	Tier II	No						
G135-655	GMA2-2 (Filtered)	4/28/2008	Water	Tier II	No						
G135-655	GMA2-3 (Filtered)	4/29/2008	Water	Tier II	No						
G135-655	GMA2-6 (Filtered)	4/28/2008	Water	Tier II	No						
G135-655	GMA2-9 (Filtered)	4/29/2008	Water	Tier II	No						
G135-655	GMA2-DUP2 (Filtered)	4/28/2008	Water	Tier II	No						Duplicate of J-1R (Filtered)
G135-655	GMA2-RB-1 (Filtered)	4/29/2008	Water	Tier II	No						
G135-655	J-1R (Filtered)	4/28/2008	Water	Tier II	No						
VOCs											
G135-655	GMA2-10	4/28/2008	Water	Tier II	Yes	1,2-Dibromo-3-chloropropane	ICAL RRF	0.012	>0.05	ND(0.0050) J	
						1,4-Dioxane	ICAL RRF	0.001	>0.05	ND(0.10) J	
						2-Butanone	ICAL RRF	0.033	>0.05	ND(0.0050) J	
						2-Chloroethylvinylether	ICAL RRF	0.014	>0.05	ND(0.013) J	
						2-Hexanone	CCAL %D	28.2%	<25%	ND(0.0050) J	
						Acetonitrile	ICAL RRF	0.006	>0.05	ND(0.020) J	
						Acrolein	ICAL RRF	0.015	>0.05	ND(0.025) J	
						Acrylonitrile	ICAL RRF	0.027	>0.05	ND(0.025) J	
						Isobutanol	ICAL RRF	0.003	>0.05	ND(0.050) J	
						Methylene Chloride	CCAL %D	45.3%	<25%	ND(0.0050) J	
						Propionitrile	ICAL RRF	0.009	>0.05	ND(0.020) J	
						trans-1,4-Dichloro-2-butene	ICAL RRF	0.020	>0.05	ND(0.0050) J	
						Trichlorofluoromethane	CCAL %D	27.3%	<25%	ND(0.0010) J	
G135-655	GMA2-DUP1	4/28/2008	Water	Tier II	Yes	1,2-Dibromo-3-chloropropane	ICAL RRF	0.012	>0.05	ND(0.0050) J	Duplicate of GMA2-10
						1,4-Dioxane	ICAL RRF	0.001	>0.05	ND(0.10) J	
						2-Butanone	ICAL RRF	0.033	>0.05	ND(0.0050) J	
						2-Chloroethylvinylether	ICAL RRF	0.014	>0.05	ND(0.013) J	
						2-Hexanone	CCAL %D	28.2%	<25%	ND(0.0050) J	
						Acetonitrile	ICAL RRF	0.006	>0.05	ND(0.020) J	
						Acrolein	ICAL RRF	0.015	>0.05	ND(0.025) J	
						Acrylonitrile	ICAL RRF	0.027	>0.05	ND(0.025) J	
						Isobutanol	ICAL RRF	0.003	>0.05	ND(0.050) J	
						Methylene Chloride	CCAL %D	45.3%	<25%	ND(0.0050) J	
						Propionitrile	ICAL RRF	0.009	>0.05	ND(0.020) J	
						trans-1,4-Dichloro-2-butene	ICAL RRF	0.020	>0.05	ND(0.0050) J	
						Trichlorofluoromethane	CCAL %D	27.3%	<25%	ND(0.0010) J	
G135-655	GMA2-RB-1	4/29/2008	Water	Tier II	Yes	1,2-Dibromo-3-chloropropane	ICAL RRF	0.012	>0.05	ND(0.0050) J	
						1,4-Dioxane	ICAL RRF	0.001	>0.05	ND(0.10) J	
						2-Butanone	ICAL RRF	0.033	>0.05	ND(0.0050) J	
						2-Chloroethylvinylether	ICAL RRF	0.014	>0.05	ND(0.013) J	
						2-Hexanone	CCAL %D	28.2%	<25%	ND(0.0050) J	
						Acetonitrile	ICAL RRF	0.006	>0.05	ND(0.020) J	
						Acrolein	ICAL RRF	0.015	>0.05	ND(0.025) J	
						Acrylonitrile	ICAL RRF	0.027	>0.05	ND(0.025) J	
						Isobutanol	ICAL RRF	0.003	>0.05	ND(0.050) J	
						Methylene Chloride	CCAL %D	45.3%	<25%	ND(0.0050) J	
						Propionitrile	ICAL RRF	0.009	>0.05	ND(0.020) J	
						trans-1,4-Dichloro-2-butene	ICAL RRF	0.020	>0.05	ND(0.0050) J	
						Trichlorofluoromethane	CCAL %D	27.3%	<25%	ND(0.0010) J	

Table C-1
Analytical Data Validation Summary
Groundwater Management Area 2 - Spring 2008

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)											
G135-655	OJ-MW-2	4/29/2008	Water	Tier II	Yes	1,2-Dibromo-3-chloropropane	ICAL RRF	0.012	>0.05	ND(0.0050) J	
						1,4-Dioxane	ICAL RRF	0.001	>0.05	ND(0.10) J	
						2-Butanone	ICAL RRF	0.033	>0.05	ND(0.0050) J	
						2-Chloroethylvinylether	MS/MSD %R	0.0%, 0.0%	16.7% to 200%	R	
						2-Hexanone	CCAL %D	28.2%	<25%	ND(0.0050) J	
						Acetonitrile	ICAL RRF	0.006	>0.05	ND(0.020) J	
G135-655	OJ-MW-2	4/29/2008	Water	Tier II	Yes	Acrolein	ICAL RRF	0.015	>0.05	ND(0.025) J	
						Acrylonitrile	ICAL RRF	0.027	>0.05	ND(0.025) J	
						Isobutanol	ICAL RRF	0.003	>0.05	ND(0.050) J	
						Methylene Chloride	CCAL %D	45.3%	<25%	ND(0.0050) J	
						Propionitrile	ICAL RRF	0.009	>0.05	ND(0.020) J	
						trans-1,4-Dichloro-2-butene	ICAL RRF	0.020	>0.05	ND(0.0050) J	
						Trichlorofluoromethane	CCAL %D	27.3%	<25%	ND(0.0010) J	
G135-655	Trip Blank	4/29/2008	Water	Tier II	Yes	1,2-Dibromo-3-chloropropane	ICAL RRF	0.012	>0.05	ND(0.0050) J	
						1,4-Dioxane	ICAL RRF	0.001	>0.05	ND(0.10) J	
						2-Butanone	ICAL RRF	0.033	>0.05	ND(0.0050) J	
						2-Chloroethylvinylether	ICAL RRF	0.014	>0.05	ND(0.013) J	
						2-Hexanone	CCAL %D	28.2%	<25%	ND(0.0050) J	
						Acetonitrile	ICAL RRF	0.006	>0.05	ND(0.020) J	
						Acrolein	ICAL RRF	0.015	>0.05	ND(0.025) J	
						Acrylonitrile	ICAL RRF	0.027	>0.05	ND(0.025) J	
						Isobutanol	ICAL RRF	0.003	>0.05	ND(0.050) J	
						Methylene Chloride	CCAL %D	45.3%	<25%	ND(0.0050) J	
						Propionitrile	ICAL RRF	0.009	>0.05	ND(0.020) J	
						trans-1,4-Dichloro-2-butene	ICAL RRF	0.020	>0.05	ND(0.0050) J	
						Trichlorofluoromethane	CCAL %D	27.3%	<25%	ND(0.0010) J	

ARCADIS

Appendix D

Historical Groundwater Data

Groundwater Elevation Monitoring
Data – Spring 2008

Table D-1
Groundwater Elevation Monitoring Data

Groundwater Management Area 2
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts

Well Name	Measuring Point Elev (Ft.)	Date	Depth to Water (feet BMP)	Corrected Water Elev. (feet)
GMA 2 - Former Oxbow Area J				
GMA 2-1	991.36	4/16/2008	14.75	976.61
GMA 2-1	991.36	4/29/2008	15.01	976.35
GMA 2-2	991.19	4/16/2008	16.08	975.11
GMA 2-2	991.19	4/28/2008	17.18	974.01
GMA 2-3	991.48	4/16/2008	12.59	978.89
GMA 2-3	991.48	4/29/2008	13.38	978.10
GMA 2-6	989.73	4/16/2008	13.68	976.05
GMA 2-6	989.73	4/28/2008	14.63	975.10
GMA 2-7	989.64	4/16/2008	12.76	976.88
GMA 2-10	990.03	4/16/2008	14.09	975.94
GMA 2-10	990.03	4/28/2008	15.10	974.93
J-1R	988.25	4/16/2008	13.53	974.72
J-1R	988.25	4/28/2008	14.58	973.67
MW-1	994.47	4/16/2008	10.25	984.22
MW-2	991.64	4/16/2008	12.96	978.68
MW-2	991.64	4/29/2008	14.05	977.59
GMA 2 - Former Oxbow Area K				
GMA 2-4	983.41	4/16/2008	7.55	975.86
GMA 2-4	983.41	4/25/2008	8.30	975.11
GMA 2-5	985.85	4/16/2008	7.96	977.89
GMA 2-8	982.30	4/16/2008	6.96	975.34
GMA 2-9	981.29	4/16/2008	6.31	974.98
GMA 2-9	981.29	4/29/2008	6.40	974.89
Housatonic River (Foot Bridge)				
GMA2-SG-1	989.82	1/17/2008	19.55	970.27
GMA2-SG-1	989.82	2/27/2008	16.32	973.50
GMA2-SG-1	989.82	3/26/2008	16.35	973.47
GMA2-SG-1	989.82	4/16/2008	15.68	974.14
GMA2-SG-1	989.82	5/19/2008	16.68	973.14
GMA 1 - Selected Monitoring Data Adjacent to GMA 2				
ES1-5	1,023.33	4/15/2008	35.80	987.53
GMA1-18	998.29	4/14/2008	4.85	993.44
ES1-20	1,001.56	4/15/2008	10.43	991.13
GMA 4 - Selected Monitoring Data Adjacent to GMA 2				
GMA4-1	1,012.35	4/17/2008	22.21	990.14
GMA4-4	999.64	4/17/2008	8.68	990.96
H78B-13R	992.93	4/17/2008	8.65	984.28
H78B-15	1,012.68	4/17/2008	13.30	999.38
H78B-16	999.33	4/17/2008	11.44	987.89
H78B-17R	1,000.31	4/17/2008	12.74	987.57
OPCA-MW-3	1,014.83	4/17/2008	19.28	995.55
OPCA-MW-4	1,018.67	4/17/2008	11.18	1,007.49
OPCA-MW-6	1,022.31	4/17/2008	15.09	1,007.22
78-4	998.55	4/17/2008	11.43	987.12
78-5R	997.36	4/17/2008	4.80	992.56

Notes:
1. ft BMP - feet Below Measuring Point.
2. A survey reference point was established on the Oxbow J & K foot bridge for staff gauge GMA2-SG-1. 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.

Summary of Historical Groundwater Analytical Results – Selected Wells

Table D-2
Comparison of Spring 2008 Sampling Result to Prior Monitoring Event Results

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	GMA2-1 03/08/07	GMA2-1 04/29/08	GMA2-2 04/25/03	GMA2-2 04/28/08	GMA2-3 04/25/03	GMA2-3 04/29/08	GMA2-4 04/19/06	GMA2-4 04/25/08	GMA2-6 04/24/03	GMA2-6 04/28/08	GMA2-9 04/14/06
Volatile Organics											
Acetone	NA	NA	0.018	NA	ND(0.010)	NA	NA	NA	ND(0.010)	NA	NA
Tetrachloroethene	NA	NA	0.0014 J	NA	ND(0.0020)	NA	NA	NA	ND(0.0020)	NA	NA
Trichloroethene	NA	NA	ND(0.0050)	NA	ND(0.0050)	NA	NA	NA	0.044	NA	NA
Vinyl Chloride	NA	NA	ND(0.0020)	NA	ND(0.0020)	NA	NA	NA	ND(0.0020)	NA	NA
Total VOCs	NA	NA	0.019 J	NA	ND(0.20)	NA	NA	NA	0.044	NA	NA
PCBs-Unfiltered											
Aroclor-1254	NA	NA	0.00028	NA	0.00065	NA	NA	NA	0.00014	NA	NA
Total PCBs	NA	NA	0.00028	NA	0.00065	NA	NA	NA	0.00014	NA	NA
PCBs-Filtered											
Aroclor-1254	ND(0.00010) J [ND(0.00010)]	ND(0.000068)	0.00023	ND(0.000066)	0.00056	ND(0.000068)	ND(0.00085)	ND(0.000067)	0.00011	ND(0.000066)	0.000076
Total PCBs	ND(0.00010) J [ND(0.00010)]	ND(0.000068)	0.00023	ND(0.000066)	0.00056	ND(0.000068)	ND(0.00085)	ND(0.000067)	0.00011	ND(0.000066)	0.000076

Table D-2
Comparison of Spring 2008 Sampling Result to Prior Monitoring Event Results

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	GMA2-9 04/29/08	J-1R 04/28/03	J-1R 04/28/08	OJ-MW-2 05/24/04	OJ-MW-2 04/29/08
Volatile Organics					
Acetone	NA	ND(0.010)	NA	ND(0.010) [ND(0.010)]	ND(0.0050)
Tetrachloroethene	NA	ND(0.0020)	NA	ND(0.0020) J	ND(0.0010)
Trichloroethene	NA	0.0020 J	NA	0.0048 J [0.0048 J]	0.012
Vinyl Chloride	NA	ND(0.0020)	NA	ND(0.0020) [ND(0.0020)]	0.00095 J
Total VOCs	NA	0.0020 J	NA	0.0048 J [0.0048 J]	0.013 J
PCBs-Unfiltered					
Aroclor-1254	NA	0.00024	NA	ND(0.000065) [ND(0.000065)]	NA
Total PCBs	NA	0.00024	NA	ND(0.000065) [ND(0.000065)]	NA
PCBs-Filtered					
Aroclor-1254	ND(0.000066)	0.00010	ND(0.000072) [ND(0.000071)]	ND(0.000065) [ND(0.000065)]	NA
Total PCBs	ND(0.000066)	0.00010	ND(0.000072) [ND(0.000071)]	ND(0.000065) [ND(0.000065)]	NA

Notes:

1. Samples were collected by ARCADIS, and submitted to SGS Environmental Services, Inc. for analysis of PCBs (filtered and unfiltered) and volatiles.
2. With the exception of samples collected after 04/01/08 Analytical results have been validated as per GE's approved Field Sampling Plan/Quality Assurance Project Plan.
3. NA - Not Analyzed.
4. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
5. Only those constituents detected in one or more samples are summarized.
6. Field duplicate sample results are presented in brackets.

Data Qualifiers:

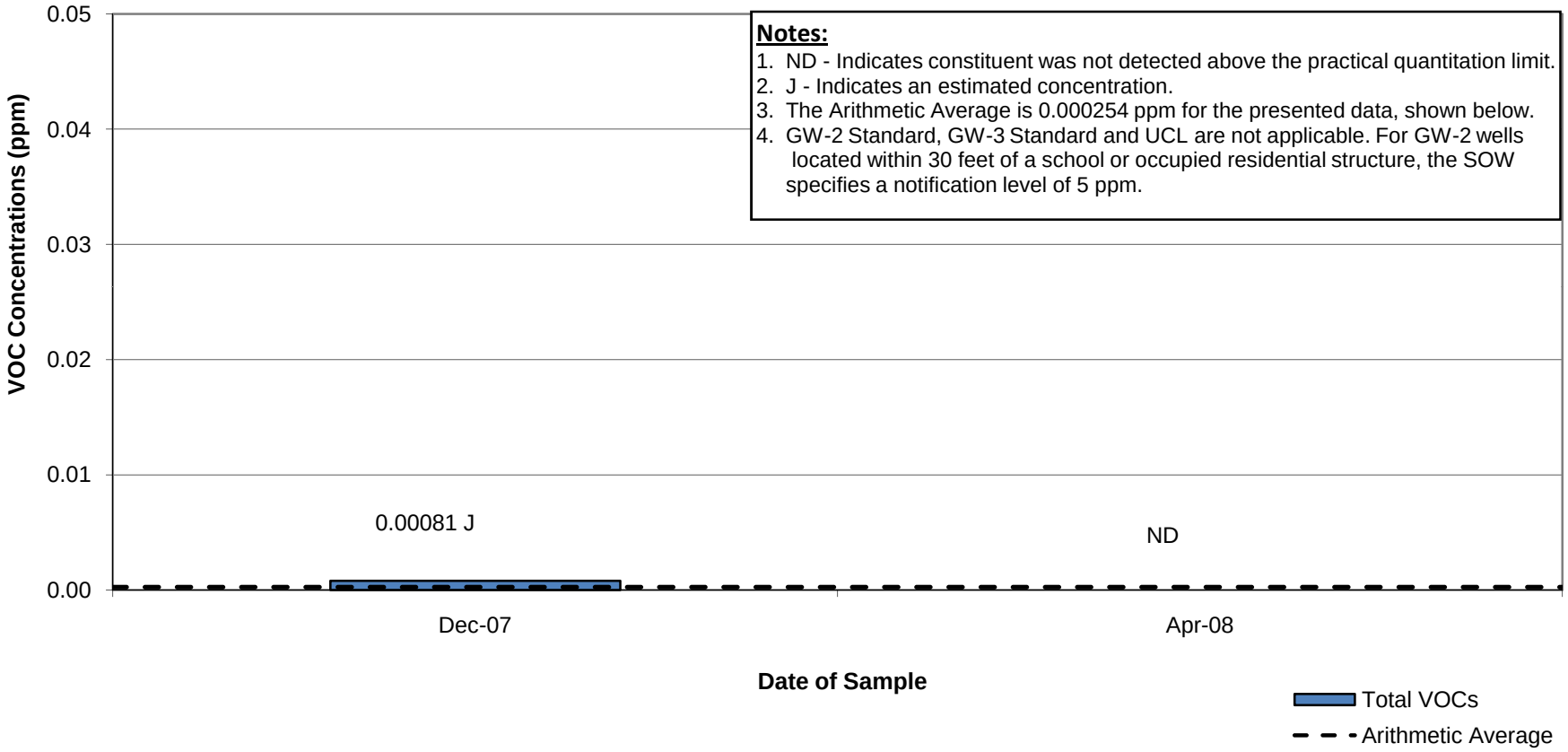
Organics (volatiles, PCBs)

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

Total VOC Concentrations –
GMA2-10 and OJ-MW-2

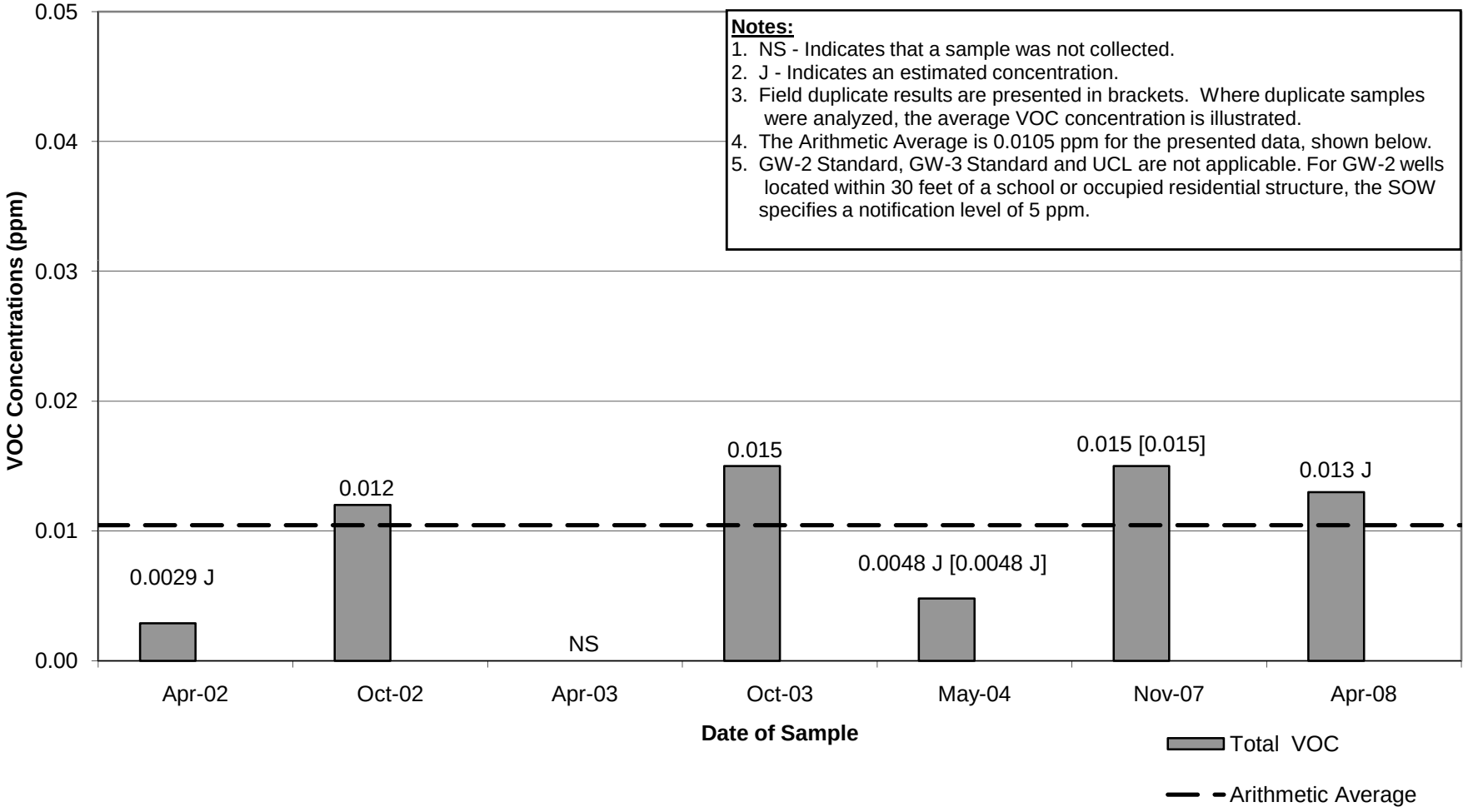
Appendix D
Well GMA2-10 Historical Total VOC Concentrations

Groundwater Management Area 2
General Electric Company - Pittsfield, Massachusetts



Appendix D
Well OJ-MW-2 Historical Total VOC Concentrations

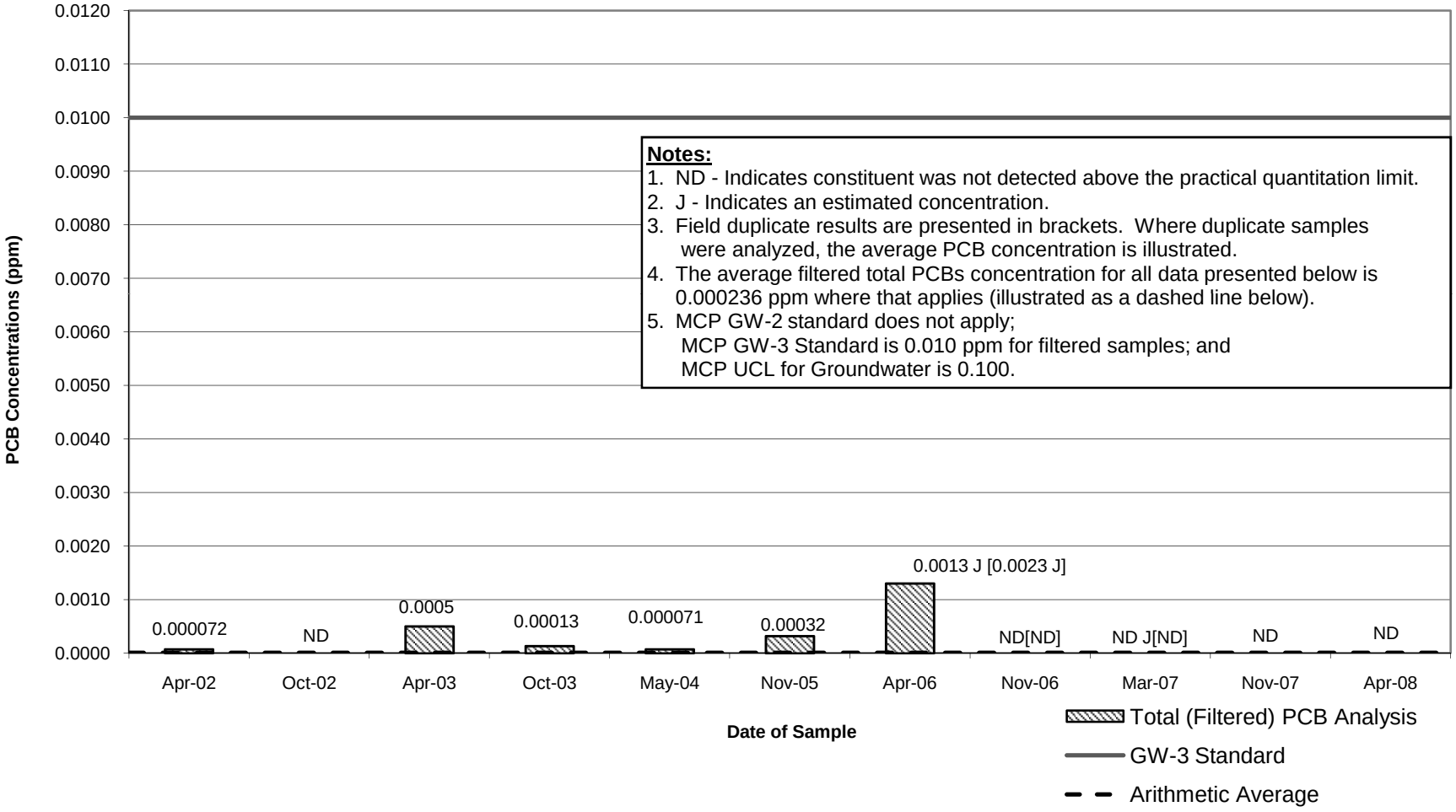
Groundwater Management Area 2
General Electric Company - Pittsfield, Massachusetts



Total PCB Concentrations –
Selected Wells

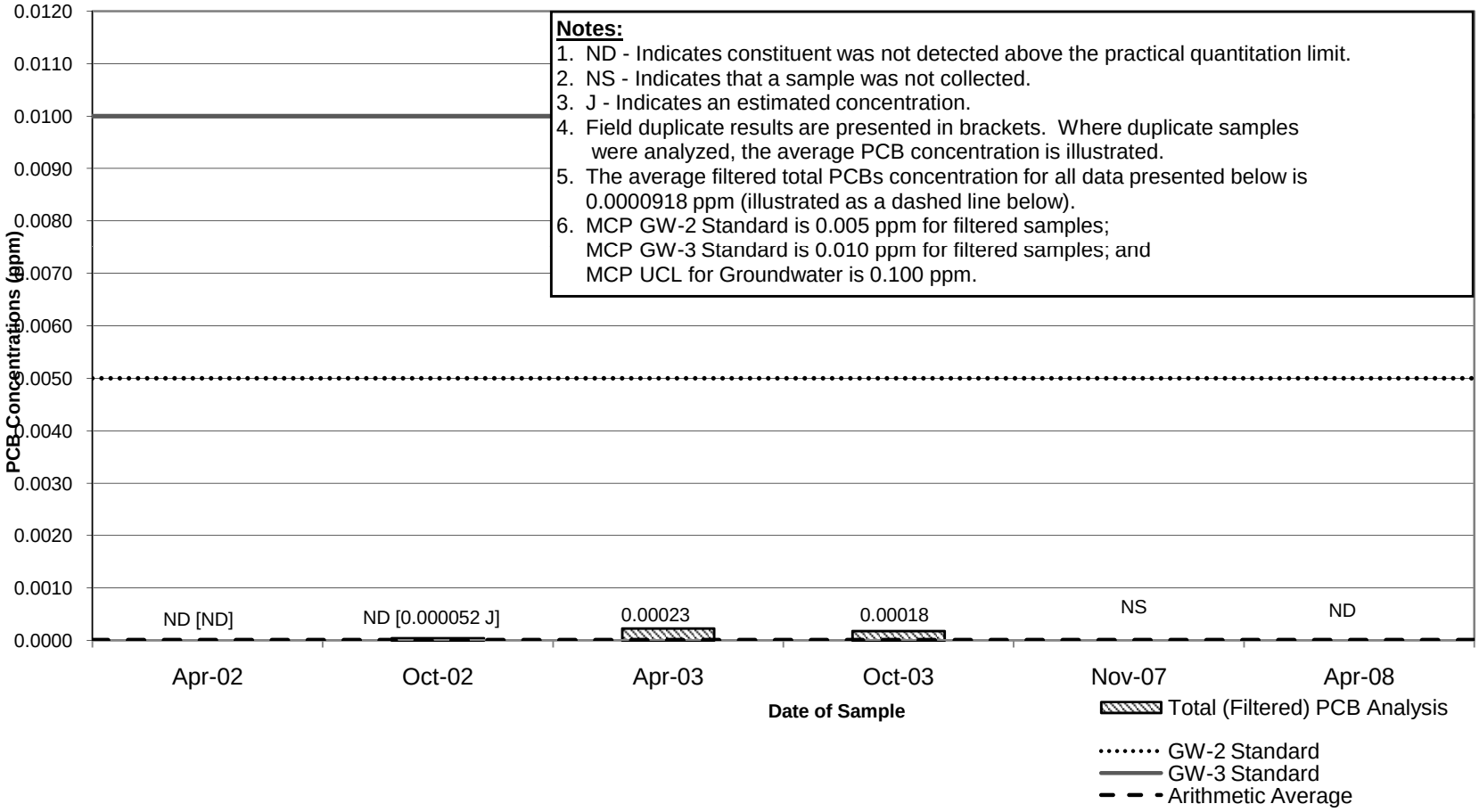
Appendix D
Well GMA2-1 Historical PCB Concentrations

Groundwater Management Area 2
General Electric Company - Pittsfield, Massachusetts



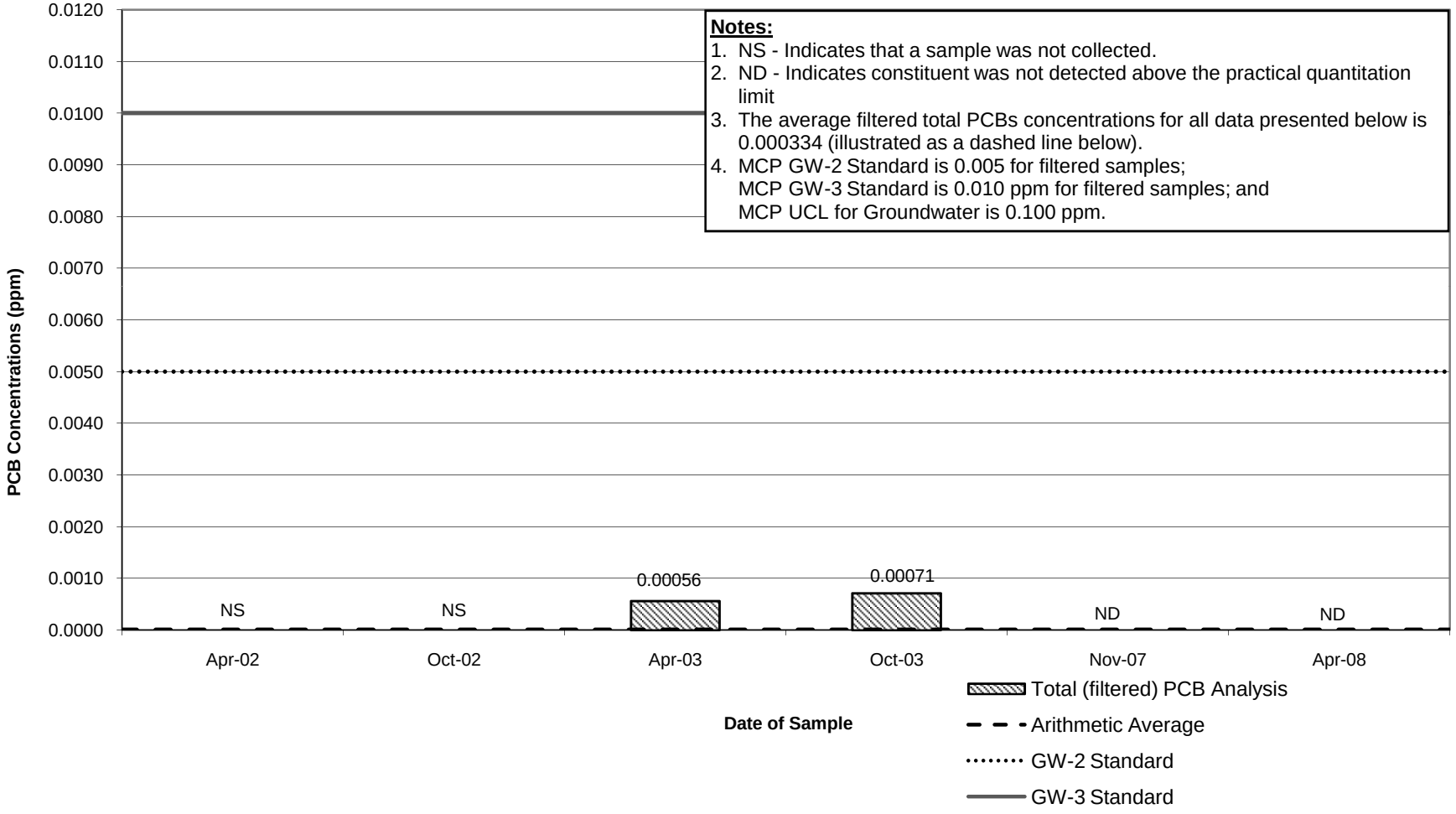
Appendix D
Well GMA2-2 Historical PCB Concentrations

Groundwater Management Area 2
General Electric Company - Pittsfield, Massachusetts



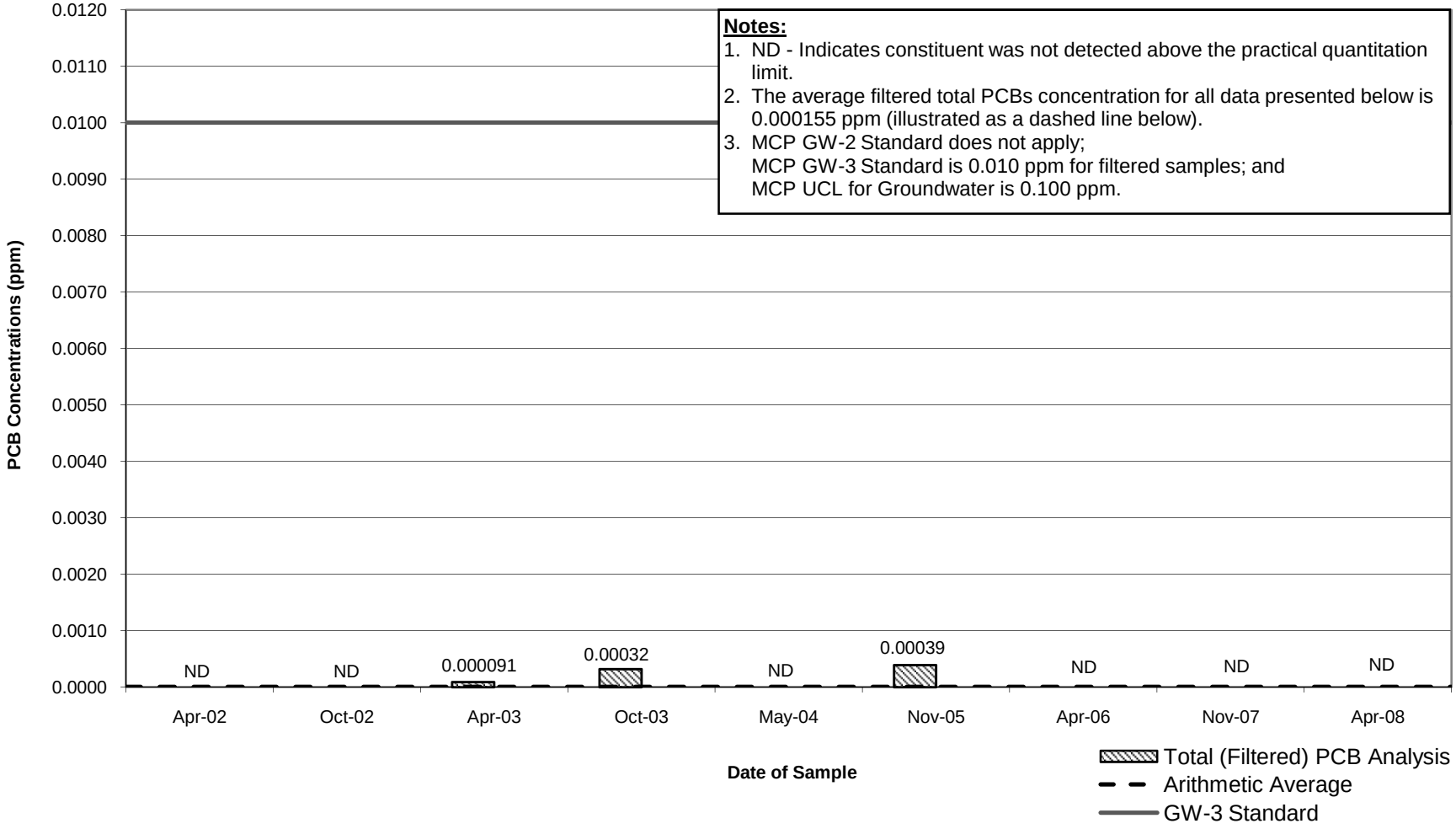
Appendix D
Well GMA2-3 Historical PCB Concentrations

Groundwater Management Area 2
General Electric Company - Pittsfield, Massachusetts



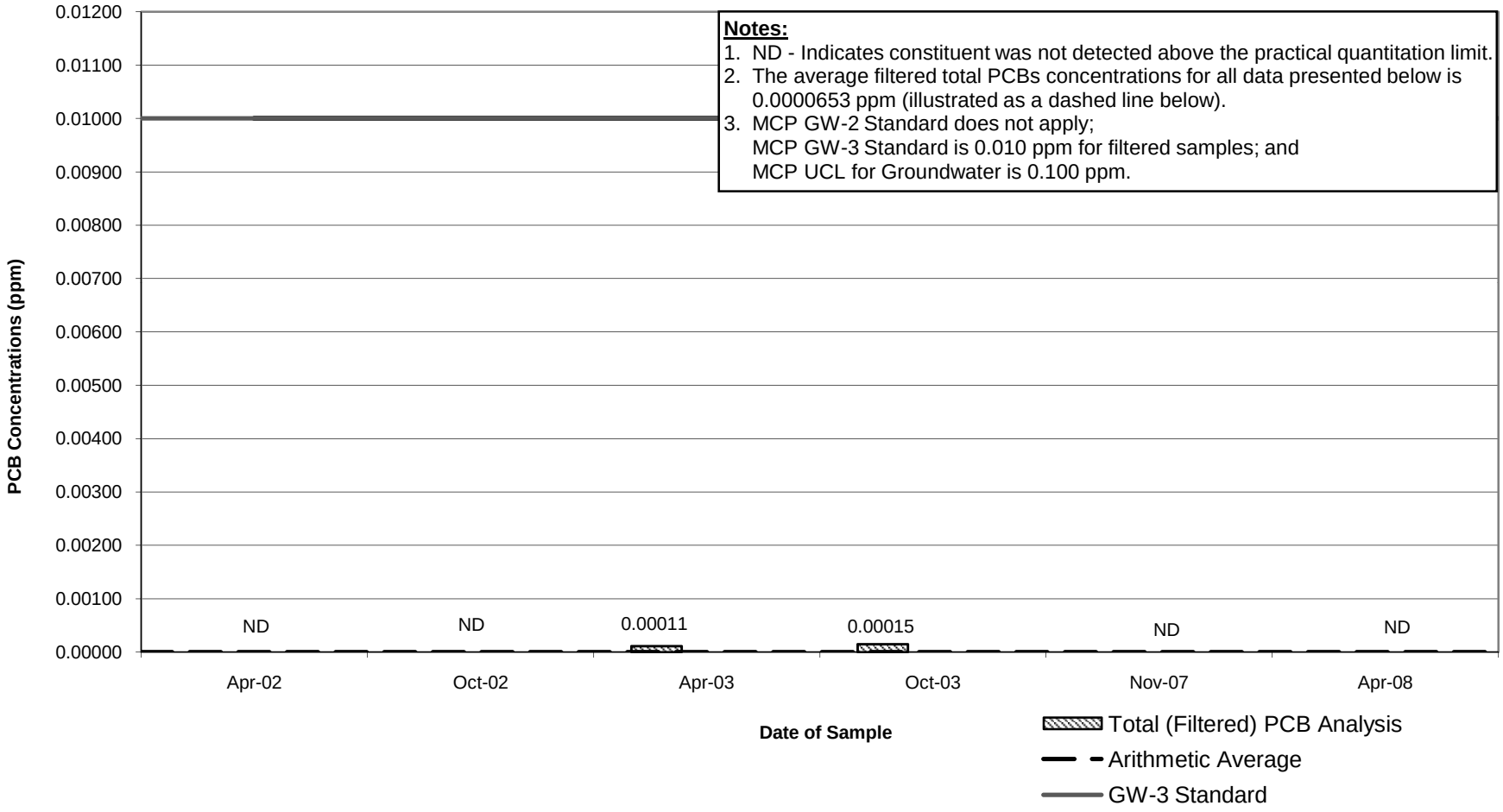
Appendix D
Well GMA2-4 Historical PCB Concentrations

Groundwater Management Area 2
General Electric Company - Pittsfield, Massachusetts



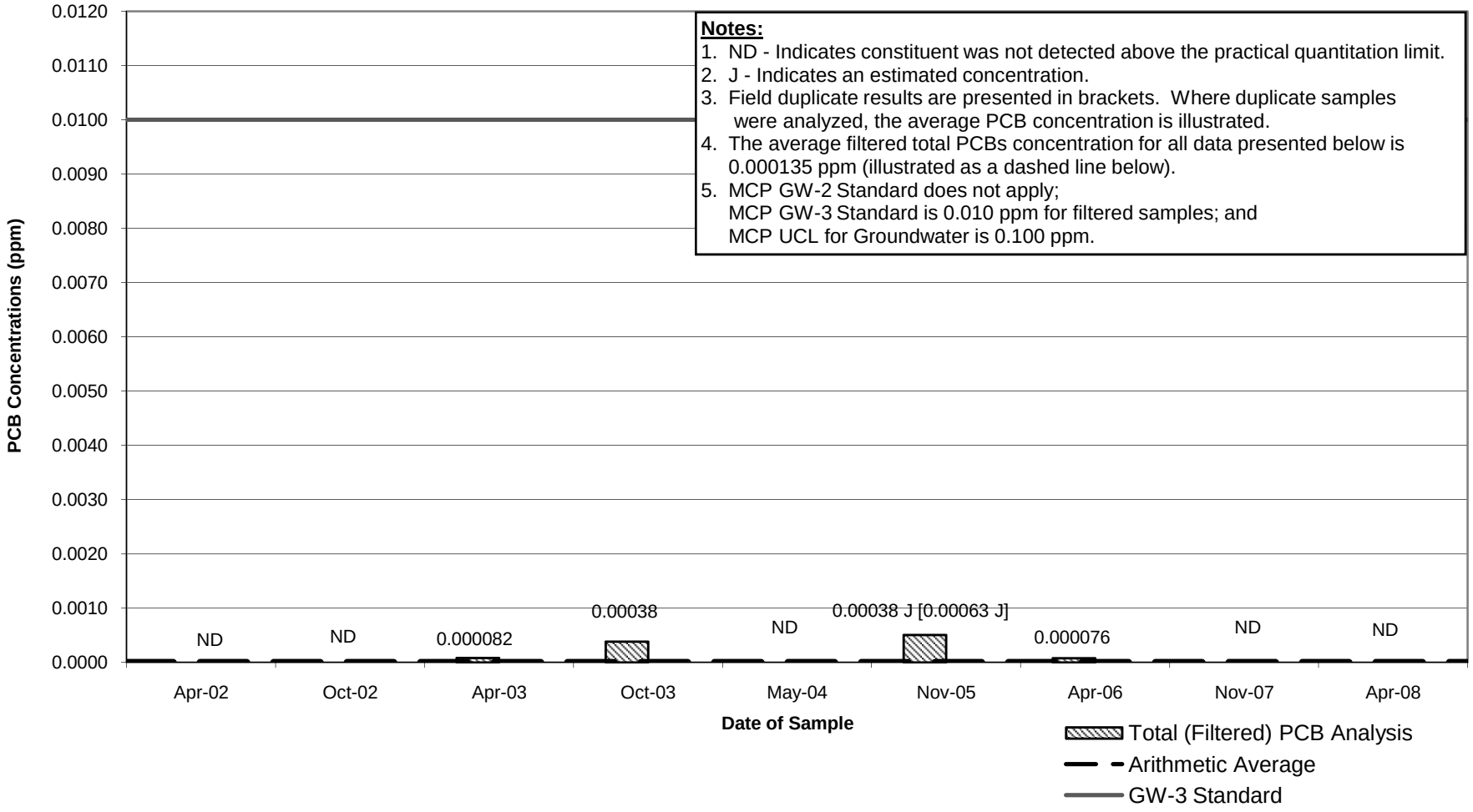
Appendix D
Well GMA2-6 Historical PCB Concentrations

Groundwater Management Area 2
General Electric Company - Pittsfield, Massachusetts



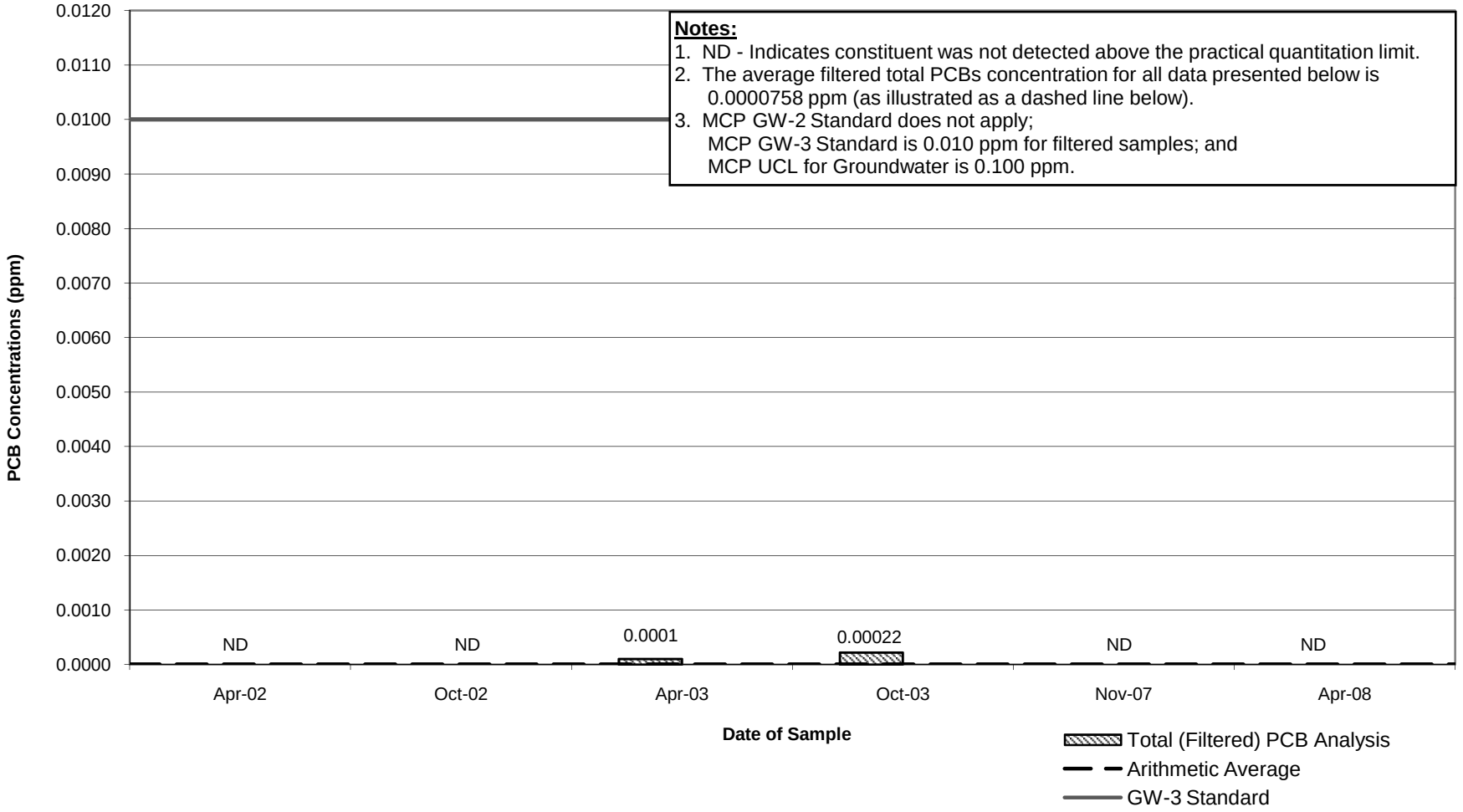
Appendix D
Well GMA2-9 Historical PCB Concentrations

Groundwater Management Area 2
General Electric Company - Pittsfield, Massachusetts



Appendix D
Well J-1R Historical PCB Concentrations

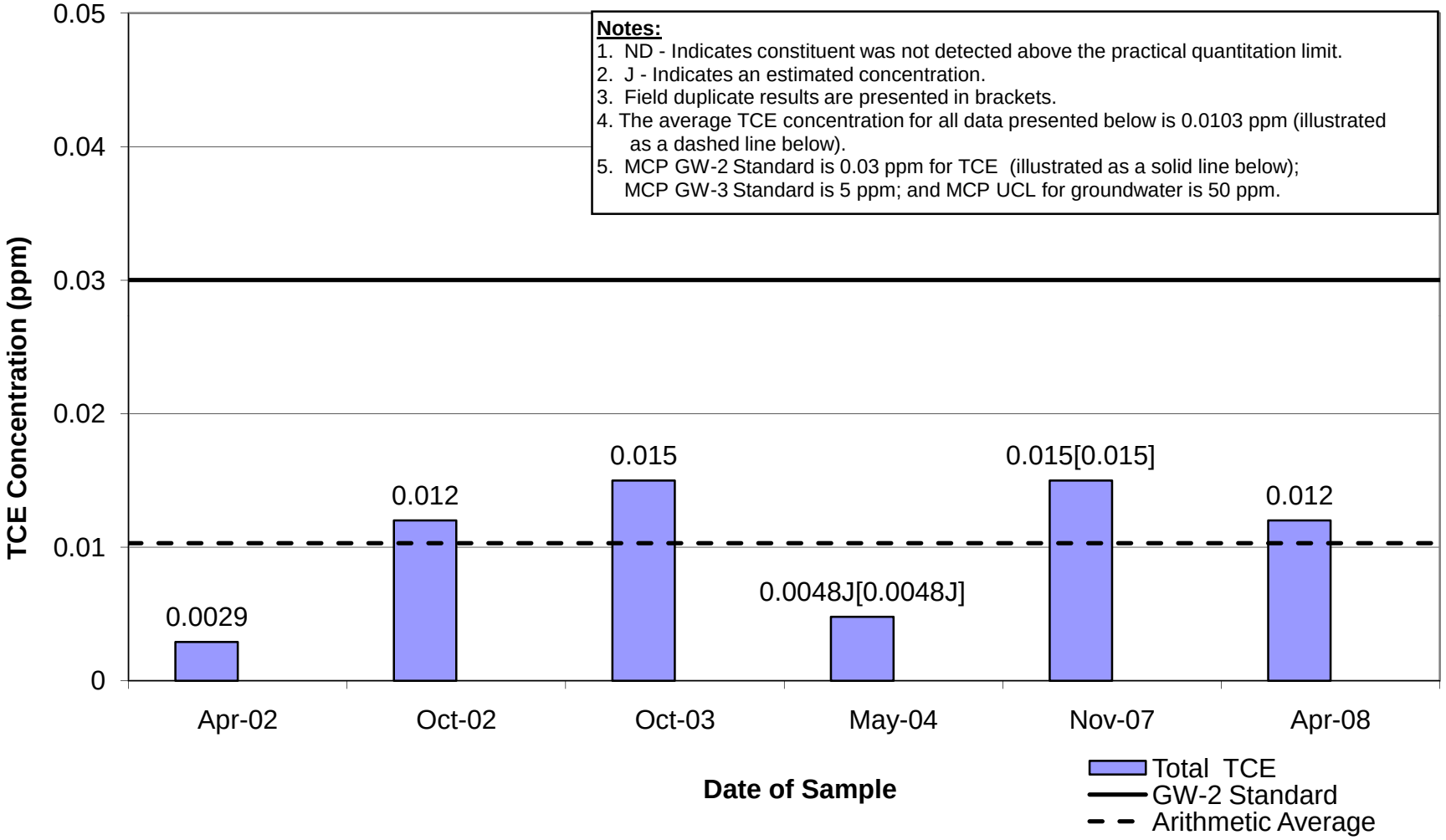
Groundwater Management Area 2
General Electric Company - Pittsfield, Massachusetts



Trichloroethene Concentrations –
Well OJ-MW-2

Appendix D
Well OJ-MW-2 Historical TCE Concentrations

Groundwater Management Area 2
General Electric Company - Pittsfield, Massachusetts



ARCADIS

Appendix E

Results of Statistical Data Assessment

Table E-1
Summary Of Historical Groundwater Analytical Results - Well GMA2-1

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	Method 1 GW-3 Standards	MCP UCL for GroundWater	Detection Frequency	Minimum Detect	Maximum Detect	Minimum Non-Detect	Maximum Non-Detect	Median Value	Arithmetic Average	Geometric Mean	Standard Deviation	Spring 2008 Results GMA2-1 04/29/08
PCBs-Filtered												
Aroclor-1254	Not Listed	Not Listed	6/11	0.000071	0.0016	0.000065	0.00011	0.0000710	0.000206	0.000100	0.000294	ND(0.000068)
Aroclor-1260	Not Listed	Not Listed	1/11	N/A	0.0007	0.000065	0.00011	0.0000330	0.0000673	0.0000448	0.000101	ND(0.000068)
Total PCBs	0.01	0.1	6/11	0.000071	0.0023	0.000065	0.00011	0.0000710	0.000236	0.000103	0.000383	ND(0.000068)

Notes:

1. Samples were collected by ARCADIS between 2002 and 2008 and submitted to SGS Environmental Services, Inc. for analysis.
2. Analytical results have been validated as per GE's approved Field Sampling Plan/Quality Assurance Project Plan.
3. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
4. Only constituents which were detected during at least one prior sampling event and were analyzed for during the spring 2008 sampling event are summarized.

Table E-2
Summary Of Historical Groundwater Analytical Results - Well GMA2-2

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Sample ID: Parameter Date Collected:	Method 1 GW-2 Standards	Method 1 GW-3 Standards	MCP UCL for GroundWater	Detection Frequency	Minimum Detect	Maximum Detect	Minimum Non-Detect	Maximum Non-Detect	Median Value	Arithmetic Average	Geometric Mean	Standard Deviation	Spring 2008 Results GMA2-2 04/28/08
PCBs-Filtered													
Aroclor-1254	Not Listed	Not Listed	Not Listed	3/6	0.00018	0.00023	0.000065	0.000066	0.0000375	0.0000918	0.0000630	0.0000891	ND(0.000066)
Total PCBs	0.005	0.01	0.1	3/6	0.00018	0.00023	0.000065	0.000066	0.0000375	0.0000918	0.0000630	0.0000891	ND(0.000066)

Notes:

1. Samples were collected by ARCADIS between 2002 and 2008 and submitted to SGS Environmental Services, Inc. for analysis.
2. Analytical results have been validated as per GE's approved Field Sampling Plan/Quality Assurance Project Plan.
3. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
4. Only constituents which were detected during at least one prior sampling event and were analyzed for during the spring 2008 sampling event are summarized.

Table E-3
Summary Of Historical Groundwater Analytical Results - Well GMA2-3

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Sample ID: Parameter Date Collected:	Method 1 GW-2 Standards	Method 1 GW-3 Standards	MCP UCL for GroundWater	Detection Frequency	Minimum Detect	Maximum Detect	Minimum Non-Detect	Maximum Non-Detect	Median Value	Arithmetic Average	Geometric Mean	Standard Deviation	Spring 2008 Results GMA2-3 04/29/08
PCBs-Filtered													
Aroclor-1254	Not Listed	Not Listed	Not Listed	2/4	0.00056	0.00071	0.000065	0.000068	0.000297	0.000334	0.000145	0.000353	ND(0.000068)
Total PCBs	0.005	0.01	0.1	2/4	0.00056	0.00071	0.000065	0.000068	0.000297	0.000334	0.000145	0.000353	ND(0.000068)

Notes:

1. Samples were collected by ARCADIS between 2002 and 2008 and submitted to SGS Environmental Services, Inc. for analysis.
2. Analytical results have been validated as per GE's approved Field Sampling Plan/Quality Assurance Project Plan.
3. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
4. Only constituents which were detected during at least one prior sampling event and were analyzed for during the spring 2008 sampling event are summarized.

Table E-4
Summary Of Historical Groundwater Analytical Results - Well GMA2-4

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	Method 1 GW-3 Standards	MCP UCL for GroundWater	Detection Frequency	Minimum Detect	Maximum Detect	Median Value	Arithmetic Average	Geometric Mean	Standard Deviation	Spring 2008 Results GMA2-4 04/25/08
PCBs-Filtered										
Aroclor-1254	Not Listed	Not Listed	3/9	0.000091	0.00039	0.0000340	0.000155	0.0000835	0.000172	ND(0.000067) J
Total PCBs	0.01	0.1	3/9	0.000091	0.00039	0.0000340	0.000155	0.0000835	0.000172	ND(0.000067) J

Notes:

1. Samples were collected by ARCADIS between 2002 and 2008 and submitted to SGS Environmental Services, Inc. for analysis.
2. Analytical results have been validated as per GE's approved Field Sampling Plan/Quality Assurance Project Plan.
3. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
4. Only constituents which were detected during at least one prior sampling event and were analyzed for during the spring 2008 sampling event are summarized.

Data Qualifiers:

Organics (PCBs)

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

Table E-5
Summary Of Historical Groundwater Analytical Results - Well GMA2-6

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: Date Collected:	Method 1 GW-3 Standards	MCP UCL for GroundWater	Detection Frequency	Minimum Detect	Maximum Detect	Minimum Non-Detect	Maximum Non-Detect	Median Value	Arithmetic Average	Geometric Mean	Standard Deviation	Spring 2008 Results GMA2-6 04/28/08
PCBs-Filtered												
Aroclor-1254	Not Listed	Not Listed	2/6	0.00011	0.00015	0.000065	0.000066	0.0000330	0.0000653	0.0000519	0.0000517	ND(0.000066)
Total PCBs	0.01	0.1	2/6	0.00011	0.00015	0.000065	0.000066	0.0000330	0.0000653	0.0000519	0.0000517	ND(0.000066)

Notes:

1. Samples were collected by ARCADIS between 2002 and 2008 and submitted to SGS Environmental Services, Inc. for analysis.
2. Analytical results have been validated as per GE's approved Field Sampling Plan/Quality Assurance Project Plan.
3. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
4. Only constituents which were detected during at least one prior sampling event and were analyzed for during the spring 2008 sampling event are summarized.

Table E-6
Summary Of Historical Groundwater Analytical Results - Well GMA2-9

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: / Date Collected:	Method 1 GW-3 Standards	MCP UCL for GroundWater	Detection Frequency	Minimum Detect	Maximum Detect	Minimum Non-Detect	Maximum Non-Detect	Median Value	Arithmetic Average	Geometric Mean	Standard Deviation	Spring 2008 Results GMA2-9 04/29/08
PCBs-Filtered												
Aroclor-1254	Not Listed	Not Listed	4/9	0.000076	0.00063	0.000065	0.000066	0.0000330	0.000135	0.0000712	0.000180	ND(0.000066)
Total PCBs	0.01	0.1	4/9	0.000076	0.00063	0.000065	0.000066	0.0000330	0.000135	0.0000712	0.000180	ND(0.000066)

Notes:

1. Samples were collected by ARCADIS between 2002 and 2008 and submitted to SGS Environmental Services, Inc. for analysis.
2. Analytical results have been validated as per GE's approved Field Sampling Plan/Quality Assurance Project Plan.
3. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
4. Only constituents which were detected during at least one prior sampling event and were analyzed for during the spring 2008 sampling event are summarized.

Table E-7
Summary Of Historical Groundwater Analytical Results - Well GMA2-10

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: Date Collected:	Method 1 GW-2 Standards	Method 1 GW-3 Standards	MCP UCL for GroundWater	Detection Frequency	Minimum Detect	Maximum Detect	Median Value	Arithmetic Average	Geometric Mean	Standard Deviation	GMA2-10 12/18/07	Spring 2008 Results GMA2-10 04/28/08
Volatile Organics												
trans-1,2-Dichloroethene	0.09	50	100	1/2	0.00034	0.00034	0.000420	0.000420	0.000412	0.000113	0.00034 J	ND(0.0010) [ND(0.0010)]
Vinyl Chloride	0.002	50	100	1/2	0.00047	0.00047	0.000485	0.000485	0.000485	0.0000212	0.00047 J	ND(0.0010) [ND(0.0010)]
Total VOCs	5	Not Listed	Not Listed	1/2	0.00081	0.00081	0.0254	0.0254	0.00636	0.0348	0.00081 J	ND(0.10) [ND(0.10)]

Notes:

1. Samples were collected by ARCADIS between 2002 and 2008 and submitted to SGS Environmental Services, Inc. for analysis.
2. Analytical results have been validated as per GE's approved Field Sampling Plan/Quality Assurance Project Plan.
3. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
4. Only constituents which were detected during at least one prior sampling event and were analyzed for during the spring 2008 sampling event are summarized.
5. Field duplicate sample results are presented in brackets.

Data Qualifiers:

Organics (volatiles)

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

Table E-8
Summary Of Historical Groundwater Analytical Results - Well J-1R

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: Date Collected:	Method 1 GW-3 Standards	MCP UCL for GroundWater	Detection Frequency	Minimum Detect	Maximum Detect	Minimum Non-Detect	Maximum Non-Detect	Median Value	Arithmetic Average	Geometric Mean	Standard Deviation	Spring 2008 Results J-1R 04/28/08
Volatile Organics												
Toluene	40	100	2/4	0.00067	0.0029	0.005	0.005	0.00250	0.00214	0.00187	0.00100	NA
Trichloroethene	5	50	4/4	0.002	0.0084	N/A	N/A	0.00265	0.00393	0.00326	0.00303	NA
Vinyl Chloride	50	100	1/4	0.0014	0.0014	0.002	0.002	0.00100	0.00110	0.00109	0.000200	NA
Total VOCs	Not Listed	Not Listed	4/4	0.002	0.013	N/A	N/A	0.00300	0.00525	0.00391	0.00519	NA
PCBs-Filtered												
Aroclor-1254	Not Listed	Not Listed	2/6	0.0001	0.00022	0.000065	0.000072	0.0000345	0.0000758	0.0000553	0.0000754	ND(0.000072) [ND(0.000071)]
Total PCBs	0.01	0.1	2/6	0.0001	0.00022	0.000065	0.000072	0.0000345	0.0000758	0.0000553	0.0000754	ND(0.000072) [ND(0.000071)]

Notes:

1. Samples were collected by ARCADIS between 2002 and 2008 and submitted to SGS Environmental Services, Inc. for analysis.
2. Analytical results have been validated as per GE's approved Field Sampling Plan/Quality Assurance Project Plan.
3. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
4. Only constituents which were detected during at least one prior sampling event and were analyzed for during the fspring 2008 sampling event are summarized.
5. Field duplicate sample results are presented in brackets.

Table E-9
Summary Of Historical Groundwater Analytical Results - Well OJ-MW-2

Groundwater Management Area 2 Long-Term Monitoring Program
Monitoring Event Evaluation Report for Spring 2008
General Electric Company - Pittsfield, Massachusetts
(Results are presented in parts per million, ppm)

Parameter / Sample ID: Date Collected:	Method 1 GW-2 Standards	Method 1 GW-3 Standards	MCP UCL for GroundWater	Detection Frequency	Minimum Detect	Maximum Detect	Median Value	Arithmetic Average	Geometric Mean	Standard Deviation	Spring 2008 Results OJ-MW-2 04/29/08
Volatile Organics											
Trichloroethene	0.03	5	50	6/6	0.0029	0.015	0.0120	0.0103	0.00876	0.00520	0.012
Vinyl Chloride	0.002	50	100	1/6	0.00095	0.00095	0.00100	0.000908	0.000883	0.000201	0.00095 J
Total VOCs	5	Not Listed	Not Listed	6/6	0.0029	0.015	0.0125	0.0105	0.00887	0.00528	0.013 J

Notes:

1. Samples were collected by ARCADIS between 2002 and 2008 and submitted to SGS Environmental Services, Inc. for analysis.
2. Analytical results have been validated as per GE's approved Field Sampling Plan/Quality Assurance Project Plan.
3. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
4. Only constituents which were detected during at least one prior sampling event and were analyzed for during the fspring 2008 sampling event are summarized.

Data Qualifiers:

Organics (volatiles)

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