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*Transmitted Via Overnight Courier*

February 13, 2009

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 5 (GECD350)**
**Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 2008**

Dear Mr. Fisher:

Enclosed is the *Groundwater Management Area 5 Long-Term Monitoring Program Monitoring Event Evaluation Report for Fall 2008* (GMA 5 Spring 2008 Monitoring Event Evaluation Report). This report was prepared in accordance with 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 Section 7.0 of Attachment H to the SOW (Groundwater/NAPL Monitoring, Assessment, and Response Programs).

The GMA 5 Fall 2008 Monitoring Event Evaluation Report is the third report to be submitted as part of the long-term monitoring program for this GMA. It summarizes activities performed at GMA 5 (also known as the Former Oxbow Areas A and C GMA) during Fall 2008, presents the results of the latest round of sampling and analysis of groundwater performed as part of the groundwater quality monitoring program at this GMA.

Please call me if you have any questions regarding this report.

Sincerely,

Richard W. Gates
Remediation Project Manager

Enclosure
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**General Electric Company**
**Pittsfield, Massachusetts**

# Groundwater Management Area 5 Long-Term Monitoring Program Monitoring Event Evaluation Report for Fall 2008

February 2009

ARCADIS

# Groundwater Management Area 5 Long-Term Monitoring Program Monitoring Event Evaluation Report for Fall 2008

(GMA 5 Fall 2008 Monitoring Event Evaluation Report)

Prepared for:
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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 A and C Groundwater Management Area, also known as and referred to herein as GMA 5.

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 also to be used for comparison with data 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. 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. As the removal action for Former Oxbow Areas A and C comprising GMA 5 had not been completed at the end of the two-year period, GE proposed, and EPA approved, an extension of the baseline monitoring

program referred to as the interim groundwater monitoring program. At GMA 5, baseline monitoring (including the subsequent interim monitoring) was conducted from spring 2002 until fall 2006, just prior to the completion of the removal action for Former Oxbow Areas A and C comprising GMA 5. In April 2007, GE submitted a *Baseline Assessment Final Report and Long-Term Monitoring Program Proposal for GMA 5* (GMA 5 Long-Term Monitoring Proposal). That report proposed a long-term groundwater monitoring program for GMA 5. Following conditional approval of that report by EPA in a letter dated August 21, 2007, GE prepared an *Addendum to the Baseline Assessment Final Report and Long-Term Monitoring Program Proposal for Groundwater Management Area 5* (GMA 5 Long-Term Monitoring Proposal Addendum) to address the requirements contained in EPA's conditional approval letter. The GMA 5 Long-Term Monitoring Proposal Addendum was submitted to EPA on September 19, 2007 and conditionally approved by EPA in a letter dated October 24, 2007. This report constitutes the third monitoring event evaluation report submitted pursuant to the long-term groundwater quality monitoring program at GMA 5.

## 1.2 Background Information

### 1.2.1 Description of GMA 5

GMA 5 encompasses the Former Oxbow Areas A and C RAA, comprising approximately 7 acres adjacent to the Housatonic River and located approximately 250 feet downstream of the Lyman Street Bridge (Figures 1 and 2). The GMA contains a combination of non-GE-owned commercial and recreational areas. As shown on Figures 1 and 2, the Housatonic River flows along the north boundary of this GMA. Certain portions of this GMA originally consisted of land associated with oxbows or low-lying areas of the Housatonic River. 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 (USACOE) separated several of these 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. At their closest proximity, Former Oxbow Area A is located approximately 225 feet southwest of Former Oxbow Area C (Figure 2).

Former Oxbow Area A encompasses approximately 5 acres. This area consists of a large open field on the south side of the river, north of Elm Street and Newell Street. The majority of this generally flat area is undeveloped and covered with grass and low brush. Commercial businesses occupy a portion of an area along Elm Street to the south of the former oxbow. Specifically, a former gas station, laundromat and car wash are located at the southwestern portion of this former oxbow area.

Former Oxbow Area C encompasses an undeveloped area of approximately 2 acres on the south side of the Housatonic River, near the northwest end of Day Street. This generally flat area is undeveloped and covered with grass and low brush. The southeastern side of the area is bordered by residential properties along Day Street and Ashley Street.

Removal Actions performed by GE at the Former Oxbow Areas A and C RAA were implemented between July and November 2006, and generally included site preparation, soil removal/replacement, and property restoration. Most excavations were to a depth of one foot, with limited spot removals to approximately 2 feet. 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 A and C* (July 2005), as modified in the *Second Addendum to Final Removal Design/Removal Action Work Plan for Former Oxbow Areas A and C* (April 2006) and *Revision to Second Addendum to Final Removal Design/Removal Action Work Plan* (letter to EPA dated June 13, 2006). In addition to these soil removals, three soil piles located on the recreational portion of Parcel I8-23-6 were removed during the course of the remediation. Overall, approximately 6,290 cubic yards of soil were removed from Former Oxbow Areas A and C and placed within the appropriate On-Plant Consolidation Area or off-site disposal facility. The *Final Completion Report for Former Oxbow Areas A and C Removal* was submitted to EPA on May 12, 2008, and EPA issued a Certificate of Completion for this RAA on June 3, 2008.

A separate disposal site, as designated under the Massachusetts Contingency Plan (MCP), is located on adjacent property near the southwestern corner of GMA 5. This disposal site is the Former Elm Street Mobil Station site (MDEP Site No. 1-0539, Tier 1B Permit No. 78741), and this site is currently being addressed by Exxon Mobil Corporation (ExxonMobil) pursuant to the MCP under an Administrative Consent Order (ACO) with the MDEP. As discussed below in Section 3.5, available documentation indicates that light NAPL (LNAPL) and soluble-phase contaminants related to releases from the Mobil Station may have migrated to the southwestern portion of GMA 5.

### 1.2.2 Overview of Hydrogeologic Conditions at the Site

In general, two unconsolidated hydrogeologic units are present within GMA 5. 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 5, non-native fill materials are present above the alluvial deposits. These fill materials typically consist of sand, gravel, cinders, brick, 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 of 7 to 17 feet. From a hydrogeologic perspective, the fill and the sand/gravel deposits act as a single unit. All of the existing monitoring wells within GMA 5 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 8 and 19 feet below ground surface.

Glacial Till - Based on boring results at nearby locations within the Lyman Street Area and Newell Street Area II (within GMA 1), glacial till underlies the alluvial deposits and typically consists of dense silt containing varying amounts of clay, sand, and gravel. Discontinuous sandy lenses also have been identified in the till within the central portion of the Lyman Street Area RAA to the north of GMA 5. Till is generally encountered at depths beginning at approximately 20 to 25 feet beneath the Lyman Street Area to the north and at approximately 40 feet at Newell Street Area II to the east. No wells or borings have been installed to till beneath GMA 5.

The unconsolidated units at GMA 5 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 5 generally flows toward the Housatonic River and is primarily influenced by the area's location (adjacent to the river). Figure 3 illustrates typical water table conditions, using groundwater data obtained during the fall 2008 groundwater monitoring event. The average depth to groundwater ranges from approximately 8 feet (downgradient) to just under 19 feet (upgradient in the western portion of the GMA). This variation in depth to groundwater is attributed to an increase in ground surface elevations across the western portion of the GMA, as little change in groundwater elevations are observed at monitoring wells located at similar distances from the river. As such, it appears that the localized changes in surface topography have little influence on groundwater flow characteristics.

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, varying from 1.99 feet/day (at GMA5-7, located along the Housatonic River in the northwestern portion of the GMA) to 260.13 feet day (at GMA5-6, located along the Housatonic River in the northeastern portion of the GMA). The geometric mean of the calculated hydraulic conductivity values for GMA 5 is 17.76 feet/day. Calculated groundwater velocities using the above-referenced hydraulic conductivities, as well as representative horizontal gradients and porosities, range from a minimum of 0.05 feet per day to a maximum of 35.12 feet day, with a geometric mean of 1.18 feet per day.

A drainage ditch extends northeast from Former Oxbow Area A into Former Oxbow Area C. The ditch then turns toward the northwest and discharges into the Housatonic River, bisecting Former Oxbow Area C. The presence of this drainage ditch, which serves as a City of Pittsfield stormwater discharge point, may locally influence groundwater flow in its immediate vicinity, but the overall flow direction is still toward the Housatonic River.

Monitoring for the presence of NAPL is performed as part of the routine groundwater elevation monitoring activities at GMA 5. Although the presence of NAPL has been documented at the adjacent Elm Street Mobil Station Site, no NAPL has been observed within any of the GE monitoring wells monitored to date at GMA 5.

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

Based on current information, the principal constituent sources that may have affected or could affect groundwater quality within GMA 5 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 A and C 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. A review of historical photographs indicates that the former river channel in Oxbow Area A and other portions of this area were filled prior to 1969. Filling of this area allegedly continued until into the 1980s. Review of these photographs also indicates that large portions of Former Oxbow Area C were filled prior to 1956, while other portions were not filled until the 1970s.

Other Sources - Commercial businesses present within or upgradient of GMA 5 include an existing laundromat and car wash, as well as a former gasoline station. These operations, which are located adjacent to Former Oxbow Area A in the southwest corner of the GMA, may be contributing sources of groundwater constituents to GMA 5. On August 15, 2007, MDEP issued Notice of Responsibility (NOR) to the owner of the property containing a dry cleaning facility in this area in regard to the presence of tetrachloroethene (PCE) in groundwater in the area at a concentration greater than the MCP GW-2 Standard and assigned Release Tracking Number 1-16724. To GE's knowledge, no further action has been taken in relation to the issuance of that NOR.

Very few constituents were consistently detected during the baseline period at GMA 5. The observed detections were sporadic and spread throughout most of the GMA 5 wells, resulting in an apparent scattered distribution of occasionally-detected constituents. Low levels of VOCs, PCBs and inorganics were detected in several wells across the GMA. In general, however, higher constituent concentrations and more frequent detections were observed in or near Oxbow Area A in the western portion of the GMA. In particular, chlorinated VOCs and PAHs are primarily, but not exclusively, found at the monitoring wells installed in or around the western oxbow.

### 1.2.4 Overview of Groundwater Investigation Activities at GMA 5

In December 2000, GE submitted a *Baseline Monitoring Program Proposal for Former Oxbows A and C Groundwater Management Area* (GMA 5 Baseline Monitoring Proposal). The GMA 5 Baseline Monitoring Proposal summarized the hydrogeologic information available at that time for GMA 5 and proposed groundwater monitoring activities for the baseline monitoring period at this GMA. EPA provided conditional approval of the GMA 5 Baseline Monitoring Proposal by letter of September 25, 2001. Thereafter, certain modifications were made to the GMA 5 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 5 entitled *Groundwater Management Area 5 Baseline Groundwater Quality Interim Report for Fall 2003* (Fall 2003 GMA 5 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 5 Baseline Monitoring Proposal also allows GE to propose a modification and/or extension of the baseline monitoring program based on the results of the initial assessment and the estimated timing of future response actions. Therefore, as the soil-related Removal Actions at the RAA within GMA 5 were not yet complete, the Fall 2003 GMA 5 Groundwater Quality Report included a proposal to modify and extend baseline groundwater quality monitoring activities at GMA 5 (under a program referred to as the interim monitoring program) until such time as the soil-related Removal Actions at the GMA 5 RAA were completed and the needs for a long-term groundwater quality monitoring program were fully delineated.

EPA conditionally approved the Fall 2003 GMA 5 Groundwater Quality Report in a letter dated May 5, 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 5 wells was initiated in spring 2004.

The results of the initial interim sampling event were provided in GE's July 2004 *Groundwater Management Area 5 Groundwater Quality Interim Report for Spring 2004* (Spring 2004 GMA 5 Groundwater Quality Report), which was conditionally approved by EPA in a letter dated November 10, 2004. However, in that letter, EPA stated that the presence of EPA's temporary dam across the Housatonic River adjacent to GMA 5 (which was utilized as part of EPA's remediation along the 1 ½-Mile Reach of the Housatonic River) may influence groundwater flow at the GMA and that future groundwater quality monitoring there should be postponed until it is demonstrated that groundwater flow is not being artificially influenced by the dam. In addition, EPA required that groundwater elevation monitoring should continue to be performed on a semi-annual basis.

The EPA temporary dam was removed during January and February of 2006, and a round of water level monitoring was conducted on March 30, 2006. GE discussed the results with EPA during an April 10, 2006 technical call and received EPA approval to resume interim groundwater sampling in spring 2006. The results of the groundwater elevation monitoring and sampling activities conducted in spring 2006 were provided in GE's July 2006 *Groundwater Management Area 5 Groundwater Quality Monitoring Interim Report for Spring 2006* (Spring 2006 GMA 5 Groundwater Quality Report).

Pursuant to GE's July 2006 *Groundwater Management Area 5 Groundwater Quality Interim Report for Spring 2006* (Spring 2006 GMA 5 Groundwater Quality Report), and EPA's conditional approval letter dated November 16, 2006, GE submitted a final baseline assessment report and proposal for long-term groundwater quality monitoring at GMA 5 to the EPA on April 26, 2007. The GMA 5 Long-Term Monitoring Proposal provided a summary of the fall 2006 sampling activities conducted at GMA 5, 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 quality monitoring at two wells in GMA 5 (i.e., wells GMA 5-4, and GMA5-7). In EPA's August 21, 2007 approval letter, EPA directed GE to collect an additional round of samples from well GMA5-5 for the full suite of analyses to re-evaluate the possible inclusion of the well in the long-term groundwater quality monitoring program, required GE to submit a proposal to establish the source of VOCs detected in well GMA5-7, and specified that wells GT-7 and GT-101 should be included in the semi-annual groundwater elevation monitoring events. In GE's September 19, 2007 GMA 5 Long-Term Monitoring Proposal Addendum, GE proposed to install and sample wells GMA5-9 and GMA5-10 to assess the source of the VOCs upgradient from well GMA5-7 and modified the long-term monitoring program to incorporate the other EPA requirements.

Following EPA approval of the GMA 5 Long-Term Monitoring Proposal Addendum, GE conducted the initial round of the required groundwater elevation monitoring and sampling activities in fall 2007, including the installation and sampling of the two new wells (GMA5-9 and GMA5-10). The results of those activities, along with proposals to modify the long-term monitoring program, were discussed in GE's *Groundwater Management Area 5 Long-Term Monitoring Event Evaluation Report for Fall 2007* (GMA 5 Fall 2007 Monitoring Event Evaluation Report), submitted to EPA on March 20, 2008.

The GMA 5 Fall 2007 Monitoring Event Evaluation Report was conditionally approved by the EPA in a letter dated April 22, 2008. GE conducted the spring 2008 groundwater elevation monitoring and sampling activities between April 28, 2008 and May 16, 2008. The results of those activities, along with any proposed modifications to the long-term monitoring program, were discussed in the *Groundwater Management Area 5 Long-Term Monitoring Program Monitoring Event Evaluation Report for Spring 2008* (GMA 5 Spring 2008 Monitoring Event Evaluation Report), submitted to EPA on August 22, 2008.

EPA conditionally approved the GMA 5 Spring 2008 Monitoring Event Evaluation Report in a letter dated October 23, 2008. GE conducted the fall 2008 groundwater elevation monitoring and sampling activities on October 30, 2008 and November 3, 2008. A description of those activities, the results obtained, and GE's assessments of those results, including any proposed modifications to the long-term monitoring program at GMA 5, are contained in this *Groundwater Management Area 5 Long-Term Monitoring Program Monitoring Event Evaluation Report for Fall 2008* (GMA 5 *Fall* 2008 Monitoring Event Evaluation Report).

### 1.3 Format of Document

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

# 2. Fall 2008 Field and Analytical Procedures

## 2.1 General

The activities conducted as part of the long-term groundwater monitoring program in fall 2008, and summarized herein, involved the measurement of groundwater levels, and the collection and analysis of groundwater samples at select monitoring wells within GMA 5, as summarized in Table 1. A summary of construction details for the GMA 5 wells that were monitored and/or sampled during fall 2008 is provided in Table 2. The field sampling data for the fall 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 eight wells listed in Table 3 during the fall 2008 groundwater elevation monitoring event performed on October 30, 2008. One of these wells (GT-7) is associated with the former Elm St. Mobil Station. Groundwater elevations in fall 2008 were, on average, approximately 1.77 feet] higher than the elevations measured during fall 2007 (the most recent fall monitoring event). The fall 2008 groundwater elevation data presented in Table 3 were used to prepare a groundwater elevation contour map for fall 2008 (Figure 3). As shown on this figure and consistent with prior monitoring data, the groundwater flow direction is generally north to northwest toward the Housatonic River. The hydraulic gradient is relatively flat in the central and eastern part of GMA 5, but increases slightly on the west side of the GMA and in the riverbank areas. A summary of all groundwater elevation data collected in fall 2008 as well as the Coltsville flow rate since the spring 2008 monitoring event are found in Appendix D.

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 5. However, as discussed in Section 3.5 and Appendix E, NAPL related to the former Elm Street Mobil Site (which is being addressed by ExxonMobil) is present on the southwest portion of the GMA.

## 2.3 Groundwater Sampling and Analysis

Groundwater samples were collected from existing wells GMA5-4, GMA5-7, GMA 5-9 and GMA5-10, on October 30 and November 3, 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 fall 2008 monitoring event is provided below:

| Parameter | Units | Range of Stabilized Readings |
|---|---|---|
| Turbidity | Nephelometric turbidity units (NTU) | 3.0 to 17.0 |
| pH | pH units | 6.39 to 6.89 |
| Specific Conductivity | Millisiemens per centimeter | 0.619 to 1.624 |
| Oxidation-Reduction Potential | Millivolts | - 108.60 to 68.50 |
| Dissolved Oxygen | Milligrams per liter | 0.29 to 6.12 |
| Temperature | Degrees Celsius | 11.15 to 15.00 |

As shown above, for this sampling event, none of the groundwater extracted from the monitoring wells had turbidity levels greater than 17 NTU. These results indicate that the sampling and measurement procedures utilized during this sampling event were effective in obtaining groundwater samples with low turbidity.

The collected groundwater samples were submitted to SGS Environmental Services, Inc. (SGS) in Wilmington, North Carolina for laboratory analysis. Filtered samples from well GMA5-4 were analyzed for cadmium (using EPA Method 6010B), and samples from well GMA5-7, GMA5-9 and GMA5-10 were analyzed for VOCs (using EPA Method 8260B).

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 C, 99.9% of all of the fall 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 cadmium 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 (GMA5-7), which was rejected due to MS/MSD recovery deviations.

# 3. Fall 2008 Groundwater Analytical Results

## 3.1 General

A description of the fall 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 fall 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 5 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 5 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 5 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 5. The current MCP Method 1 GW-2 and GW-3 standards for the constituents detected in the fall 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.

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 those standards were used in the preparation of this report. In addition, in its July 30, 2008 conditional approval letter related to the *Groundwater Management Area 2 Long-Term Monitoring Program Addendum to Monitoring Event Evaluation Report for Fall 2007*, EPA specified that the low-range guidance values developed in that report for cobalt and copper should represent the Method 2 GW-3 standards for these metals at all of the GE Pittsfield GMAs. GE has previously utilized those Method 2 standards in its evaluation of whether there is any need for additional monitoring for those constituents and concluded that the baseline monitoring data was sufficient to verify attainment of the Performance Standards for cobalt and copper at GMA 5. As such, as approved by EPA, no analysis for either metal was performed on any of the samples collected during this sampling event.

Based on consideration of the above points, the specific groundwater quality Performance Standards for GMA 5 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. Compliance with the applicable Performance Standards at several other wells has been verified during performance of the baseline monitoring program at GMA 5.

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

### 3.3 Fall 2008 Groundwater Quality Results

The following subsections provide an overview of the fall 2008 analytical results from the GMA 5 monitoring wells for each constituent group that was analyzed.

#### 3.3.1 VOC Results

Groundwater samples collected from three groundwater quality monitoring wells were analyzed for VOCs during the fall 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 GMA5-10 during the fall 2008 sampling event, while a total of four VOCs were detected at the other two monitoring wells. Total detected VOC concentrations ranged from an estimated concentration of 0.026 parts per million (ppm) at well GMA5-9 to an estimated concentration of 0.036 ppm at well GMA5-7. The only VOC detected at more than one sampling location was tetrachloroethene (PCE). Specifically, wells GMA5-7 and GMA5-9 contained PCE at concentrations of 0.034 ppm and 0.026 ppm, respectively. 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 fall 2008 sampling round.

#### 3.3.2 Inorganic Constituent Results

Filtered groundwater samples were obtained from monitoring well GMA5-4 was analyzed for cadmium. The analytical results for this sample are summarized in Tables 7 and B-1 within Appendix B. Cadmium was not detected in the filtered sample analyzed from well GMA5-4.

### 3.4 Evaluation of Groundwater Quality – Fall 2008

For the purpose of assessing current groundwater conditions, the analytical results from the fall 2008 groundwater sampling event were compared to the applicable groundwater Performance Standards for GMA 5. 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 fall 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.

Additionally, as discussed in Section 3.5 below, concentrations of certain petroleum hydrocarbon compounds in wells installed and sampled by ExxonMobil at their Elm Street Mobil Site have exceeded Method 1 GW-2 and/or GW-3 standards during ExxonMobil's most recent groundwater sampling event, conducted in fall 2008. These wells were installed at the southwest corner of GMA 5, as part of ongoing remedial investigations and monitoring activities being conducted at that site. Groundwater quality data at specified locations obtained during those investigations is provided in Appendix E. Matters concerning water quality in relation to that site are being addressed by ExxonMobil.

### 3.4.1 Fall 2008 Groundwater Results Relative to GW-2 Performance Standards

During the fall 2008 groundwater quality monitoring event at GMA 5, groundwater samples were collected from three wells designated as GW-2 monitoring locations (i.e., wells GMA5-7, GMA5-9, and GMA5-10). The fall 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. All four constituents detected in well GMA5-7 (benzene, chlorobenzene, PCE, and trichloroethene (TCE)) were found at levels below the respective Method 1 GW-2 standards. The only constituent detected at well GMA5-9 (PCE) was also at a concentration below the respective MCP GW-2 standard. No VOCs were detected in well GMA5-10 during the fall 2008 groundwater quality monitoring event. Thus, no constituent was detected in GMA 5 at a concentration above its GW-2 standard. This result is consistent with the results from spring 2008

None of the three GW-2 wells 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 Fall 2008 Groundwater Results Relative GW-3 Performance Standards

Groundwater samples were collected from two wells designated as GW-3 monitoring points during the fall 2008 sampling event (i.e., wells GMA5-4 and GMA5-7). The fall 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, no samples were analyzed for these metals in fall 2008). There were no exceedances of

the GW-3 standards for any substances in the designated GW-3 wells within GMA 5 in fall 2008, consistent with the results for spring 2008.

At well GMA5-4, no cadmium was detected in fall 2008, consistent with the fall 2007 and spring 2008 sampling events. Although cadmium was detected in this well during the fall 2006 sampling round at an estimated concentration of 0.00411 ppm, representing a slight exceedance of the GW-3 standard for cadmium (0.004 ppm), this result represents the only detection of cadmium in this well in the nine sampling events performed since April 2002.

### 3.4.3 Comparison of Fall 2008 Groundwater Results to Upper Concentration Limits

In addition to comparing the fall 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 Adjacent MCP Site Monitoring Results

As discussed above in Section 1.2, the Former Elm Street Mobil Site (MDEP Site No. 1-0539, Tier 1B Permit No. 78741) is located on adjacent, upgradient property near the southwestern corner of GMA 5. This separate disposal site (as designated under the MCP) is currently being addressed by ExxonMobil pursuant to the MCP under an Administrative Consent Order with MDEP.

The Long-Term Monitoring Proposal provides that GE will include available monitoring results from response actions performed by ExxonMobil in the monitoring event evaluation reports for GMA 5. The most recent review of the MDEP file for the Elm Street Mobil Site was conducted on January 7, 2009. Two documents pertaining to groundwater investigations and response actions have been issued for that site since the previous file review performed during preparation of the GMA 5 Spring 2008 Monitoring Event Evaluation Report. The documents are:

- Phase V Inspection & Monitoring Report, Former Mobil Service Station No. 01-ECQ83-89 Elm Street Pittsfield, Massachusetts, Release Tracking Number 1-0539 (CDM, December 2008).

- Immediate Response Action Plan and Completion Report, Former Mobil Service Station No. 01-ECQ, 83-89 Elm Street, Pittsfield, Massachusetts, Release Tracking Number 1-0539, (CDM, September 2008).

A site map and pertinent monitoring results from the most recent monitoring report reviewed for the Former Elm Street Mobil Site (i.e., the December 2008 Phase V Inspection and Monitoring Report) are provided in Appendix E.

The following information summary was compiled from the CDM December 2008 Phase V Inspection and Monitoring Report:

- CDM monitored seven wells in June 2008 and eight wells in July, August, September, October and November 2008 for the presence of NAPL. During each event, wells that had a measurable amount of NAPL were generally bailed, although in some cases wells were not bailed. Any NAPL removed from wells was stored in a double-walled 55-gallon drum located on the Mobil station property. A summary of the monitoring results for each well from the December 2008 Phase V Inspection and Monitoring Report is provided in Appendix E.

- During the most recent ground water sampling event conducted on October 16 and 17, 2008, CDM collected groundwater samples from 26 monitoring wells at the site.

  - No VPH compounds were detected above the laboratory detection limit in samples collected from ten of those monitoring wells.

  - Of the 16 samples that contained concentrations of VPH compounds above the laboratory detection limit, there were no MCP Method 1 GW-2 or GW-3 Groundwater Standards exceeded in samples collected from 14 monitoring wells.

  - GW-2 standard exceedances were observed in samples collected from two monitoring wells (GES-208 and EXP-11R). These wells were conservatively designated as GW-2 wells due to their close proximity to the former Mobil station, which is currently unoccupied, and fluctuating depth to water near 15 feet bgs. Samples collected from these two wells contained concentrations of C5-C8 aliphatic hydrocarbons in excess of the GW-2 standard. The sample collected from GES-208 also contained concentrations of total xylenes, C9-C12 aliphatic hydrocarbons and C9-C10 aromatic hydrocarbons in excess of the respective GW-2 standards. Concentrations of all four constituents were also detected above GW-2 standards in the duplicate sample collected from GES-208.

- GW-3 standard exceedances were observed in the sample collected from one monitoring well located on the former Mobil station property (GES-208). Total xylenes were detected in this sample at a concentration of 19,930 µg/L. The concentration of total xylenes detected in the duplicate sample collected at this well was 11,596 µg/L. No other constituents in this sample, or any other sample, were detected above their applicable GW-3 standards.

As noted above, all matters concerning groundwater and NAPL related to the ExxonMobil site are being addressed by ExxonMobil under the MCP.

### 3.6 NAPL Evaluation

Consistent with prior monitoring results, no NAPL was observed in any of the GMA 5 monitoring wells during the groundwater elevation and sampling activities conducted in fall 2008.

If NAPL is encountered at portions of GMA 5 outside of the Former Elm Street Mobil Site and adjacent areas being addressed by ExxonMobil pursuant to the MCP under a separate Administrative Consent Order with MDEP, the long-term trend evaluations will also include a review of the current NAPL recovery efforts to the extent that data are available from ExxonMobil.

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 5 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 third monitoring event evaluation report submitted since commencement of the GMA 5 long-term groundwater quality program. The information presented herein is based on the laboratory results obtained during the course of the GMA 5 baseline and long-term groundwater monitoring programs.

For the purpose of assessing overall groundwater conditions at GMA 5, the analytical results from the fall 2008 groundwater sampling event were compared to the applicable groundwater Performance Standards for GMA 5, as described in Section 3.4 above. In addition, GE has compared the fall 2008 results to prior data to evaluate variations and/or potential trends in constituent concentrations in GMA 5 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 fall 2008 groundwater sampling event were compared to data obtained during prior baseline sampling events, and in particular, the most recent round of sampling data. In addition, the variability of the data was evaluated. The results of these comparisons are described below.

### 4.2.1 Comparison of Fall 2008 Analytical Results to Baseline Data

Graphs illustrating historical VOC and filtered cadmium concentrations for all wells sampled and analyzed for those constituent during fall 2008 at GMA 5 are presented in Appendix D. In addition, Appendix D contains graphs of historical concentrations of individual constituents that exceeded the applicable MCP Method 1 GW-2 or GW-3 standards during any of the prior sampling events (i.e., PCE and vinyl chloride at well GMA5-7).

At well GMA5-7, the fall 2008 total VOC concentrations (0.036 ppm) is slightly higher than the arithmetic average concentration observed at this well (0.0348 ppm). However, the fall 2008 results are less than the maximum total VOC concentrations observed during the baseline program in spring and fall 2006. Wells GMA5-9 and GMA5-10 did not exist during the baseline program. Both wells were sampled for the third time in fall 2008; therefore the prior data available for comparison is limited to the past two results. Total VOC

concentrations at well GMA5-9 were found to be 0.026 ppm, slightly above the arithmetic average of 0.023 ppm, but still at relatively low levels in comparison to the Performance Standards for the detected constituents. No VOCs were detected at well GMA5-10, compared to trace amounts (0.00016J, [0.00035J]) observed in fall 2007.

Since PCE is the primary constituent found at wells GMA5-7 and GMA5-9, the graphs of historical PCE concentrations contained in Appendix D are very similar to the total VOC results discussed above --- e.g., the fall 2008 PCE concentration at GMA5-7 (0.034 ppm) was slightly above the historical arithmetic average of 0.0304 ppm. However, this concentration is less than the maximum levels observed in spring and fall 2006. All PCE concentrations, with the exception of that spring 2006 result, have been below the GW-2 standard of 0.05 ppm.

The historical graph for vinyl chloride concentrations shows non-detect for vinyl chloride in fall 2008 at well GMA5-7. Vinyl chloride has been detected during only three of the ten times it has been analyzed for at this well and has not shown an exceedance of the GW-2 standard since fall 2003 (0.0029 ppm). The fall 2003 event was the only round that exceeded the GW-2 standard for vinyl chloride.

As shown in the graph in Appendix D, cadmium was not detected in well GMA5-4 during fall 2008. This is consistent with all other prior sampling rounds at this well, with the exception of a single detection during the fall 2006 monitoring event.

### 4.2.2 Comparison of Fall 2008 Analytical Results to Previous Sampling Round

Table D-3 in Appendix D presents a comparison of the fall 2008 analytical results to historical sampling data collected from each of the wells for each constituent analyzed (i.e., VOCs at wells GMA5-7, GMA5-9 and GMA5-10, and cadmium at well GMA5-4).

At well GMA 5-7, the total VOC concentration detected in fall 2008 (estimated at 0.036 ppm) was slightly below the estimated concentration of 0.041 ppm observed in spring 2008. PCE was the primary constituent observed during each sampling round in 2008, at concentrations of 0.037 ppm in spring 2008 compared to 0.034 ppm in the fall. TCE was the only other VOC detected during each of the 2008 sampling events, and was found at concentrations an order of magnitude below the applicable GW-2 Standard of 0.03 ppm in both spring 2008 (0.0028 ppm) and fall 2008 (0.0014 ppm). Trace concentrations of five other VOCs were either detected in spring 2008, but not in fall 2008 (ethylbenzene, trans-1,2-dichloroethene, and vinyl chloride) or observed in the fall but not the spring (benzene and chlorobenzene).

PCE was the only VOC detected in fall 2008 at well GMA5-9. Along with PCE, a trace concentration of chlorobenzene was also detected at this well in spring 2008. Total VOC concentrations at this well (which are almost entirely attributable to PCE) were relatively consistent at this well, ranging from 0.021 ppm in spring 2008 to 0.026 ppm in fall 2008.

As in spring 2008, no VOCs were detected at well GMA5-10 in fall 2008.

No cadmium was detected in the filtered sample from well GMA5-4 in fall 2008, which was consistent with the results from spring 2008. The fall 2006 result of 0.00411 ppm appears to be anomalous, given that cadmium was not detected during any of the seven other sampling rounds performed at this well. Nonetheless, pursuant to EPA's April 22, 2008 conditional approval letter, GE will continue analyzing this well for cadmium until four consecutive sampling rounds show cadmium levels at or below the Performance Standards.

### 4.2.3 Evaluation of Seasonal Variability in Data

To evaluate the potential presence of seasonal trends in the groundwater quality data at GMA 5, GE has reviewed the analytical data from the wells included in the long-term monitoring program at GMA 5. Inspection of the historical concentration graphs contained in Appendix D indicates that, for both PCE and total VOCs, the ranges of data collected in the spring vs. fall seasons are within the same order of magnitude at wells GMA5-7, GMA5-9, and GMA5-10, although the data show more variation and there are significantly more historical data at well GMA5-7 than at wells GMA5-9 and GMA5-10. Cadmium was only detected at well GMA5-4 during the fall 2006 monitoring event, but not during four other fall monitoring rounds (or three spring sampling events). Based on these preliminary evaluations, it does not appear that seasonal variability is significantly affecting the sampling results throughout GMA 5.

## 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 5 Long-Term Monitoring Proposal, three statistical techniques may be utilized to evaluate temporal trends in GMA 5 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 5 wells where long-term monitoring is being conducted (i.e., wells GMA5-4, GMA5-7, GMA5-9 and GMA5-10) are contained in Appendix F and are discussed below.

As shown in Table F-1 in Appendix F, cadmium was only detected at well GMA5-4 during one of 8 sampling events (fall 2006). Although the estimated concentration during that event was slightly above the GW-3 standard of 0.004 ppm, the average concentration at this well is below the applicable standard and that single detection appears to be anomalous. Similar to the four sampling rounds conducted prior to fall 2006, and the first two sampling rounds of the long-term monitoring program (fall 2007 and spring 2008), no cadmium was detected in the filtered sample from well GMA5-4 analyzed in fall 2008.

A statistical breakdown of the historical VOC data for well GMA5-7 is contained in Table F-2 in Appendix F. As seen on that table, nine individual VOCs have been detected in this well during at least one of the ten sampling events that have been conducted. Four of these constituents were detected at trace levels during fall 2008. PCE and TCE were each detected during at least two sampling events, including fall 2008. The primary VOCs observed at well GMA5-7 are PCE (detected during all 10 sampling events) and TCE (detected during 6 of 10 sampling events). Benzene and chlorobenzene have been found for the first time at this location during the fall 2008 round.

A statistical breakdown of the historical VOC data for well GMA5-9 is provided in Table F-3 in Appendix F. As seen on that table, PCE was detected during all sampling events that have been conducted at this well, including fall 2008. The only VOC observed at well GMA5-9 in fall 2008 was PCE. The fall 2008 concentration of PCE (0.026ppm) was just above the arithmetic average (0.0230 ppm).

A statistical breakdown of the historical VOC data for well GMA5-10 is contained in Table F-4 in Appendix F. As seen on that table, only one individual VOC has been detected in this well during the three sampling events that have been conducted. No constituents were detected during fall 2008. Toluene was detected during only one sampling event, in fall 2007.

### 4.4 Overall Assessment of Groundwater Quality Data

Very few constituents have been consistently detected in groundwater at GMA 5. Most of the observed detections have been sporadic and spread across the GMA, resulting in an apparent scattered distribution of occasionally-detected constituents. Low levels of VOCs and inorganics have been detected in certain wells included in the long-term monitoring program at the GMA.

The following subsections provide an overview of the groundwater quality data at GMA 5, focused on the constituents and locations that are included in the long-term monitoring program and/or were sampled in fall 2008.

#### 4.4.1 VOCs

Three wells were included in the fall 2008 long-term sampling event for VOC analysis. However, only one well (GMA5-7) is currently part of the long-term monitoring program. Wells GMA5-9 and GMA5-10 were installed and sampled to assess the VOCs found to be present in well GMA5-7, particularly to help determine if the presence of PCE in well GMA5-7 could be related to a dry cleaning facility located upgradient of that well.

Total VOC concentrations at well GMA5-7 are closely related to the concentrations of PCE, which constitutes the primary constituent detected in this well. PCE has been detected in well GMA5-7 during each sampling round, as shown in the graph in Appendix D. During the spring 2006 sampling event, the concentration of PCE detected in this well (0.062 ppm) exceeded the GW-2 standard of 0.05 ppm. However, in the fall 2008 sampling round, the PCE concentration detected in this well (0.034 ppm) was below the GW-2 standard, consistent with the result from the fall 2006, spring 2007, fall 2007 and spring 2008 sampling rounds. The spring 2006 event was the only occasion on which the GW-2 standard for PCE was exceeded at this well. Since that time, four sampling rounds have been conducted, with the PCE results below the applicable standard.

Although the last four consecutive sampling events showed results below the applicable standards (as required to demonstrate that the groundwater Performance Standards have been achieved) and the PCE and total VOC concentrations at this well have been essentially stable near their historical average concentrations for the past several years (including fall 2008), GE plans to continue to sample this well under the long-term monitoring program until potential trends in the analytical results are more thoroughly examined in the initial Long-Term Trend Evaluation Report, which is currently scheduled to be submitted in fall 2009.

The GW-2 standard for vinyl chloride (0.002 ppm) was exceeded in well GMA5-7 during the fall 2003 sampling round, when the detected concentration was 0.0029 ppm. As shown in the historical vinyl chloride concentration graph for this well in Appendix D, vinyl chloride was not detected in this well during four out of six subsequent sampling events and was only detected at trace levels below the PQL in fall 2007 and spring 2008. Thus, the fall 2008 represents the sixth consecutive sampling event in which the vinyl chloride concentration was below the applicable GW-2 standard, indicating that the Performance Standard for vinyl chloride has been achieved at well GMA5-7. However, since well GMA5-7 will continue to be analyzed for VOCs to further assess PCE concentrations at that location, GE will continue to evaluate the presence of vinyl chloride at this well.

PCE was detected at a concentration above the GW-2 standard in well GMA 5-7 only once out of the last ten sampling rounds. As noted above, given the location of well GMA5-7 downgradient from operating dry cleaning and laundry facilities and the general absence of PCE elsewhere in the GMA, GE believes it is apparent that the PCE in this well is not related to former GE operations at the site. Consistent with this understanding, MDEP issued a Notice of Responsibility letter for a PCE release to the owner of the upgradient property where the dry cleaning operation is located after the GW-2 exceedance at well GMA5-7 was reported. Nonetheless, to perform a further evaluation of the possible source of PCE, GE agreed to install wells GMA5-9 and GMA5-10 upgradient of well GMA5-7. At well GMA5-9, which is closest to the dry cleaning facility, the PCE concentration in fall 2008 was 0.026 ppm (see Table 5), which is comparable to the concentration in well GMA5-7 (0.034 ppm). The fall 2008 PCE concentration in well GMA5-9 was similar to the concentrations observed during the initial monitoring rounds at this well in fall 2007 (0.022 ppm) and spring 2008 (0.021 ppm), and all of these concentrations were well below the GW-2 standard. No PCE has ever been detected in well GMA5-10. Although no exceedances of any applicable Performance Standards have been recorded at wells GMA5-9 or GMA5-10, and although the only locations in this GMA where PCE has been detected are in the vicinity of or downgradient from the operating dry cleaning and laundry facilities, GE proposes to conduct one additional monitoring round for VOC analyses in spring 2009 in order to obtain a fourth set of analytical data, allowing GE to evaluate the need for long-term monitoring at these locations utilizing the same sample size utilized at the other GMA 5 wells during the baseline monitoring program.

### 4.4.2 Cadmium

Well GMA5-4 was added to the long-term monitoring program based on an estimated cadmium concentration of 0.00411 ppm detected in fall 2006, which is slightly above the GW-3 standard of 0.004 ppm. Cadmium was not detected in the filtered sample from well GMA5-4 in fall 2008. Overall, samples from well GMA5-4 have been analyzed for cadmium during seven sampling events conducted since initiation of the baseline monitoring program

and the fall 2006 event was the only time that the constituent was detected. Fall 2008 was the third sampling event conducted since the GW-3 exceedance observed in fall 2006, and the historical data from this well indicate that the fall 2006 data point is anomalous. Nevertheless, as required by EPA in its April 22, 2008 conditional approval letter, GE will continue long-term monitoring for cadmium at well GMA5-4 for one more round, until four consecutive sample results below the GW-3 standard are obtained.

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

As stated in the GMA 5 Long-Term Monitoring Proposal and Addendum, the analytical data obtained during the baseline monitoring programs did not reveal any data gaps concerning groundwater quality that would suggest the need for any further investigations or assessments, other than the additional investigations being conducted to identify the source of PCE found in well GMA5-7. Likewise, a review of the fall 2008 long-term monitoring data does not indicate the need for additional actions beyond the approved long-term monitoring activities.

In fall 2008, the detected VOC concentrations were very low in relation to any applicable GW-2 or GW-3 standards and cadmium was not detected at all. Based on the results during the fall 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 5, GE will evaluate the need for appropriate response actions and will propose any necessary actions for EPA approval.

# 5. Schedule of Future Activities

## 5.1 Field Activities Schedule

A summary of the long-term groundwater sampling program activities proposed to be conducted in spring 2009 is provided in Table 8. The monitoring well subject to sampling in spring 2009 is illustrated on Figure 4. GE will continue to monitor groundwater elevations at the GMA 5 wells listed in Table 8 on a semi-annual basis, in conjunction with future long-term sampling events.

Since GE has proposed no modifications to the long-term monitoring program requiring EPA approval prior to the next scheduled sampling event, GE will conduct the Spring 2009 long-term groundwater quality sampling event in April/May 2009. A round of groundwater elevation monitoring at the GMA 5 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 5 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 Spring 2009 Monitoring Event Evaluation Report for GMA 5 within 60 days following receipt of the final analytical data packages from the event. That report will present the final, validated spring 2009 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. GE will also include an updated summary of available groundwater monitoring results and analytical data collected at the adjacent Elm Street Mobil Site, to the extent that such information is available to GE.

Subsequent semi-annual Monitoring Event Evaluation Reports for GMA 5 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 is scheduled to 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 5 will be prepared at two-year intervals over the duration of the long-term monitoring program at GMA 5. 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. However, the spring 2009 sampling event will represent the fourth such event conducted under the long-term monitoring program and, if the analytical results from that sampling round are consistent with recent data, may be the fourth consecutive sampling event where all groundwater quality Performance Standards at GMA 5 are met. Therefore, if it appears that long-term monitoring may no longer be necessary at GMA 5 after reviewing the spring 2009 analytical results, GE may propose to submit the initial Long-Term Trend Evaluation Report in lieu of the Spring 2009 Monitoring Event Evaluation Report for GMA 5.

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**Tables**

**Table 1**
**Fall 2008 Groundwater Monitoring Program**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 2008**
**General Electric Company-Pittsfield, Massachusetts**

| Well Number | Monitoring Well Usage | Sampling Schedule & Analyses | | Comments |
|---|---|---|---|---|
| | | Sampling Schedule | Analyses Completed | |
| GMA5-1 | Groundwater Elevation | None | None | |
| GMA5-3 | Groundwater Elevation | None | None | |
| GMA5-4 | GW-3 Perimeter (GW-3 Compliance Well) | Semi-Annual | Cadmium | Long-term monitoring conducted to verify attainment of GW-3 Performance Standards for cadmium. |
| GMA5-7 | 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 vinyl chloride and PCE. |
| GMA5-8 | Groundwater Elevation | None | None | |
| GMA5-9 | GW-2 Sentinel (Supplemental) | Fall 2008 | VOC | Sampled as part of PCE assessment. |
| GMA5-10 | GW-2 Sentinel (Supplemental) | Fall 2008 | VOC | Sampled as part of PCE assessment. |
| GT-7 | Groundwater Elevation - Elm Street Mobil | None | None | |
| GT-101 | Groundwater Elevation - Elm Street Mobil | None | None | |

NOTE:
1. Wells GMA5-4, GMA5-7, GMA5-9, GMA5-10 were sampled for the listed parameters during the long-term groundwater quality sampling event conducted in Fall 2008.

**Table 2**
**Monitoring Well Construction**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 2008**
**General Electric Company-Pittsfield, Massachusetts**

| Well ID | Survey Coordinates | | Well Diameter (inches) | Ground Surface Elevation (ft AMSL) | Measuring Point Elevatin (ft AMSL) | Depth to Top of Screen (ft bgs) | Screen Length (ft) | Top of Screen Elevation (ft AMSL) | Base of Screen Elevation (ft AMSL) | Average Depth to Groundwater (ft bgs) | Average Groundwater Elevation (ft AMSL) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Northing | Easting | | | | | | | | | |
| GMA5-1 | 531464.50 | 130012.30 | 2.00 | 984.40 | 984.82 | 5.11 | 10.00 | 979.29 | 969.29 | 9.63 | 975.38 |
| GMA5-3 | 531419.00 | 139738.70 | 2.00 | 989.57 | 989.14 | 10.00 | 15.00 | 979.57 | 964.57 | 17.75 | 971.82 |
| GMA5-4 | 531811.30 | 129982.60 | 2.00 | 979.29 | 979.10 | 8.09 | 10.00 | 971.20 | 961.20 | 8.08 | 971.21 |
| GMA5-7 | 531507.50 | 129845.00 | 2.00 | 987.21 | 986.75 | 8.00 | 20.00 | 979.21 | 959.21 | 15.60 | 971.61 |
| GMA5-8 | 531711.70 | 130216.90 | 2.00 | 984.95 | 984.69 | 8.00 | 10.00 | 976.95 | 966.95 | 12.56 | 972.39 |
| GMA5-9 | 531276.20 | 129834.80 | 2.00 | 989.88 | 989.42 | 12.00 | 10.00 | 977.9 | 967.88 | 15.78 | 974.11 |
| GMA5-10 | 531407.90 | 129894.40 | 2.00 | 987.57 | 987.11 | 9.00 | 10.00 | 978.6 | 968.57 | 13.94 | 973.64 |
| GT-7 | 531331.70 | 129602.82 | 4.00 | 990.11 | 989.76 | 10.00 | 15.00 | 980.11 | 965.11 | 16.77 | 973.34 |
| GT-101 | -- | -- | -- | 989.92 | 989.68 | -- | -- | -- | -- | 18.84 | 971.08 |

Notes:
1. feet AMSL = feet above mean sea level.
2. feet BGS = feet below ground surface.
3. -- = not available.
4. Complete monitoring well construction information for Former Mobil Service Station wells GT-101, GT-102, and RW-2 is not available. Ground surface elevatins are inferred based on flush mount well construction
5. Well GMA5-1 was modified during construction activities in the area. The screen elevations listed above are based on an initial ground elevation of 985.11 feet AMSL and depth to top of screen of 5.72 feet. This well was re-surveyed on January 8, 2008 and the corrected ground surface and measuring point elevations, as well as a revised depth to top of screen based on new grade are listed above

**Table 3**
**Groundwater Elevation Data - Fall 2008**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 2008**
**General Electric Company-Pittsfield, Massachusetts**

| Well Number | Remedial Action Area | Fall 2008 Groundwater Elevation (Feet AMSL) |
|---|---|---|
| GMA 5-1 | Oxbow Areas A and C | 975.37 |
| GMA 5-3 | Oxbow Areas A and C | 972.23 |
| GMA 5-4 | Oxbow Areas A and C | 970.90 |
| GMA 5-7 | Oxbow Areas A and C | 973.97 |
| GMA 5-8 | Oxbow Areas A and C | 973.49 |
| GMA 5-9 | Oxbow Areas A and C | 975.21 |
| GMA 5-10 | Oxbow Areas A and C | 974.04 |
| GT-7 | Elm Street Mobil | 973.73 |
| GT-101 | Elm Street Mobil | 972.61 |

Notes:

1. Groundwater elevation measurements were collected on October 30, 2008.
2. Coltsville mean flow for the 10/30/08 Fall 2008 Monitoring round was 324 cubic feet per second (cfs).
2. The surface water elevation of the Housatonic River, measured at (BM-2A) the Lyman Street Bridge on October 30, 2008 was 971.37 feet AMSL.

**Table 4**
**Field Parameter Measurements - Fall 2008**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 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) |
|---|---|---|---|---|---|---|
| GMA5-4 | 9 | 11.15 | 6.89 | 1.063 | -108.60 | 3.20 |
| GMA5-7 | 7 | 11.47 | 6.81 | 0.619 | 68.50 | 6.12 |
| GMA5-9 | 17 | 13.10 | 6.77 | 1.624 | -108.50 | 2.99 |
| GMA5-10 | 3 | 15.00 | 6.39 | 1.477 | -57.70 | 0.29 |

Notes:
1. Measurements collected during Fall 2008 groundwater sampling event performed on October 30 and November 3, 2008.
2. Well parameters were monitored continuously during purging by low-flow techniques. Final stabilized 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**

**Baseline Groundwater Quality and Interim Report for Fall 2008**
**Groundwater Management Area 5**
**General Electric Company - Pittsfield, Massachusetts**
**(Results are presented in parts per million, ppm)**

| Parameter / Sample ID: / Date Collected: | Method 1 GW-2 Standards | GMA5-7 10/30/08 | GMA5-9 10/30/08 | GMA5-10 11/03/08 |
|---|---|---|---|---|
| **Volatile Organics** | | | | |
| Benzene | 2 | 0.00010 J [0.000090 J] | ND(0.0010) | ND(0.0010) |
| Chlorobenzene | 0.2 | 0.00071 J [0.00071 J] | ND(0.0010) | ND(0.0010) |
| Tetrachloroethene | 0.05 | 0.034 [0.034] | 0.026 | ND(0.0010) |
| Trichloroethene | 0.03 | 0.0014 [0.0014] | ND(0.0010) | ND(0.0010) |
| Total VOCs | 5 | 0.036 J [0.036 J] | 0.026 | ND(0.10) |

Notes:

1. Samples were collected by ARCADIS and submitted to SGS Environmental Services, Inc. for analysis of volatiles and cadmium (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. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
4. Only detected volatiles are summarized.
5. Total VOCs are being compared to the notification level in the SOW of 5 ppm, as there is no GW-2 standard for Total VOCs.
6. Field duplicate sample results are presented in brackets.

Data Qualifiers:

Organics (volatiles)

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**

**Baseline Groundwater Quality and Interim Report for Fall 2008**
**Groundwater Management Area 5**
**General Electric Company - Pittsfield, Massachusetts**
**(Results are presented in parts per million, ppm)**

| Parameter / Sample ID: / Date Collected: | Method 1 GW-3 Standards | GMA5-4 10/30/08 | GMA5-7 10/30/08 |
|---|---|---|---|
| **Volatile Organics** | | | |
| Benzene | 10 | NA | 0.00010 J [0.000090 J] |
| Chlorobenzene | 1 | NA | 0.00071 J [0.00071 J] |
| Tetrachloroethene | 30 | NA | 0.034 [0.034] |
| Trichloroethene | 5 | NA | 0.0014 [0.0014] |
| **Inorganics-Filtered** | | | |
| Cadmium | 0.004 | ND(0.0100) J [ND(0.0100) J] | NA |

Notes:

1. Samples were collected by ARCADIS and submitted to SGS Environmental Services, Inc. for analysis of volatiles and cadmium (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. With the exception of cadmium only those constituents detected in one or more samples are summarized.

Data Qualifiers:

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

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

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

**Baseline Groundwater Quality and Interim Report for Fall 2008**
**Groundwater Management Area 5**
**General Electric Company - Pittsfield, Massachusetts**
**(Results are presented in parts per million, ppm)**

| Parameter / Sample ID: / Date Collected: | MCP UCL for GroundWater | GMA5-4 10/30/08 | GMA5-7 10/30/08 | GMA5-9 10/30/08 | GMA5-10 11/03/08 |
|---|---|---|---|---|---|
| **Volatile Organics** | | | | | |
| Benzene | 100 | NA | 0.00010 J [0.000090 J] | ND(0.0010) | ND(0.0010) |
| Chlorobenzene | 10 | NA | 0.00071 J [0.00071 J] | ND(0.0010) | ND(0.0010) |
| Tetrachloroethene | 100 | NA | 0.034 [0.034] | 0.026 | ND(0.0010) |
| Trichloroethene | 50 | NA | 0.0014 [0.0014] | ND(0.0010) | ND(0.0010) |
| **Inorganics-Filtered** | | | | | |
| Cadmium | 0.05 | ND(0.0100) J [ND(0.0100) J] | NA | NA | NA |

Notes:

1. Samples were collected by ARCADIS and submitted to SGS Environmental Services, Inc. for analysis of volatiles and cadmium
2. (filtered).
   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. With the exception of cadmium only those constituents detected in one or more samples are summarized.

Data Qualifiers:

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

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

**Table 8**
**Proposed Long Term Groundwater Monitoring Program Activities - Spring 2009**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 2008**
**General Electric Company-Pittsfield, Massachusetts**

| Well Number | Monitoring Well Designation | Current Monitoring Well Usage | Proposed Sampling Schedule and Analyses | | Comments |
|---|---|---|---|---|---|
| | | | Sampling Schedule | Proposed Analyses | |
| GMA5-1 | GW-2 Sentinel/ GW-3 Perimeter | Groundwater Elevation | None | None | Groundwater elevation monitoring location only |
| GMA5-3 | GW-2 Sentinel/GW-3 Perimeter (GW-2/GW-3 Compliance Well) | Groundwater Elevation | None | None | Groundwater elevation monitoring location only |
| GMA5-4 | GW-3 Perimeter (GW-3 Compliance Well) | Groundwater Elevation/ GW-3 Perimeter Monitoring | Semi-Annual | Cadmium | Long-term sampling to be continued to verify attainment of GW-3 Performance Standards for cadmium (have been met for three consecutive sampling events). |
| GMA5-7 | GW-2 Sentinel/GW-3 Perimeter (GW-2/GW-3 Compliance Well) | Groundwater Elevation/ GW-2 Sentinel/GW-3 Perimeter Monitoring | Semi-Annual | VOC | GW-2 Performance Standards for vinyl chloride and PCE have been met for four consecutive sampling events. Additional sampling needs to be assessed following review of spring 2009 results and potential trends in historical data. |
| GMA5-8 | GW-3 General/Source Area Sentinel | Groundwater Elevation | None | None | Groundwater elevation monitoring location only |
| GMA5-9 | GW-2 Sentinel (Supplemental) | Groundwater Elevation/ GW-2 Sentinel (Supplemental) | Spring 2009 | VOC | Additional sampling proposed as part of PCE assessment. Additional sampling needs to be assessed following review of spring 2009 results. |
| GMA5-10 | GW-2 Sentinel (Supplemental) | Groundwater Elevation/ GW-2 Sentinel (Supplemental) | Spring 2009 | VOC | Additional sampling proposed as part of PCE assessment. Additional sampling needs to be assessed following review of spring 2009 results. |
| GT-7 | Groundwater Elevation - Elm Street Mobil | Groundwater Elevation - Elm Street Mobil | None | None | Groundwater elevation monitoring location only |
| GT-101 | Groundwater Elevation - Elm Street Mobil | Groundwater Elevation - Elm Street Mobil | None | None | Groundwater elevation monitoring location only |

NOTE:

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.
2. All wells currently listed for groundwater elevation monitoring above will continue to be utilized for groundwater elevation monitoring on a semi-annual basis.

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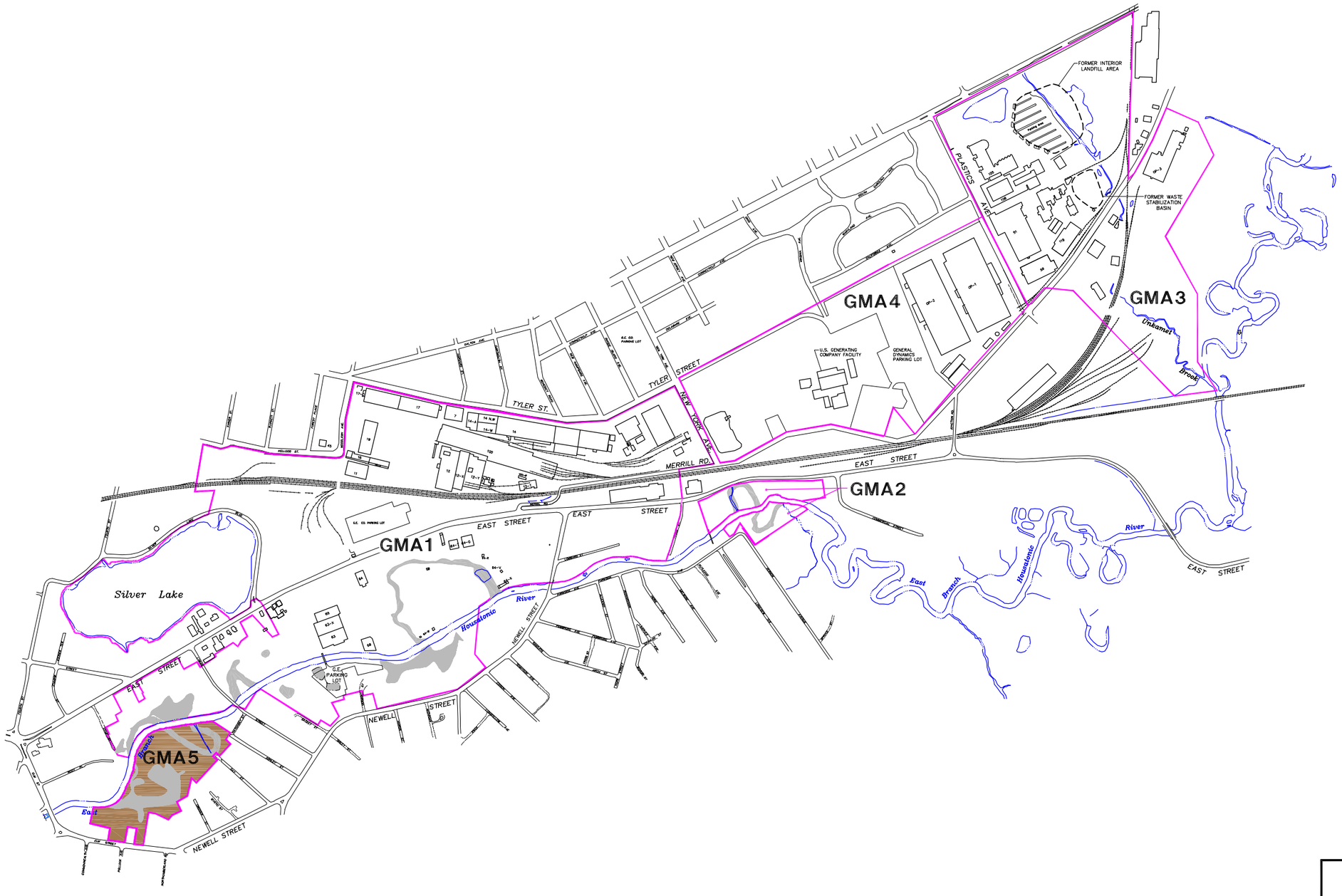
**Figures**




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'
APPROXIMATE SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
**GMA 5 GROUNDWATER QUALITY MONITORING PROGRAM**

# GROUNDWATER MANAGEMENT AREAS

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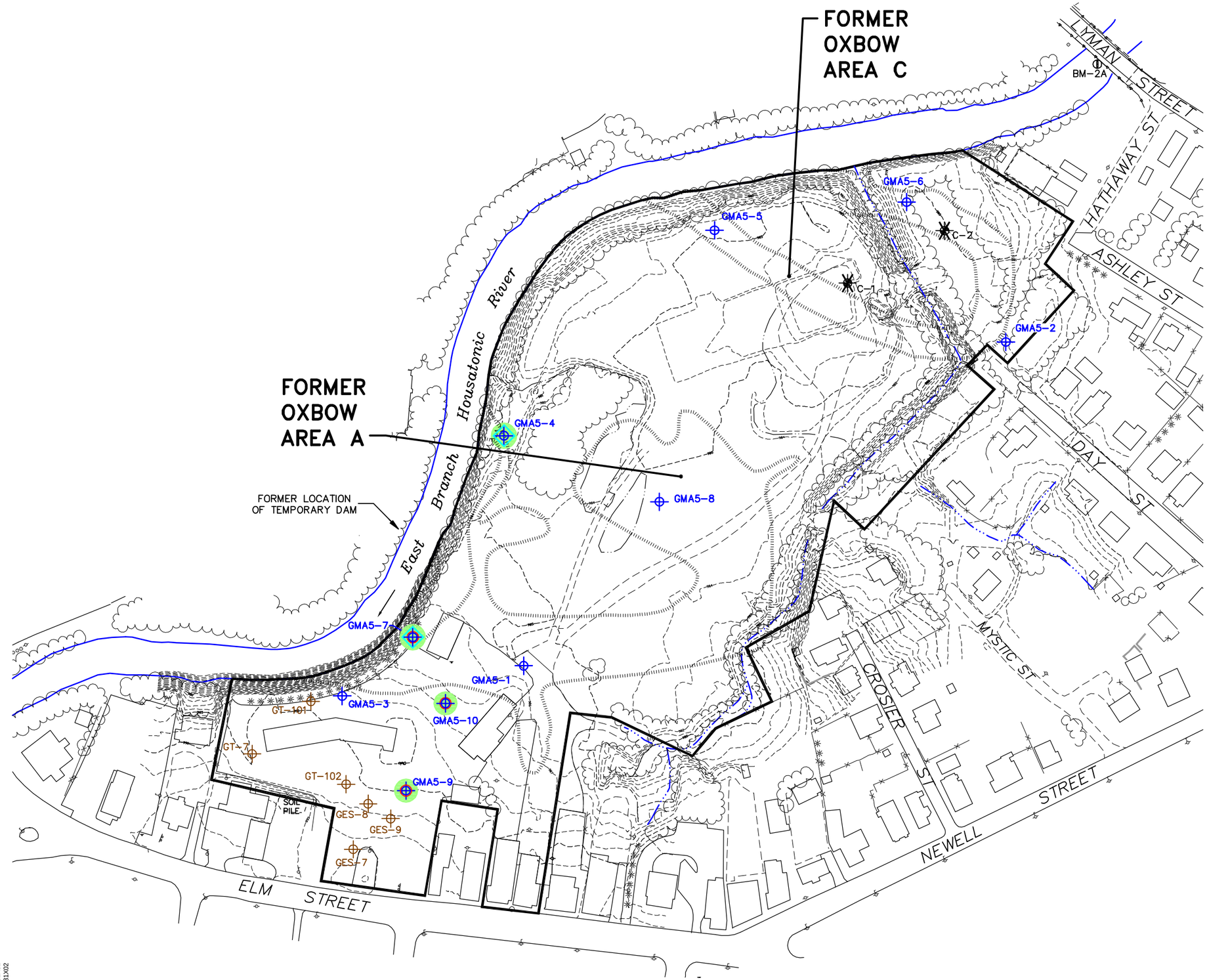
FIGURE 1




**LEGEND:**

- GMA 5 SITE BOUNDARY
- FORMER OXBOW/LOW-LYING AREA
- FENCE
- DITCHES/STREAMS WITH INTERMITTENT FLOW
- MONITORING WELL
- STAFF GAUGE
- ADJACENT MCP DISPOSAL SITE MONITORING WELL
- GW-2 SENTINEL/ COMPLIANCE WELL
- GW-3 PERIMETER WELL
- WELL SAMPLED IN FALL 2008
- 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.

0 150' 300'

GRAPHIC SCALE

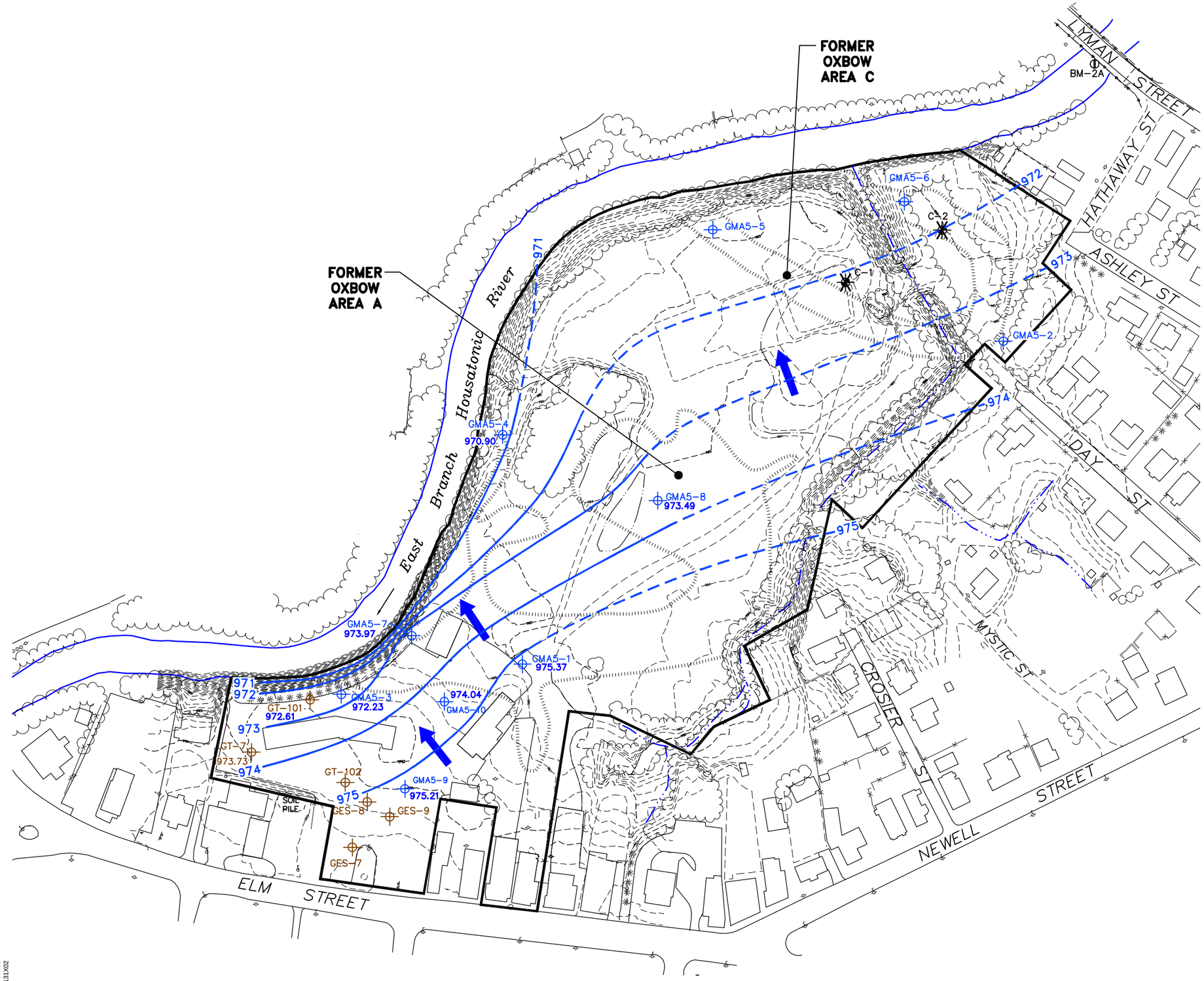
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
**GMA 5 GROUNDWATER QUALITY MONITORING PROGRAM**

**FALL 2008**
**GROUNDWATER MONITORING PROGRAM**

ARCADIS

FIGURE
**2**

CITY: SYRACUSE DIV 85/GROUP: ENV DB: NES RCB WLJ PM:NS LYR:(Off)ON=*;OFF=REF* (FRZ)
R:\ENVCAD\SYRACUSE\ACTIN\B0030131\0000\000004\DWG\30131B20.DWG LAYOUT: 2 SAVED: 1/9/2009 4:21 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 2/13/2009 2:16 PM BY: JONES, WENDY
XREFS: 30131X01 30131X02
IMAGES: PROJECTNAME: ---




LEGEND:

- GMA 5 BOUNDARY
- FORMER OXBOW/LOW-LYING AREA
- FENCE
- STREAMS WITH INTERMITTENT FLOW
- MONITORING WELL
- ADJACENT MCP DISPOSAL SITE MONITORING WELL
- STAFF GUAGE
- 973.64 GROUNDWATER ELEVATION (FT AMSL)
- 974 GROUNDWATER ELEVATION CONTOUR (FT AMSL), DASHED WHERE INFERRED
- DECOMMISSIONED MONITORING PROGRAM WELL
- GROUNDWATER FLOW

NOTE:

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 LEVEL MEASUREMENTS OBTAINED OCTOBER 30, 2008.
7. RIVER ELEVATION AT LYMAN STREET BRIDGE ON OCTOBER 30, 2008: 971.37 FT. AMSL.

0 150' 300'

GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

**GMA 5 GROUNDWATER QUALITY MONITORING PROGRAM**

# WATER TABLE CONTOUR MAP - FALL 2008

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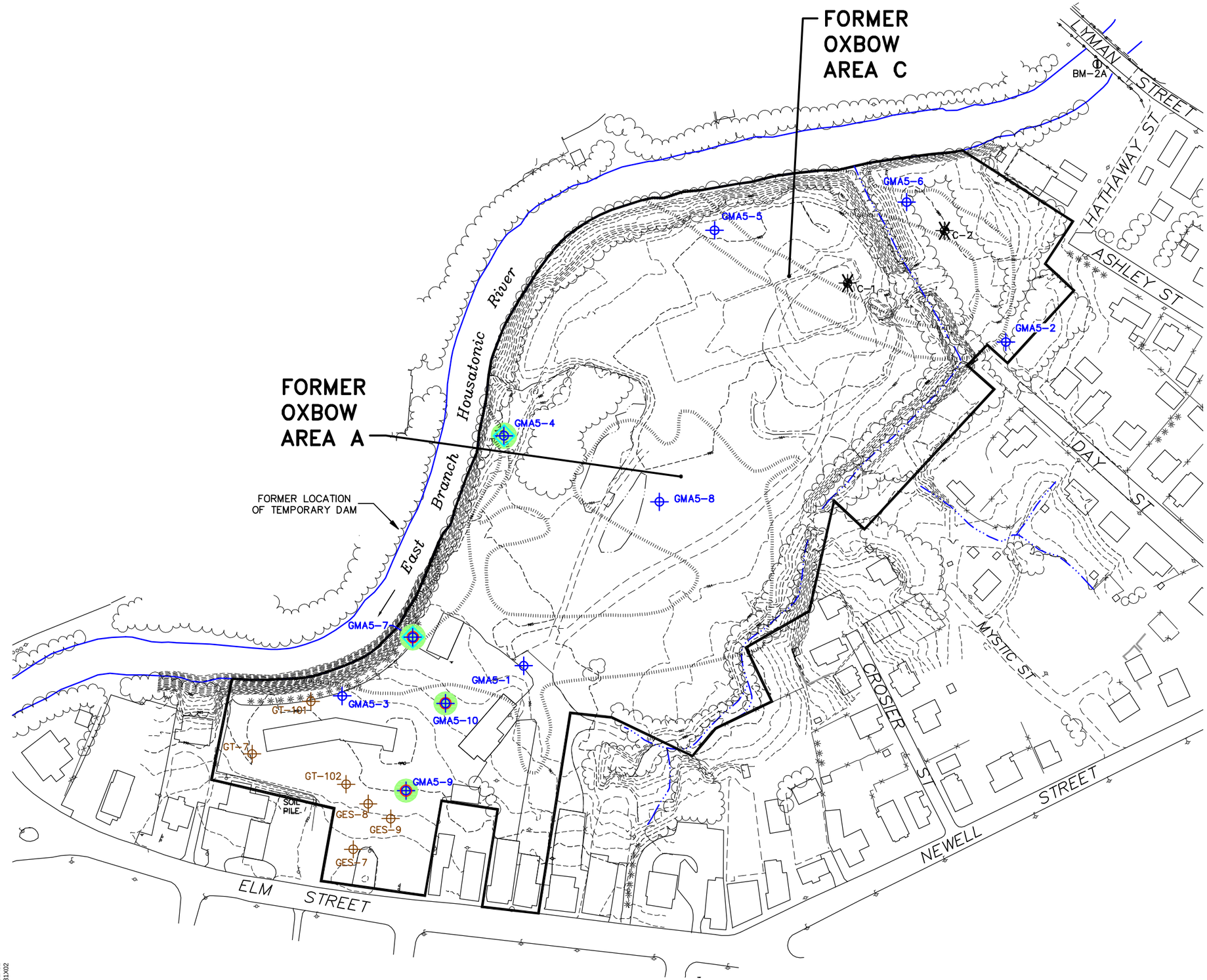
FIGURE 3

CITY: SYRACUSE DIV 141/GROUP: ENV DB: DMW RCB DMW LD: DMW PM: NS LYR:(Opt)ON=*;OFF=REF; (FRZ)
R:\ENVCAD\SYRACUSE\ACTIVE\B0030131\00000000004\DWG\FALL08\30131W03.DWG LAYOUT: 3 SAVED: 2/13/2009 2:11 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 2/13/2009 2:13 PM BY: JONES, WENDY
XREFS: 30131X01 30131X02
IMAGES: PROJECTNAME: ---




**LEGEND:**

- GMA 5 SITE BOUNDARY
- FORMER OXBOW/LOW-LYING AREA
- FENCE
- DITCHES/STREAMS WITH INTERMITTENT FLOW
- MONITORING WELL
- STAFF GAUGE
- ADJACENT MCP DISPOSAL SITE MONITORING WELL
- GW-2 SENTINEL/ COMPLIANCE WELL
- GW-3 PERIMETER WELL
- WELL TO BE SAMPLED IN SPRING 2009
- 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.

0 150' 300'

GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
**GMA 5 GROUNDWATER QUALITY MONITORING PROGRAM**

# PROPOSED SPRING 2009 GROUNDWATER MONITORING PROGRAM

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FIGURE
**4**

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# Appendices

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**Appendix A**

Field Sampling Data

**Table A-1**
**Summary Of Groundwater Sampling Methods**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 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 | Fall 2007 | Spring 2008 | Fall 2008 |
| GMA5-4 | PP/BA | PP | PP | PP | NS | NS | NS | PP | PP | PP | PP |
| | Spring 2003: Water in outer cover of flush-mount protective casing.<br>Fall 2002: Flush-mount protective casing filled with water, pumped water out to open well.<br>Spring 2002: VOCs collected with a disposable teflon bailer. | | | | | | | | | | |
| GMA5-7 | BP | PP | BP | BP | BP | NS | BP | BP | BP | BP | BP |
| | Fall 2005: Sampling postponed due to operation of temporary dam across Housatonic River. | | | | | | | | | | |
| GMA5-9 | NS | NS | NS | NS | NS | NS | NS | NS | BP | BP | BP |
| | Fall 2007: Well installed and added to monitoring program. | | | | | | | | | | |
| GMA5-10 | NS | NS | NS | NS | NS | NS | NS | NS | BP | BP | BP |
| | Fall 2007: Well installed and added to monitoring program. | | | | | | | | | | |

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, and fall 2006.
3. Interim/baseline sampling conducted at select wells from spring 2004 to spring 2006.
4. Long-term monitoring program initiated in fall 2007.

# GROUNDWATER SAMPLING LOG

Well No. GMA5-4
Key No. —
PID Background (ppm) —
Well Headspace (ppm) —

Site/GMA Name GMA5 GE Pittsfield
Sampling Personnel KC / DLK
Date 10/30/08
Weather Sunny 40's.

**WELL INFORMATION**

Reference Point Marked? (Y) N
Height of Reference Point ____ Meas. From TIC
Well Diameter 2"
Screen Interval Depth 8.09-18.09 Meas. From BGS.
Water Table Depth 8.32 Meas. From TIC
Well Depth 19.00 Meas. From TIC
Length of Water Column 10.68
Volume of Water in Well 1.74 gallons
Intake Depth of Pump/Tubing 15' 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 1425
Sample ID GMA5-4
Duplicate ID GMA5-DUP1
MS/MSD GMA5-4 MS/MSD
Split Sample ID —

| Required | Analytical Parameters: | Collected |
|---|---|---|
| ( ) | VOCs (Std. list) | ( ) |
| ( ) | 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 | ( ) |
| (X) | Other (Specify) Cadmium (filtered) | (+) |

**EVACUATION INFORMATION**

Pump Start Time 1330
Pump Stop Time 1445
Minutes of Pumping 75 min.
Volume of Water Removed 5.0 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: YSI-556 MPS Hach 2100P Turbidimeter

| Time | Pump Rate (L/min.) | Total Gallons Removed | Water Level (ft TIC) | Temp. (Celsius) [3%]* | pH [0.1 units]* | Sp. Cond. (mS/cm) [3%]* | Turbidity (NTU) [10% or 1 NTU]* | DO (mg/l) [10% or 0.1 mg/l]* | ORP (mV) [10 mV]* |
|---|---|---|---|---|---|---|---|---|---|
| 1335 | 250 | 0.33 | 8.44 | — | — | — | 326 | — | — |
| 1340 | 250 | 0.66 | 8.45 | — | — | — | 41 | — | — |
| 1345 | 250 | 0.99 | 8.44 | 10.60 | 6.85 | 1.222 | 21 | 8.13 | -105.7 |
| 1350 | 250 | 1.32 | 8.44 | 10.72 | 6.85 | 1.170 | 14 | 6.15 | -107.7 |
| 1355 | 250 | 1.65 | 8.45 | 10.81 | 7.03 | 1.125 | 15 | 4.23 | -109.8 |
| 1400 | 250 | 1.98 | 8.44 | 10.89 | 6.83 | 1.084 | 13 | 3.38 | -110.4 |
| 1405 | 250 | 2.31 | 8.44 | 10.79 | 6.91 | 1.076 | 12 | 3.40 | -108.8 |
| 1410 | 250 | 2.64 | 8.45 | 10.92 | 6.87 | 1.068 | 10 | 3.35 | -108.8 |

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

**OBSERVATIONS/SAMPLING METHOD DEVIATIONS**

Initial purge light brown/cloudy slight odor
1340 - Hooked up Flow through cell

**SAMPLE DESTINATION**

Laboratory: SGS
Delivered Via: UPS
Airbill #: —

Field Sampling Coordinator: [signature]

# GROUNDWATER SAMPLING LOG

Well No. GMA5-4

Site/GMA Name GMA5 GE Pittsfield.
Sampling Personnel K.IC / DLK
Date 10/30/08
Weather Sunny 40'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]* |
|---|---|---|---|---|---|---|---|---|---|
| 1415 | 250 | 2.97 | 8.46 | 11.01 | 6.86 | 1.065 | 9 | 3.27 | -109.3 |
| 1420 | 250 | 3.30 | 8.45 | 11.15 | 6.89 | 1.063 | 9 | 3.20 | -108.6 |
| 1425 | 250 | | | | | | | | |

Sampled @ 1425

* 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

Key No. GMA5-7
PID Background (ppm)
Well Headspace (ppm)

Sampling Personnel GMA5 DRA/EMC
Date 10/30/09
Weather Sunny 35°F

**WELL INFORMATION**

Reference Point Marked? (Y) N
Height of Reference Point -3.5" Meas. From Ground
Well Diameter 2"
Screen Interval Depth 8-28' Meas. From ~~TIC~~ Ground
Water Table Depth 12.97 Meas. From TIC
Well Depth 27.58 Meas. From TIC
Length of Water Column 14.71
Volume of Water in Well 2.39
Intake Depth of Pump/Tubing 20.3' 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 14:50
Sample ID GMA-5-7 DRA
Duplicate ID GMA5-DUP-01 02
MS/MSD N/A
Split Sample ID N/A

| Required | Analytical Parameters: | Collected |
|---|---|---|
| (X) | VOCs (Std. list) | (X) |
| ( ) | VOCs (Exp. list) | ( ) |
| ( ) | SVOCs | ( ) |
| ( ) | PCBs (Total) | ( ) |
| (X) (EC) | PCBs (Dissolved) | (X) (EC) |
| ( ) | 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 13:45
Pump Stop Time 15:10
Minutes of Pumping 85
Volume of Water Removed 3.0 GAL
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
HACH 2100P 46500-00

| 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]* |
|---|---|---|---|---|---|---|---|---|---|
| 13:45 | 50 | — | 13.20 | - | - | — | 7 | - | - |
| 13:50 | 75 | 0.10 | 13.96 | - | - | - | 32 | - | - |
| 13:55 | 75 | 0.20 | 14.15 | - | - | - | 30 | - | - |
| 14:00 | " | 0.30 | 14.32 | - | - | - | 36 | - | - |
| 14:05 | 125 | 0.47 | 14.61 | - | - | - | 35 | - | - |
| 14:10 | " | 0.63 | 15.03 | - | - | - | - | - | - |
| 14:15 | 150 | 0.83 | 15.15 | 11.41 | 6.93 | 0.619 | 17 | 12.51 | 58.7 |
| 14:20 | " | 1.03 | 15.05 | 11.90 | 6.80 | 0.620 | 11 | 6.39 | 64.0 |

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

**OBSERVATIONS/SAMPLING METHOD DEVIATIONS** INITIAL PURGE CLEAR W/ SOME ORANGE/BROWN MATERIAL

**SAMPLE DESTINATION**

Laboratory: SGS
Delivered Via: UPS
Airbill #: —

Field Sampling Coordinator:

C:\WORK\QEG\groundwater\054199\Attachment\D-2

# GROUNDWATER SAMPLING LOG

Well No. GMA5-7

Site/GMA Name GMA5

Sampling Personnel Eme / DH

Date 10/30/08

Weather P/C 40°

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]* |
|---|---|---|---|---|---|---|---|---|---|
| 14:25 | 150 | 1.22 | 15.03 | 11.90 | 6.85 | 0.620 | 10 | 6.18 | 65.3 |
| 1430 | " | 1.42 | 15.03 | 11.94 | 6.82 | 0.621 | 9 | 6.22 | 66.4 |
| 14:35 | " | 1.62 | 15.03 | 11.80 | 6.85 | 0.624 | 7 | 6.24 | 65.7 |
| 14:40 | " | 1.82 | 15.00 | 11.98 | 6.82 | 0.624 | 7 | 6.15 | 68.0 |
| 14:45 | " | 2.02 | 14.90 | 11.97 | 6.81 | 0.619 | 7 | 6.12 | 69.5 |

* 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

# GROUNDWATER SAMPLING LOG

Well No. GMA5-9
Key No. —
PID Background (ppm) —
Well Headspace (ppm) —

Site/GMA Name GMA5 GE Pittsfield
Sampling Personnel KLC, DLK
Date 10/30/08
Weather Sunny 40's

**WELL INFORMATION**

Reference Point Marked? (Y) N
Height of Reference Point — Meas. From TIC
Well Diameter 2"
Screen Interval Depth 12'-22' Meas. From BGS
Water Table Depth 14.21 Meas. From TIC
Well Depth 21.35 Meas. From TIC
Length of Water Column 7.14'
Volume of Water in Well 1.17 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 GMA5-9 1200
Sample ID 12:00 ↵
Duplicate ID —
MS/MSD GMA5-9 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 ~~1030~~/1050
Pump Stop Time 1210
Minutes of Pumping 80 min
Volume of Water Removed 3-7 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 Hach 2100P Turbidimeter

| Time | Pump Rate (L/min.) | Total Gallons Removed | Water Level (ft TIC) | Temp. (Celsius) [3%]* | pH [0.1 units]* | Sp. Cond. (mS/cm) [3%]* | Turbidity (NTU) [10% or 1 NTU]* | DO (mg/l) [10% or 0.1 mg/l]* | ORP (mV) [10 mV]* |
|---|---|---|---|---|---|---|---|---|---|
| 1055 | 150 | 0.20 | 14.43 | — | — | — | 334 | — | — |
| 1100 | 150 | 0.40 | 14.53 | — | — | — | 121 | — | — |
| 1105 | 250 | 0.73 | 14.71 | — | — | — | 87 | — | — |
| 1110 | 250 | 1.06 | 15.04 | — | — | — | 25.0 | — | — |
| 1115 | 250 | 1.39 | 15.54 | 13.19 | 6.55 | 1.555 | 16 | 6.94 | -116.9 |
| 1120 | 200 | 1.65 | 15.74 | 13.48 | 6.61 | 1.552 | 16 | 5.73 | -116.6 |
| 1125 | 150 | 1.85 | 15.91 | 13.10 | 6.64 | 1.557 | 14 | 5.02 | -113.8 |
| 1130 | 150 | 2.05 | 16.08 | 13.19 | 6.66 | 1.559 | 13 | 4.40 | -112.8 |

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

**OBSERVATIONS/SAMPLING METHOD DEVIATIONS** Initial purge cloudy, no odor
1110 Hooked up Flowthrough cell, shaded Flowthrough w/ bucket lid.

**SAMPLE DESTINATION**

Laboratory: SGS
Delivered Via: UPS
Airbill #: —

Field Sampling Coordinator:

C:\WORK\GE\Groundwater\554199\Attachment\D-3

# GROUNDWATER SAMPLING LOG

Well No. GMA5-9

Site/GMA Name GMA5 GE Pittsfield
Sampling Personnel KLC / DLK
Date 10/30/08
Weather Sunny 40'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]* |
|---|---|---|---|---|---|---|---|---|---|
| 1135 | 200 | 2.31 | 16.51 | 13.66 | 6.68 | 1.562 | ~~6~~ 8 | 3.71 | -113.6 |
| X 1138 | 200 | 2.47 | — | 13.87 | 6.70 | 1.567 | 5 | 3.49 | -113.0 |
| 1141 | 75 | 2.53 | — | 12.45 | 6.65 | 1.592 | 5 | 3.51 | -112.0 |
| 1144 | 150 | 2.65 | — | 12.46 | 6.72 | 1.588 | 5 | 3.39 | -110.8 |
| 1147 | 150 | 2.77 | — | 12.96 | 6.74 | 1.590 | 8 | 3.22 | -111.1 |
| 1150 | 150 | 2.89 | — | 12.92 | 6.70 | 1.603 | 10 | 3.17 | -110.5 |
| 1153 | 150 | 3.01 | — | 13.27 | 6.77 | 1.598 | 16 | 2.98 | -108.6 |
| 1156 | 150 | 3.12 | — | 13.01 | 6.80 | 1.626 | 16 | 3.03 | -110.1 |
| 1159 | 150 | 3.24 | | 13.10 | 6.77 | 1.624 | 17 | 2.99 | -108.5 |
| 1200 | Sampled @ 1200 | | | | | | | | |

KLC

* 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**

X top of pump above water level

# GROUNDWATER SAMPLING LOG

Well No. GMA5-10
Key No. 2537
PID Background (ppm) 0
Well Headspace (ppm) 0

Site/GMA Name GMA5
Sampling Personnel EMC/JA
Date 11/3/08
Weather OVERCAST, 49°

## WELL INFORMATION

Reference Point Marked? Y (N)
Height of Reference Point SEE NOTES Meas. From
Well Diameter 2"
Screen Interval Depth 9-19' Meas. From GROUND
Water Table Depth 13.06 Meas. From TIC
Well Depth 18.47 Meas. From TIC
Length of Water Column 5.41
Volume of Water in Well .88
Intake Depth of Pump/Tubing 15.76 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 15:20
Sample ID GMA5-10
Duplicate ID N/A
MS/MSD N/A
Split Sample ID NIT

| 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 14:30
Pump Stop Time 15:25
Minutes of Pumping 55
Volume of Water Removed 2.50 gal
Did Well Go Dry? Y (N)

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

Water Quality Meter Type(s) / Serial Numbers: YSI 556 MPS #41 03M6230 AE
HACH 2100P 46500-00

| 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]* |
|---|---|---|---|---|---|---|---|---|---|
| 14:30 | 200 | INITIAL | 13.16 | - | - | - | 35 | - | - |
| 14:35 | 150 | 0.20 | 13.16 | - | - | - | 30 | - | - |
| 14:40 | " | 0.40 | 13.16 | 14.59 | 6.20 | 1.420 | 19 | 3.69 | -73.3 |
| 14:45 | 100 | 0.53 | 13.16 | 14.36 | 6.58 | 1.473 | 15 | 0.91 | -65.0 |
| 14:50 | 125 | 0.70 | 13.16 | 14.55 | 6.44 | 1.473 | 10 | 0.54 | -62.9 |
| 14:55 | 160 | 0.90 | 13.21 | 14.81 | 6.42 | 1.474 | 7 | 0.45 | -59.1 |
| 15:00 | " | 1.10 | 13.16 | 14.92 | 6.41 | 1.477 | 5 | 0.38 | -61.3 |
| 15:05 | " | 1.29 | 13.16 | 14.88 | 6.41 | 1.479 | 4 | 0.33 | -61.6 |

* 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 RISER - 5" BGS. REFERENCE POINT NOT MARKED. Initial Purge - Clear, no odor. Connected YSI @ 14:40

## SAMPLE DESTINATION

Laboratory: SGS
Delivered Via: UPS
Airbill #: —

Field Sampling Coordinator:

# GROUNDWATER SAMPLING LOG

Well No. GMA5-10

Site/GMA Name GMA5
Sampling Personnel EMC/DA
Date 11/3/08
Weather OVERCAST, 49°

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]* |
|---|---|---|---|---|---|---|---|---|---|
| 15:10 | 150 | 1.49 | ~~15:10~~ ~~15.05~~ | 15.03 | 6.40 | 1.478 | 4 | 0.29 | -60.3 |
| 15:15 | " | 2.89 | 13.16 | 15.00 | 6.39 | 1.477 | 3 | 0.29 | -57.7 |
| | 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, clear / NO ODOR.

ARCADIS

**Appendix B**

Validated Groundwater
Analytical Results – Fall 2008

**Table B-1**
**Fall 2008 Groundwater Analytical Results**

**Baseline Groundwater Quality and Interim Report for Fall 2008**
**Groundwater Management Area 5**
**General Electric Company - Pittsfield, Massachusetts**
**(Results are presented in parts per million, ppm)**

| Parameter / Sample ID: / Date Collected: | GMA5-4 10/30/08 | GMA5-7 10/30/08 | GMA5-9 10/30/08 | GMA5-10 11/03/08 |
|---|---|---|---|---|
| **Volatile Organics** | | | | |
| 1,1,1,2-Tetrachloroethane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| 1,1,1-Trichloroethane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| 1,1,2,2-Tetrachloroethane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| 1,1,2-Trichloroethane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| 1,1-Dichloroethane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| 1,1-Dichloroethene | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| 1,2,3-Trichloropropane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| 1,2-Dibromo-3-chloropropane | NA | ND(0.0050) J [ND(0.0050) J] | ND(0.0050) J | ND(0.0050) J |
| 1,2-Dibromoethane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| 1,2-Dichloroethane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| 1,2-Dichloropropane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| 1,4-Dioxane | NA | ND(0.10) J [ND(0.10) J] | ND(0.10) J | ND(0.10) J |
| 2-Butanone | NA | ND(0.0050) J [ND(0.0050) J] | ND(0.0050) J | ND(0.0050) J |
| 2-Chloro-1,3-butadiene | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| 2-Chloroethylvinylether | NA | ND(0.013) J [ND(0.013) J] | R | ND(0.013) J |
| 2-Hexanone | NA | ND(0.0050) [ND(0.0050)] | ND(0.0050) | ND(0.0050) |
| 3-Chloropropene | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| 4-Methyl-2-pentanone | NA | ND(0.0050) [ND(0.0050)] | ND(0.0050) | ND(0.0050) |
| Acetone | NA | ND(0.0050) J [ND(0.0050) J] | ND(0.0050) J | ND(0.0050) J |
| Acetonitrile | NA | ND(0.020) J [ND(0.020) J] | ND(0.020) J | ND(0.020) J |
| Acrolein | NA | ND(0.025) J [ND(0.025) J] | ND(0.025) J | ND(0.025) J |
| Acrylonitrile | NA | ND(0.025) J [ND(0.025) J] | ND(0.025) J | ND(0.025) J |
| Benzene | NA | 0.00010 J [0.000090 J] | ND(0.0010) | ND(0.0010) |
| Bromodichloromethane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Bromoform | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Bromomethane | NA | ND(0.0010) J [ND(0.0010) J] | ND(0.0010) J | ND(0.0010) J |
| Carbon Disulfide | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Carbon Tetrachloride | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Chlorobenzene | NA | 0.00071 J [0.00071 J] | ND(0.0010) | ND(0.0010) |
| Chloroethane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Chloroform | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Chloromethane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| cis-1,3-Dichloropropene | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Dibromochloromethane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Dibromomethane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Dichlorodifluoromethane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Ethyl Methacrylate | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Ethylbenzene | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Iodomethane | NA | ND(0.0010) J [ND(0.0010) J] | ND(0.0010) J | ND(0.0010) |
| Isobutanol | NA | ND(0.050) J [ND(0.050) J] | ND(0.050) J | ND(0.050) J |
| Methacrylonitrile | NA | ND(0.010) J [ND(0.010) J] | ND(0.010) J | ND(0.010) J |
| Methyl Methacrylate | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Methylene Chloride | NA | ND(0.0050) [ND(0.0050)] | ND(0.0050) | ND(0.0050) |
| Propionitrile | NA | ND(0.020) J [ND(0.020) J] | ND(0.020) J | ND(0.020) J |
| Styrene | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Tetrachloroethene | NA | 0.034 [0.034] | 0.026 | ND(0.0010) |
| Toluene | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| trans-1,2-Dichloroethene | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| trans-1,3-Dichloropropene | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| trans-1,4-Dichloro-2-butene | NA | ND(0.0050) J [ND(0.0050) J] | ND(0.0050) J | ND(0.0050) J |
| Trichloroethene | NA | 0.0014 [0.0014] | ND(0.0010) | ND(0.0010) |
| Trichlorofluoromethane | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Vinyl Acetate | NA | ND(0.0025) [ND(0.0025)] | ND(0.0025) | ND(0.0025) |
| Vinyl Chloride | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Xylenes (total) | NA | ND(0.0010) [ND(0.0010)] | ND(0.0010) | ND(0.0010) |
| Total VOCs | NA | 0.036 J [0.036 J] | 0.026 | ND(0.10) |
| **Inorganics-Filtered** | | | | |
| Cadmium | ND(0.0100) J [ND(0.0100) J] | NA | NA | NA |

**Table B-1**
**Fall 2008 Groundwater Analytical Results**

**Baseline Groundwater Quality and Interim Report for Fall 2008**
**Groundwater Management Area 5**
**General Electric Company - Pittsfield, Massachusetts**
**(Results are presented in parts per million, ppm)**

Notes:

1. Samples were collected by ARCADIS and submitted to SGS Environmental Services, Inc. for analysis of volatiles and cadmium (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)

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

Inorganics

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

ARCADIS

**Appendix C**

Data Validation Report –
Fall 2008

**Appendix C**
**Groundwater Sampling Data Validation Report**
**Groundwater Management Area 5 – Fall 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 October and November 2008 as part of groundwater sampling activities conducted at Groundwater Management Area 5, located at the General Electric Company/Housatonic River Site in Pittsfield, Massachusetts. The samples were analyzed for volatile organic compounds (VOCs) and metals listed in Appendix IX of 40 CFR Part 264, plus one additional constituent -- 2-chloroethyl vinyl ether (hereafter referred to as Appendix IX) by SGS Environmental Services, Inc. of Wilmington, North Carolina. Data validation was performed for six VOC samples and two metal samples.

## 2.0 Data Evaluation Procedures

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

- *Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP), General Electric Company, Pittsfield, Massachusetts,* ARCADIS BBL (submitted by GE on March 30, 2007 and approved by EPA on June 13, 2007)*;*

- *Region I Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses,* USEPA Region I (June 13, 1988) (Modified February 1989); 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 | |
| VOCs | 0 | 0 | 0 | 3 | 1 | 2 | 6 |
| Metals | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| **Total** | **0** | **0** | **0** | **4** | **1** | **3** | **8** |

When qualification of the sample data was required, the sample results associated with a QA/QC parameter deviation were qualified in accordance with the procedures outlined in EPA Region I data validation guidance documents. When the data validation process identified several quality control deficiencies, the cumulative effect of the various deficiencies was employed in assigning the final data qualifier. A summary of the QA/QC parameter deviations that resulted in data qualification is presented in Section 4 below.

## 4.0 Summary of QA/QC Parameter Deviations Requiring Data Qualification

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

The initial calibration criterion for organic analyses requires that the average relative response factor (RRF) has a value greater than 0.05. Sample results were qualified as estimated (J) when this criterion was not achieved. The compounds that did not achieve the initial calibration criterion and the number of samples qualified are presented in the following table.

**Compounds Qualified Due to Initial Calibration Deviations (RRF)**

| Analysis | Compound | Number of Affected Samples | Qualification |
|---|---|---|---|
| VOCs | 1,2-Dibromo-3-chloropropane | 6 | J |
| | 1,4-Dioxane | 6 | J |
| | 2-Butanone | 6 | J |
| | 2-Chloroethylvinylether | 5 | J |
| | Acetone | 6 | J |
| | Acetonitrile | 6 | J |
| | Acrolein | 6 | J |
| | Acrylonitrile | 6 | J |
| | Isobutanol | 6 | J |
| | Methacrylonitrile | 6 | J |
| | Propionitrile | 6 | J |
| | trans-1,4-Dichloro-2-butene | 6 | 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 | Acetone | 3 | J |
| | Acrolein | 6 | J |
| | Bromomethane | 6 | J |
| | Iodomethane | 3 | J |
| | Methacrylonitrile | 3 | J |

Matrix spike/matrix spike duplicate (MS/MSD) sample analysis recovery criteria for organics require that the MS/MSD recovery must be within the laboratory-generated QC control limits specified on the MS reporting form. Non-detect organic sample results that exhibited MS/MSD recoveries less than 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 Recovery Deviations**

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

Contract required detection limit (CRDL) standards were analyzed to evaluate instrument performance at low-level concentrations that are near the analytical method PQL. These standards are required to have recoveries between 80% and 120% to verify that the analytical instrumentation was properly calibrated. When CRDL standard recoveries were outside these control limits, the affected samples with detected results at or near the PQL concentration (i.e., less than three times the PQL) were qualified as estimated (J). The analyte that did not meet CRDL criteria and the number of samples qualified due to those deviations are presented in the following table.

**Analyte Qualified Due to CRDL Standard Recovery Deviations**

| Analysis | Analyte | Number of Affected Samples | Qualification |
|---|---|---|---|
| Inorganics | Cadmium | 2 | 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 |
|---|---|---|
| VOCs | 99.7 | A total of one sample result was rejected due to MS/MSD recovery deviations. |
| Metals | 100 | None |

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

## 5.1 Precision

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

## 5.2 Accuracy

Accuracy measures the bias in an analytical system or the degree of agreement of a measurement with a known reference value. For this investigation, accuracy was defined as the percent recovery of QA/QC samples that were spiked with a known concentration of an analyte or compound of interest. The QA/QC samples used to evaluate analytical accuracy included instrument calibration, internal standards, LCS/LCSDs, MS/MSD samples, CRDL samples, and surrogate compound recoveries. For this analytical program, 27.2% of the data required qualification due to instrument calibration deviations, 0.3% of the data required qualification due to MS/MSD recovery deviations, and 0.59% of the data required qualification due to CRDL sample recoveries. None of the data required qualification due to internal standard recovery deviations, LCS/LCSD recovery deviations, 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 October and November 2008 were analyzed by EPA SW-846 method 6010B for metals 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 5 Sampling - Fall 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | | | |
| G582-173 | GMA5-4 (Filtered) | 10/30/2008 | Water | Tier II | Yes | Cadmium | CRDL Standard %R | 73.6% | 80% to 120% | ND(0.0100) J | |
| G582-173 | GMA5-Dup-01 (Filtered) | 10/30/2008 | Water | Tier II | Yes | Cadmium | CRDL Standard %R | 73.6% | 80% to 120% | ND(0.0100) J | Parent Sample GMA5-4 (Filtered) |
| **VOCs** | | | | | | | | | | | |
| G582-173 | GMA5-7 | 10/30/2008 | Water | Tier II | Yes | 1,2-Dibromo-3-chloropropane | ICAL RRF | 0.019 | >0.05 | ND(0.0050) J | |
| | | | | | | 1,4-Dioxane | ICAL RRF | 0.001 | >0.05 | ND(0.10) J | |
| | | | | | | 2-Butanone | ICAL RRF | 0.047 | >0.05 | ND(0.0050) J | |
| | | | | | | 2-Chloroethylvinylether | ICAL RRF | 0.027 | >0.05 | ND(0.013) J | |
| | | | | | | Acetone | ICAL RRF | 0.032 | >0.05 | ND(0.0050) J | |
| | | | | | | Acetone | CCAL %D | 28.1% | <25% | ND(0.0050) J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.009 | >0.05 | ND(0.020) J | |
| | | | | | | Acrolein | ICAL RRF | 0.023 | >0.05 | ND(0.025) J | |
| | | | | | | Acrolein | CCAL %D | 39.1% | <25% | ND(0.025) J | |
| | | | | | | Acrylonitrile | ICAL RRF | 0.040 | >0.05 | ND(0.025) J | |
| | | | | | | Bromomethane | CCAL %D | 44.3% | <25% | ND(0.0010) J | |
| | | | | | | Iodomethane | CCAL %D | 26.6% | <25% | ND(0.0010) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.003 | >0.05 | ND(0.050) J | |
| | | | | | | Methacrylonitrile | ICAL RRF | 0.010 | >0.05 | ND(0.010) J | |
| | | | | | | Propionitrile | ICAL RRF | 0.012 | >0.05 | ND(0.020) J | |
| | | | | | | trans-1,4-Dichloro-2-butene | ICAL RRF | 0.028 | >0.05 | ND(0.0050) J | |
| G582-173 | GMA5-9 | 10/30/2008 | Water | Tier II | Yes | 1,2-Dibromo-3-chloropropane | ICAL RRF | 0.019 | >0.05 | ND(0.0050) J | |
| | | | | | | 1,4-Dioxane | ICAL RRF | 0.001 | >0.05 | ND(0.10) J | |
| | | | | | | 2-Butanone | ICAL RRF | 0.047 | >0.05 | ND(0.0050) J | |
| | | | | | | 2-Chloroethylvinylether | MS/MSD %R | 0.0%, 0.0% | 16.7% to 200% | R | |
| | | | | | | Acetone | ICAL RRF | 0.032 | >0.05 | ND(0.0050) J | |
| | | | | | | Acetone | CCAL %D | 28.1% | <25% | ND(0.0050) J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.009 | >0.05 | ND(0.020) J | |
| | | | | | | Acrolein | ICAL RRF | 0.023 | >0.05 | ND(0.025) J | |
| | | | | | | Acrolein | CCAL %D | 39.1% | <25% | ND(0.025) J | |
| | | | | | | Acrylonitrile | ICAL RRF | 0.040 | >0.05 | ND(0.025) J | |
| | | | | | | Bromomethane | CCAL %D | 44.3% | <25% | ND(0.0010) J | |
| | | | | | | Iodomethane | CCAL %D | 26.6% | <25% | ND(0.0010) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.003 | >0.05 | ND(0.050) J | |
| | | | | | | Methacrylonitrile | ICAL RRF | 0.010 | >0.05 | ND(0.010) J | |
| | | | | | | Propionitrile | ICAL RRF | 0.012 | >0.05 | ND(0.020) J | |
| | | | | | | trans-1,4-Dichloro-2-butene | ICAL RRF | 0.028 | >0.05 | ND(0.0050) J | |
| G582-173 | GMA5-Dup-02 | 10/30/2008 | Water | Tier II | Yes | 1,2-Dibromo-3-chloropropane | ICAL RRF | 0.019 | >0.05 | ND(0.0050) J | Parent Sample GMA5-7 |
| | | | | | | 1,4-Dioxane | ICAL RRF | 0.001 | >0.05 | ND(0.10) J | |
| | | | | | | 2-Butanone | ICAL RRF | 0.047 | >0.05 | ND(0.0050) J | |
| | | | | | | 2-Chloroethylvinylether | ICAL RRF | 0.027 | >0.05 | ND(0.013) J | |
| | | | | | | Acetone | ICAL RRF | 0.032 | >0.05 | ND(0.0050) J | |
| | | | | | | Acetone | CCAL %D | 28.1% | <25% | ND(0.0050) J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.009 | >0.05 | ND(0.020) J | |
| | | | | | | Acrolein | ICAL RRF | 0.023 | >0.05 | ND(0.025) J | |
| | | | | | | Acrolein | CCAL %D | 39.1% | <25% | ND(0.025) J | |
| | | | | | | Acrylonitrile | ICAL RRF | 0.040 | >0.05 | ND(0.025) J | |
| | | | | | | Bromomethane | CCAL %D | 44.3% | <25% | ND(0.0010) J | |
| | | | | | | Iodomethane | CCAL %D | 26.6% | <25% | ND(0.0010) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.003 | >0.05 | ND(0.050) J | |
| | | | | | | Methacrylonitrile | ICAL RRF | 0.010 | >0.05 | ND(0.010) J | |
| | | | | | | Propionitrile | ICAL RRF | 0.012 | >0.05 | ND(0.020) J | |
| | | | | | | trans-1,4-Dichloro-2-butene | ICAL RRF | 0.028 | >0.05 | ND(0.0050) J | |
| G582-188 | GMA5-10 | 11/3/2008 | Water | Tier II | Yes | 1,2-Dibromo-3-chloropropane | ICAL RRF | 0.019 | >0.05 | ND(0.0050) J | |
| | | | | | | 1,4-Dioxane | ICAL RRF | 0.001 | >0.05 | ND(0.10) J | |
| | | | | | | 2-Butanone | ICAL RRF | 0.047 | >0.05 | ND(0.0050) J | |
| | | | | | | 2-Chloroethylvinylether | ICAL RRF | 0.027 | >0.05 | ND(0.013) J | |
| | | | | | | Acetone | ICAL RRF | 0.032 | >0.05 | ND(0.0050) J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.009 | >0.05 | ND(0.020) J | |
| | | | | | | Acrolein | ICAL RRF | 0.023 | >0.05 | ND(0.025) J | |
| | | | | | | Acrolein | CCAL %D | 34.8% | <25% | ND(0.025) J | |
| | | | | | | Acrylonitrile | ICAL RRF | 0.040 | >0.05 | ND(0.025) J | |
| | | | | | | Bromomethane | CCAL %D | 40.0% | <25% | ND(0.0010) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.003 | >0.05 | ND(0.050) J | |
| | | | | | | Methacrylonitrile | ICAL RRF | 0.010 | >0.05 | ND(0.010) J | |
| | | | | | | Methacrylonitrile | CCAL %D | 30.0% | <25% | ND(0.010) J | |
| | | | | | | Propionitrile | ICAL RRF | 0.012 | >0.05 | ND(0.020) J | |
| | | | | | | trans-1,4-Dichloro-2-butene | ICAL RRF | 0.028 | >0.05 | ND(0.0050) J | |

**Table C-1**
**Analytical Data Validation Summary**
**Groundwater Management Area 5 Sampling - Fall 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)** | | | | | | | | | | | |
| G582-188 | GMA-5-RB-1 | 11/4/2008 | Water | Tier II | Yes | 1,2-Dibromo-3-chloropropane | ICAL RRF | 0.019 | >0.05 | ND(0.0050) J | |
| | | | | | | 1,4-Dioxane | ICAL RRF | 0.001 | >0.05 | ND(0.10) J | |
| | | | | | | 2-Butanone | ICAL RRF | 0.047 | >0.05 | ND(0.0050) J | |
| | | | | | | 2-Chloroethylvinylether | ICAL RRF | 0.027 | >0.05 | ND(0.013) J | |
| | | | | | | Acetone | ICAL RRF | 0.032 | >0.05 | ND(0.0050) J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.009 | >0.05 | ND(0.020) J | |
| | | | | | | Acrolein | ICAL RRF | 0.023 | >0.05 | ND(0.025) J | |
| | | | | | | Acrolein | CCAL %D | 34.8% | <25% | ND(0.025) J | |
| | | | | | | Acrylonitrile | ICAL RRF | 0.040 | >0.05 | ND(0.025) J | |
| | | | | | | Bromomethane | CCAL %D | 40.0% | <25% | ND(0.0010) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.003 | >0.05 | ND(0.050) J | |
| | | | | | | Methacrylonitrile | ICAL RRF | 0.010 | >0.05 | ND(0.010) J | |
| | | | | | | Methacrylonitrile | CCAL %D | 30.0% | <25% | ND(0.010) J | |
| | | | | | | Propionitrile | ICAL RRF | 0.012 | >0.05 | ND(0.020) J | |
| | | | | | | trans-1,4-Dichloro-2-butene | ICAL RRF | 0.028 | >0.05 | ND(0.0050) J | |
| G582-188 | Trip Blank | 11/3/2008 | Water | Tier II | Yes | 1,2-Dibromo-3-chloropropane | ICAL RRF | 0.019 | >0.05 | ND(0.0050) J | |
| | | | | | | 1,4-Dioxane | ICAL RRF | 0.001 | >0.05 | ND(0.10) J | |
| | | | | | | 2-Butanone | ICAL RRF | 0.047 | >0.05 | ND(0.0050) J | |
| | | | | | | 2-Chloroethylvinylether | ICAL RRF | 0.027 | >0.05 | ND(0.013) J | |
| | | | | | | Acetone | ICAL RRF | 0.032 | >0.05 | ND(0.0050) J | |
| | | | | | | Acetonitrile | ICAL RRF | 0.009 | >0.05 | ND(0.020) J | |
| | | | | | | Acrolein | ICAL RRF | 0.023 | >0.05 | ND(0.025) J | |
| | | | | | | Acrolein | CCAL %D | 34.8% | <25% | ND(0.025) J | |
| | | | | | | Acrylonitrile | ICAL RRF | 0.040 | >0.05 | ND(0.025) J | |
| | | | | | | Bromomethane | CCAL %D | 40.0% | <25% | ND(0.0010) J | |
| | | | | | | Isobutanol | ICAL RRF | 0.003 | >0.05 | ND(0.050) J | |
| | | | | | | Methacrylonitrile | ICAL RRF | 0.010 | >0.05 | ND(0.010) J | |
| | | | | | | Methacrylonitrile | CCAL %D | 30.0% | <25% | ND(0.010) J | |
| | | | | | | Propionitrile | ICAL RRF | 0.012 | >0.05 | ND(0.020) J | |
| | | | | | | trans-1,4-Dichloro-2-butene | ICAL RRF | 0.028 | >0.05 | ND(0.0050) J | |

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**Appendix D**

Historical Groundwater Data

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Groundwater Elevation and Surface Water Monitoring Data – Fall 2008

**Table D-1**
**Groundwater Elevation Monitoring Data**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 2008**
**General Electric Company - Pittsfield, Massachusetts**

| Well Name | Measuring Point Elevation (feet AMSL) | Date | Depth to Water (feet BMP) | Corrected Water Elevation (feet AMSL) |
|---|---|---|---|---|
| **GMA 5 - Former Oxbow Area A** | | | | |
| GMA 5-1 | 984.82 | 10/30/2008 | 9.45 | 975.37 |
| GMA 5-3 | 989.14 | 10/30/2008 | 16.91 | 972.23 |
| GMA 5-4 | 979.10 | 10/30/2008 | 8.20 | 970.90 |
| GMA 5-7 | 986.75 | 10/30/2008 | 12.78 | 973.97 |
| GMA 5-8 | 984.69 | 10/30/2008 | 11.20 | 973.49 |
| GMA 5-9 | 989.42 | 10/30/2008 | 14.21 | 975.21 |
| GMA 5-10 | 987.11 | 10/30/2008 | 13.07 | 974.04 |
| GMA 5-10 | 987.11 | 11/3/2008 | 13.06 | 974.05 |
| **Elm Street Mobil Monitoring Wells (Adjacent to GMA 5)** | | | | |
| GT-7 | 989.76 | 10/30/2008 | 16.03 | 973.73 |
| GT-101 | 989.68 | 10/30/2008 | 17.07 | 972.61 |
| **Housatonic River (Lyman St. Bridge)** | | | | |
| BM-2A | 986.32 | 5/7/2008 | 16.13 | 970.19 |
| BM-2A | 986.32 | 5/14/2008 | 16.20 | 970.12 |
| BM-2A | 986.32 | 5/19/2008 | 15.95 | 970.37 |
| BM-2A | 986.32 | 5/27/2008 | 16.44 | 969.88 |
| BM-2A | 986.32 | 6/2/2008 | 16.38 | 969.94 |
| BM-2A | 986.32 | 6/10/2008 | 16.20 | 970.12 |
| BM-2A | 986.32 | 6/18/2008 | 15.70 | 970.62 |
| BM-2A | 986.32 | 6/25/2008 | 15.75 | 970.57 |
| BM-2A | 986.32 | 7/2/2008 | 16.40 | 969.92 |
| BM-2A | 986.32 | 7/9/2008 | 16.46 | 969.86 |
| BM-2A | 986.32 | 7/15/2008 | 16.50 | 969.82 |
| BM-2A | 986.32 | 7/21/2008 | 16.52 | 969.80 |
| BM-2A | 986.32 | 7/30/2008 | 15.98 | 970.34 |
| BM-2A | 986.32 | 8/6/2008 | 16.45 | 969.87 |
| BM-2A | 986.32 | 8/13/2008 | 15.60 | 970.72 |
| BM-2A | 986.32 | 8/20/2008 | 16.55 | 969.77 |
| BM-2A | 986.32 | 8/27/2008 | 16.64 | 969.68 |
| BM-2A | 986.32 | 9/3/2008 | 16.60 | 969.72 |
| BM-2A | 986.32 | 9/10/2008 | 15.90 | 970.42 |
| BM-2A | 986.32 | 9/17/2008 | 16.26 | 970.06 |
| BM-2A | 986.32 | 9/26/2008 | 16.31 | 970.01 |
| BM-2A | 986.32 | 10/1/2008 | 16.15 | 970.17 |
| BM-2A | 986.32 | 10/8/2008 | 16.40 | 969.92 |
| BM-2A | 986.32 | 10/15/2008 | 16.46 | 969.86 |
| BM-2A | 986.32 | 10/16/2008 | 16.53 | 969.79 |
| BM-2A | 986.32 | 10/21/2008 | 16.42 | 969.90 |
| BM-2A | 986.32 | 10/23/2008 | 16.30 | 970.02 |
| BM-2A | 986.32 | 10/27/2008 | 14.90 | 971.42 |
| BM-2A | 986.32 | 10/28/2008 | 15.05 | 971.27 |
| BM-2A | 986.32 | 10/29/2008 | 13.76 | 972.56 |
| BM-2A | 986.32 | 10/30/2008 | 14.95 | 971.37 |

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 BM-2A. The "Depth to Water" value(s) provided in the above table refer to the vertical distance from the surveyed reference point to the water surface.

**Table D-2**
**East Branch Housatonic River at Coltsville, MA River Discharge**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 2008**
**General Electric Company - Pittsfield, Massachusetts**

| Date | Maximum Discharge (cfs) | Minimum Discharge (cfs) | Comments |
|---|---|---|---|
| 5/7/2008 | 111 | 93 | BM-2A Measured |
| 5/14/2008 | 74 | 64 | BM-2A Measured |
| 5/19/2008 | 122 | 102 | BM-2A Measured |
| 5/27/2008 | 61 | 49 | BM-2A Measured |
| 6/2/2008 | 58 | 47 | BM-2A Measured |
| 6/10/2008 | 100 | 82 | BM-2A Measured |
| 6/18/2008 | 188 | 130 | BM-2A Measured |
| 6/25/2008 | 188 | 145 | BM-2A Measured |
| 7/2/2008 | 74 | 53 | BM-2A Measured |
| 7/9/2008 | 122 | 40 | BM-2A Measured |
| 7/15/2008 | 40 | 35 | BM-2A Measured |
| 7/21/2008 | 43 | 37 | BM-2A Measured |
| 7/30/2008 | 140 | 93 | BM-2A Measured |
| 8/6/2008 | 89 | 66 | BM-2A Measured |
| 8/13/2008 | 225 | 198 | BM-2A Measured |
| 8/20/2008 | 42 | 38 | BM-2A Measured |
| 8/27/2008 | 28 | 24 | BM-2A Measured |
| 9/3/2008 | 66 | 17 | BM-2A Measured |
| 9/10/2008 | 162 | 117 | BM-2A Measured |
| 9/17/2008 | 67 | 61 | BM-2A Measured |
| 9/26/2008 | 86 | 25 | BM-2A Measured |
| 10/1/2008 | 96 | 86 | BM-2A Measured |
| 10/8/2008 | 47 | 43 | BM-2A Measured |
| 10/15/2008 | 47 | 35 | BM-2A Measured |
| 10/16/2008 | 40 | 33 | BM-2A Measured |
| 10/21/2008 | 38 | 31 | BM-2A Measured |
| 10/23/2008 | 61 | 54 | BM-2A Measured |
| 10/27/2008 | 355 | 215 | BM-2A Measured |
| 10/28/2008 | 496 | 215 | BM-2A Measured |
| 10/29/2008 | 478 | 394 | BM-2A Measured |
| 10/30/2008 | 398 | 266 | Fall 08 Monitoring Round/ GMA5-4 and GMA5-7 Sampling |
| 11/3/2008 | 142 | 132 | GMA5-10 Sampling |

Notes:

1. 1. ft BMP - feet Below Measuring Point.
2. Coltsville mean flow for the 10/30/08 Fall 2008 Monitoring/Sampling round was 324 cubic feet per second (cfs).

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Summary of Historical Groundwater Analytical Results – Selected Wells

**Table D-3**
**Historical Groundwater Analytical Results For Cadmium - Well GMA5-4**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 2008**
**General Electric Company - Pittsfield, Massachusetts**
**(Results are presented in parts per million, ppm)**

| Parameter / Sample ID: / Date Collected: | GMA5-4 05/02/02 | GMA5-4 10/17/02 | GMA5-4 04/30/03 | GMA5-4 10/22/03 |
|---|---|---|---|---|
| **Inorganics-Filtered** | | | | |
| Cadmium | ND(0.0100) | ND(0.00500) | ND(0.00500) | ND(0.00500) |

| Parameter / Sample ID: / Date Collected: | GMA5-4 11/15/06 | GMA5-4 11/15/07 | GMA5-4 05/15/08 | GMA5-4 10/30/08 |
|---|---|---|---|---|
| **Inorganics-Filtered** | | | | |
| Cadmium | 0.00411 J | ND(0.0100) | ND(0.0100) [ND(0.0100)] | ND(0.0100) [ND(0.0100)] |

Notes:

1. Samples were collected by ARCADIS between 2007and 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 fall 2008 sampling event are summarized.
5. Field duplicate sample results are presented in brackets.
6. J - Indicates that the associated numerical value is an estimated concentration.

**Table D-4**
**Historical Groundwater Analytical Results For VOCs - Well GMA5-7**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 2008**
**General Electric Company - Pittsfield, Massachusetts**
**(Results are presented in parts per million, ppm)**

| Parameter / Sample ID: / Date Collected: | GMA5-7 04/16/02 | GMA5-7 10/17/02 | GMA5-7 04/30/03 | GMA5-7 10/21/03 | GMA5-7 05/11/04 |
|---|---|---|---|---|---|
| **Volatile Organics** | | | | | |
| Acetone | ND (0.010) J | ND(0.010) | 0.014 | ND(0.010) | ND(0.010) J |
| Benzene | ND(0.0050) | ND(0.0050) | ND(0.0050) | ND(0.0050) | ND(0.0050) |
| Chlorobenzene | ND(0.0050) | ND(0.0050) | ND(0.0050) | ND(0.0050) | ND(0.0050) |
| Ethylbenzene | ND(0.0050) | ND(0.0050) | ND(0.0050) | ND(0.0050) | ND(0.0050) |
| Tetrachloroethene | 0.018 | 0.0045 | 0.020 | 0.024 | 0.034 |
| Toluene | ND(0.0050) | ND(0.0050) | ND(0.0050) | 0.0011 J | ND(0.0050) |
| trans-1,2-Dichloroethene | ND(0.0050) | ND(0.0050) | ND(0.0050) | 0.00082 J | ND(0.0050) |
| Trichloroethene | ND(0.0050) | ND(0.0050) | 0.0067 | 0.0029 J | ND(0.0050) |
| Vinyl Chloride | ND(0.0020) | ND(0.0020) | ND(0.0020) | 0.0029 | ND(0.0020) |
| Total VOCs | 0.018 | 0.0045 | 0.041 | 0.032 J | 0.034 |

| Parameter / Sample ID: / Date Collected: | GMA5-7 04/12/06 | GMA5-7 10/27/06 | GMA5-7 11/15/07 | GMA5-7 05/15/08 | GMA5-7 10/30/08 |
|---|---|---|---|---|---|
| **Volatile Organics** | | | | | |
| Acetone | ND(0.010) | ND(0.0050) | ND(0.0050) J | ND(0.0050) J | ND(0.0050) [ND(0.0050)] |
| Benzene | ND(0.0050) | ND(0.0010) | ND(0.0010) | ND(0.0010) | 0.00010 J [0.000090 J] |
| Chlorobenzene | ND(0.0050) | ND(0.0010) | ND(0.0010) | ND(0.0010) | 0.00071 J [0.00071 J] |
| Ethylbenzene | ND(0.0050) | ND(0.0010) | 0.00023 J | 0.00018 J | ND(0.0010) [ND(0.0010)] |
| Tetrachloroethene | 0.062 | 0.046 | 0.024 | 0.037 | 0.034 [0.034] |
| Toluene | ND(0.0050) | ND(0.0010) | ND(0.0010) | ND(0.0010) | ND(0.0010) [ND(0.0010)] |
| trans-1,2-Dichloroethene | ND(0.0050) | ND(0.0010) | 0.0011 | 0.00080 J | ND(0.0010) [ND(0.0010)] |
| Trichloroethene | 0.0023 J | 0.0023 | 0.0031 | 0.0028 | 0.0014 [0.0014] |
| Vinyl Chloride | ND(0.0020) | ND(0.0010) | 0.00061 J | 0.00059 J | ND(0.0010) [ND(0.0010)] |
| Total VOCs | 0.064 J | 0.048 | 0.029 J | 0.041 J | 0.036 J [0.036 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 fall 2008 sampling event are summarized.
5. Field duplicate sample results are presented in brackets.
6. J - Indicates that the associated numerical value is an estimated concentration.

**Table D-5**
**Historical Groundwater Analytical Results For VOCs - Well GMA5-9**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 2008**
**General Electric Company - Pittsfield, Massachusetts**
**(Results are presented in parts per million, ppm)**

| Parameter / Sample ID: / Date Collected: | GMA5-9 12/17/07 | GMA5-9 05/16/08 | GMA5-9 10/30/08 |
|---|---|---|---|
| **Volatile Organics** | | | |
| Chlorobenzene | ND(0.0010) | 0.00011 J [ND(0.0010)] | ND(0.0010) |
| Tetrachloroethene | 0.022 | 0.021 [0.020] | 0.026 |
| Total VOCs | 0.022 | 0.021 [0.020] | 0.026 |

Notes:

1. Samples were collected by ARCADIS between 2007and 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 fall 2008 sampling event are summarized.
5. Field duplicate sample results are presented in brackets.
6. J - Indicates that the associated numerical value is an estimated concentration.

**Table D-6**
**Historical Groundwater Analytical Results For VOCs - Well GMA5-10**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 2008**
**General Electric Company - Pittsfield, Massachusetts**
**(Results are presented in parts per million, ppm)**

| Parameter / Sample ID: / Date Collected: | GMA5-10 12/18/07 | GMA5-10 05/16/08 | GMA5-10 11/03/08 |
|---|---|---|---|
| **Volatile Organics** | | | |
| Toluene | 0.00016 J [0.00035 J] | ND(0.0010) | ND(0.0010) |
| Total VOCs | 0.00016 J [0.00035 J] | ND(0.10) | ND(0.10) |

Notes:

1. Samples were collected by ARCADIS between 2007and 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
3. Plan.
4. ND - Analyte was not detected. The number in parenthesis is the associated detection limit.
5. Only constituents which were detected during at least one prior sampling event and were analyzed for during the fall 2008 sampling event are summarized.
6. Toluene was detected in duplicate samples analyzed during the December 2007 sampling event, which was the only sampling event where VOCs were detected in this well. The minimum and maximum detected concentrations represent the duplicate sample results from that single sampling event.

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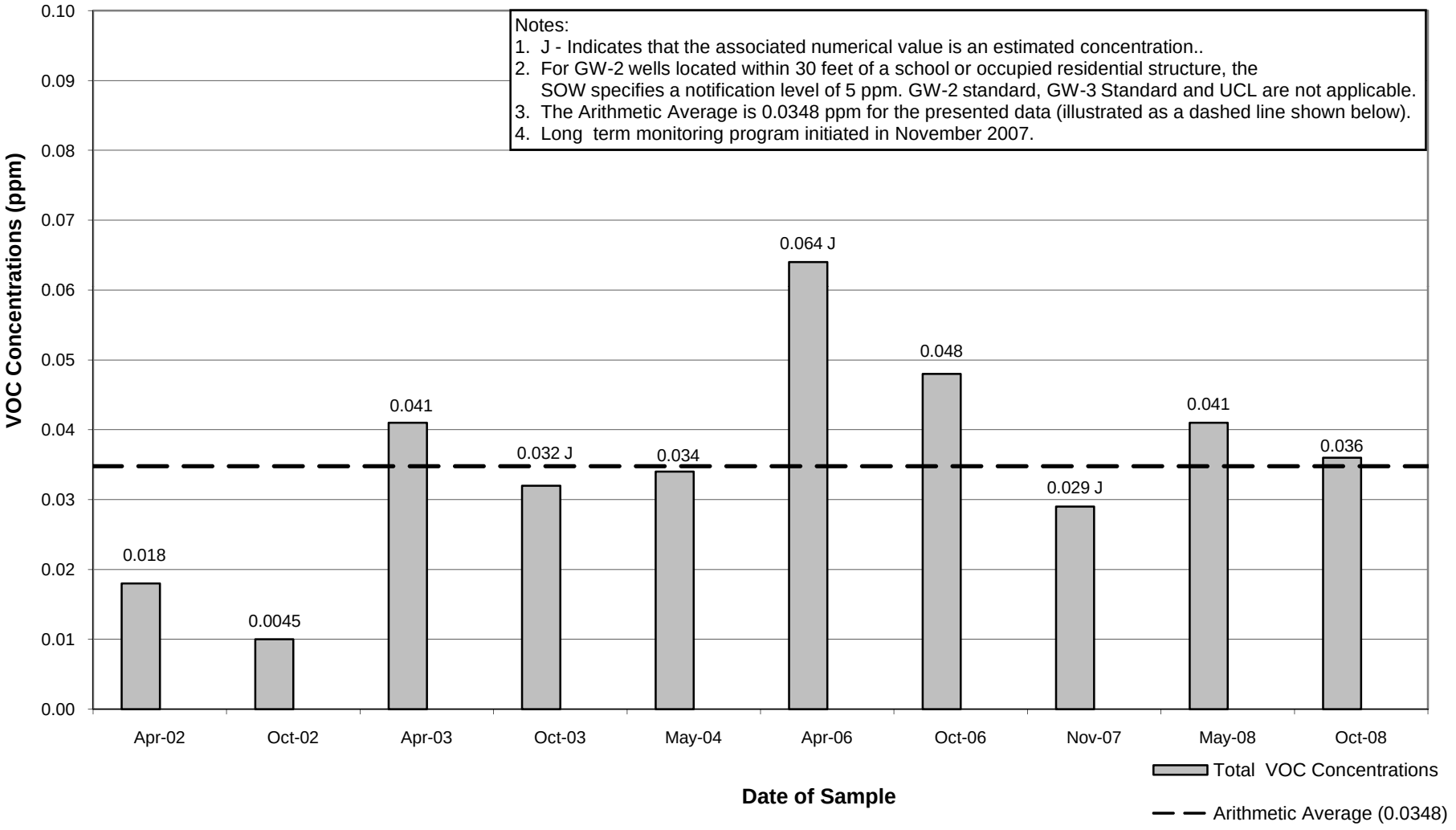
Total VOC Concentrations - Selected Wells

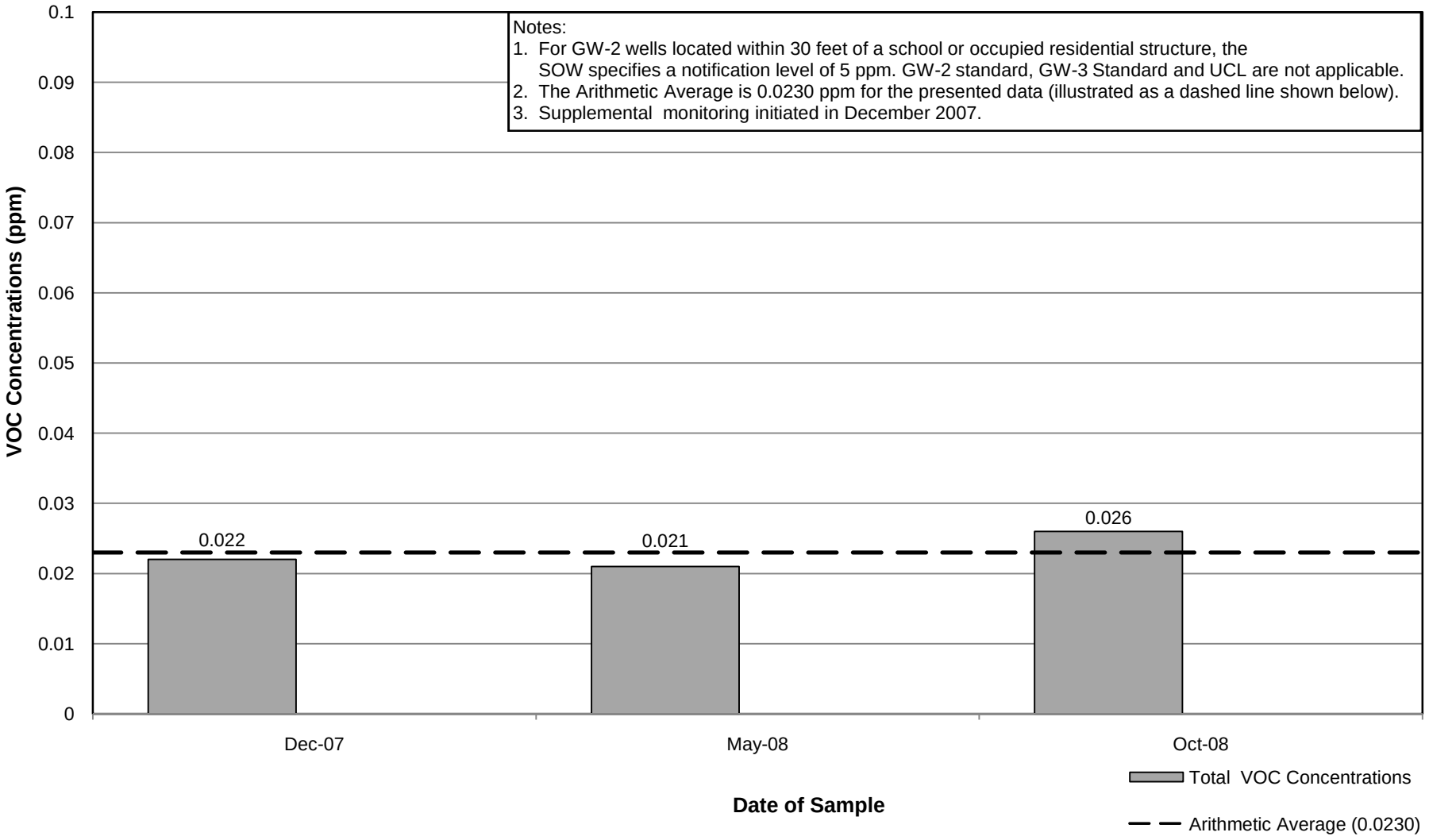
**Appendix D**
**Well GMA5-7 Historical Total VOC Concentrations**

**Groundwater Management Area 5**
**General Electric Company - Pittsfield, Massachusetts**



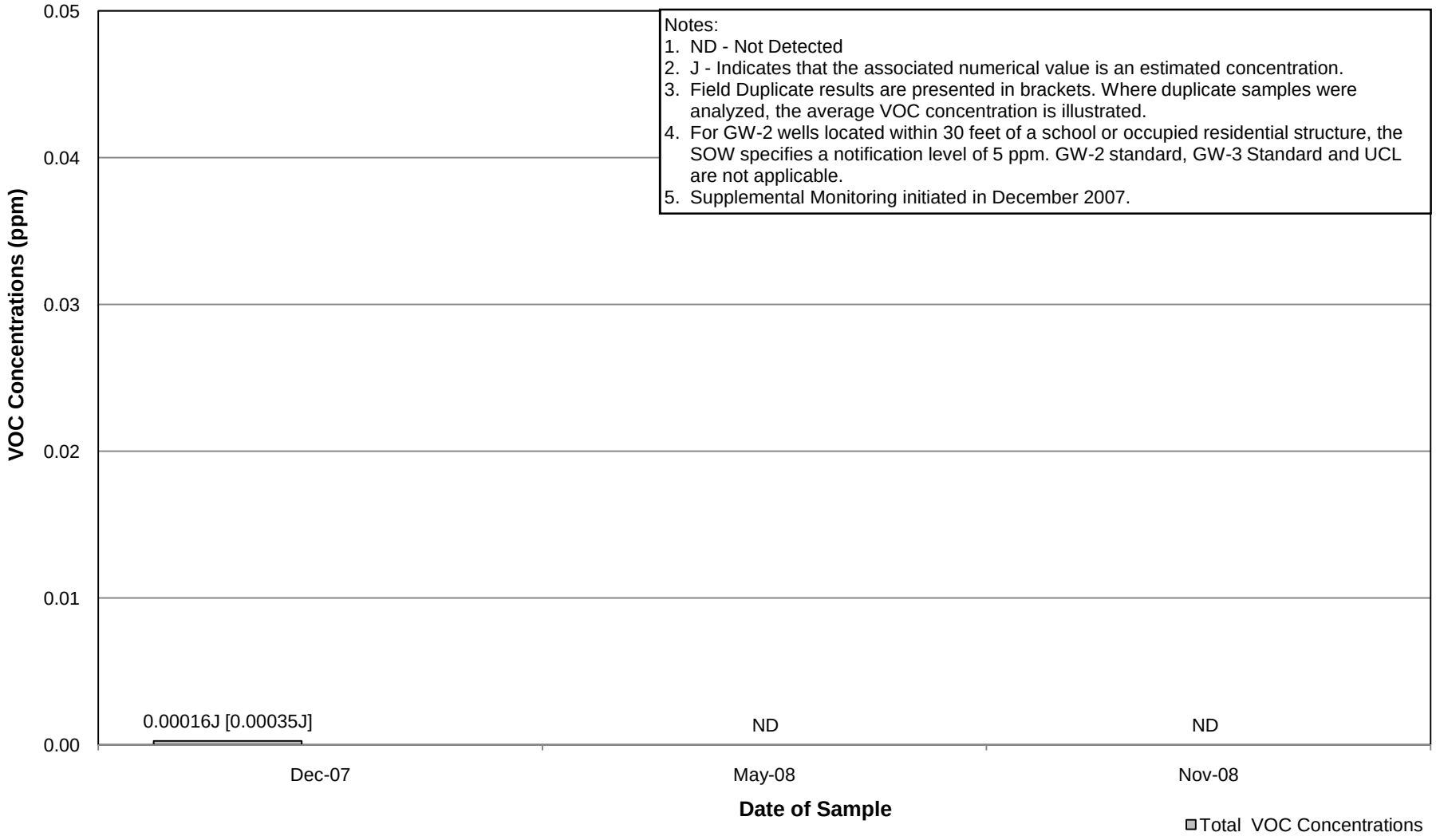
**Appendix D**
**Well GMA5-9 Historical Total VOC Concentrations**

**Groundwater Management Area 5**
**General Electric Company - Pittsfield, Massachusetts**



## Appendix D
## Well GMA5-10 Historical Total VOC Concentrations

## Groundwater Management Area 5
## General Electric Company - Pittsfield, Massachusetts



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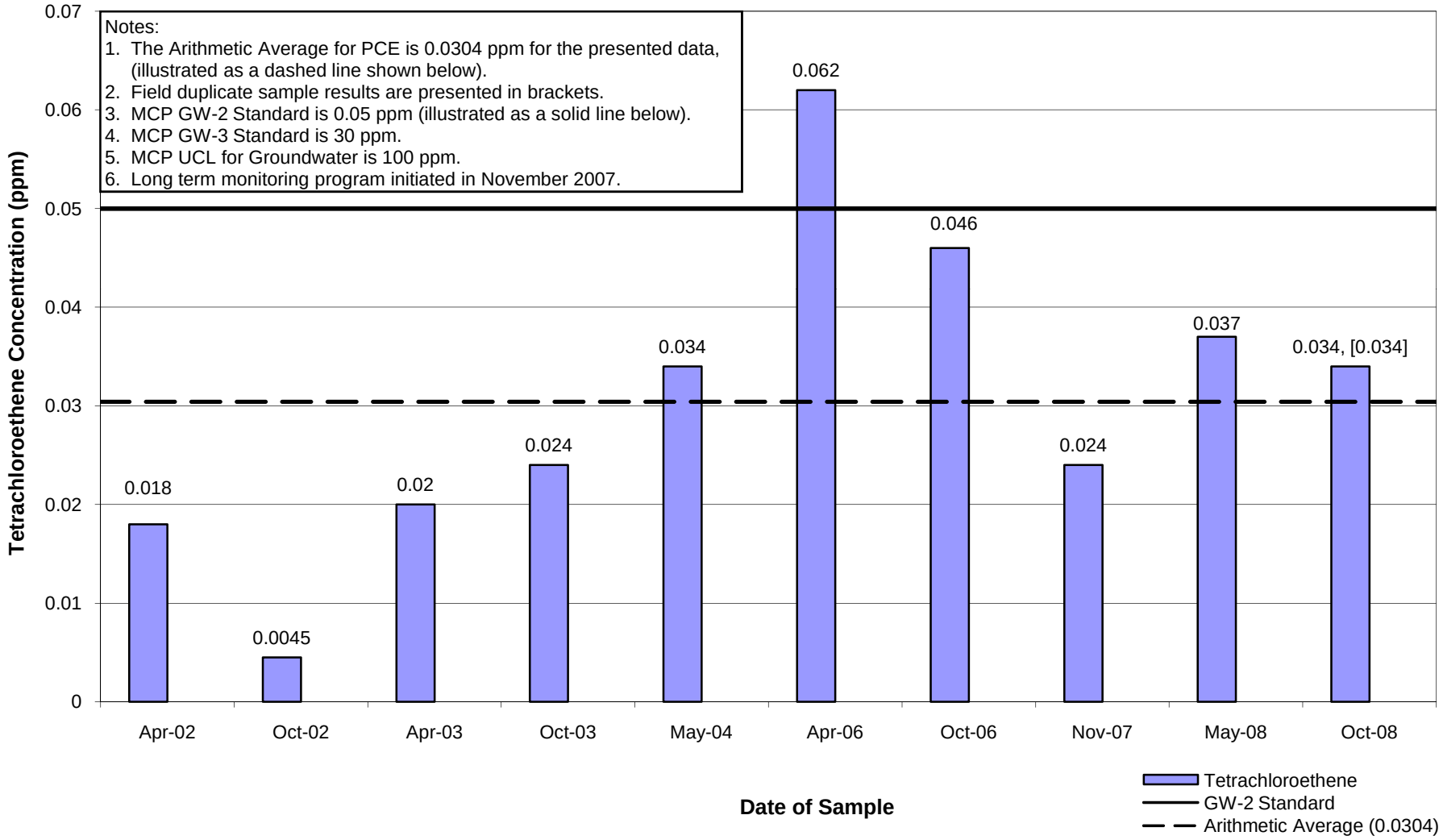
Tetrachloroethene Concentrations – Selected Wells

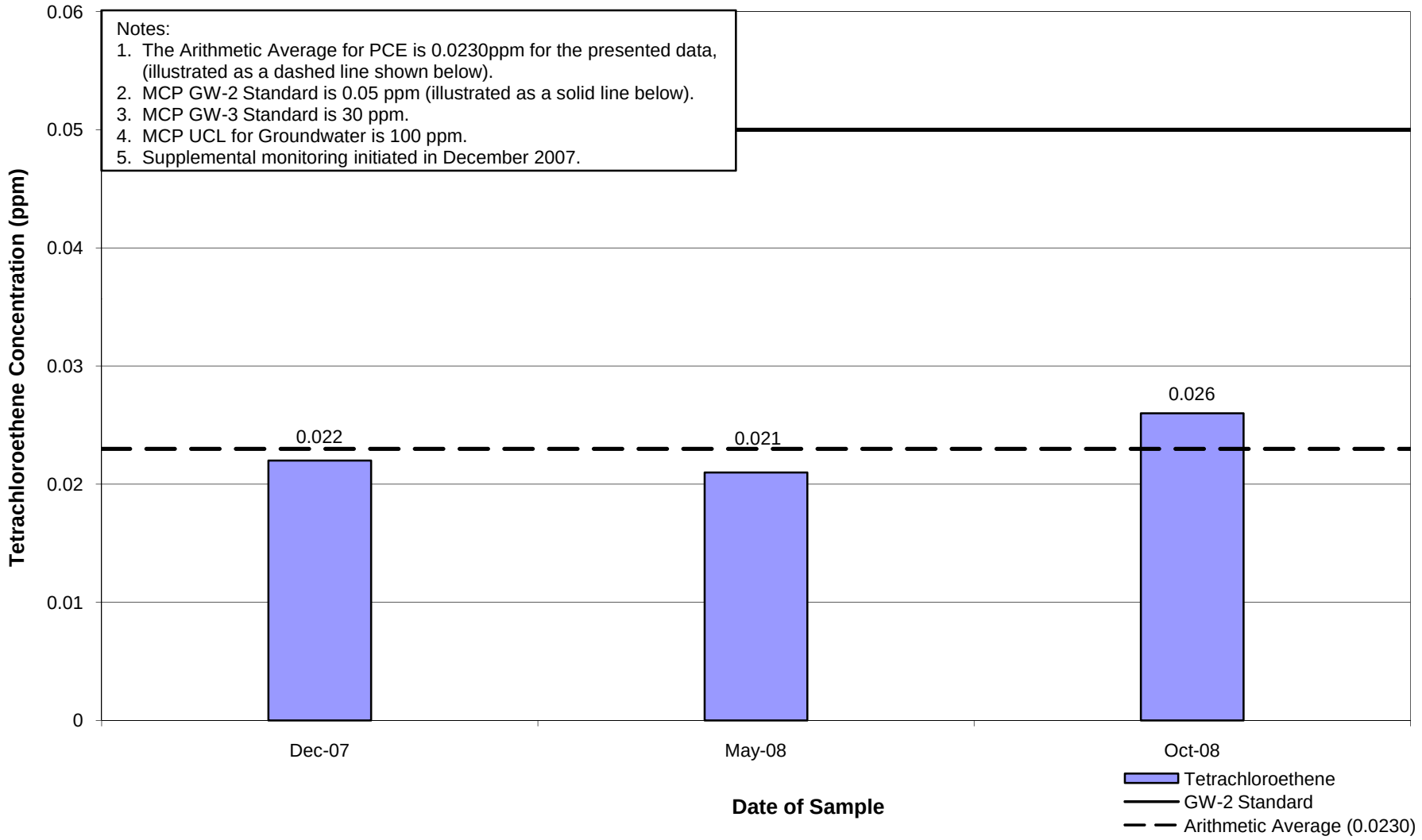
**Appendix D**
**Well GMA5-7 Historical Tetrachloroethene (PCE) Concentrations**

**Groundwater Management Area 5**
**General Electric Company - Pittsfield, Massachusetts**



## Appendix D
## Well GMA5-9 Historical Tetrachloroethene (PCE) Concentrations

## Groundwater Management Area 5
## General Electric Company - Pittsfield, Massachusetts



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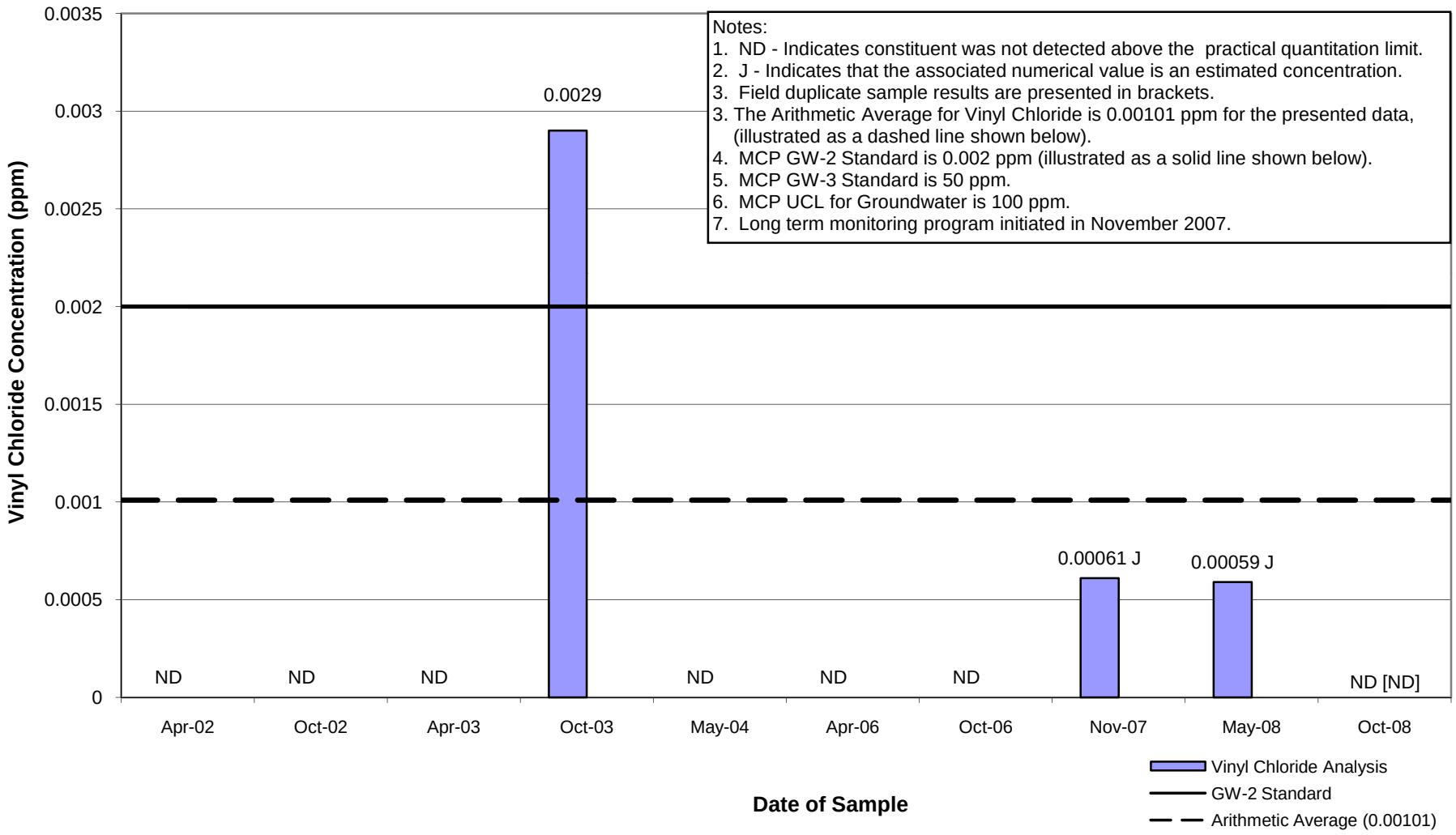
Vinyl Chloride Concentrations – Well GMA5-7

**Appendix D**
**Well GMA5-7 Historical Vinyl Chloride Concentrations**

**Groundwater Management Area 5**
**General Electric Company - Pittsfield, Massachusetts**



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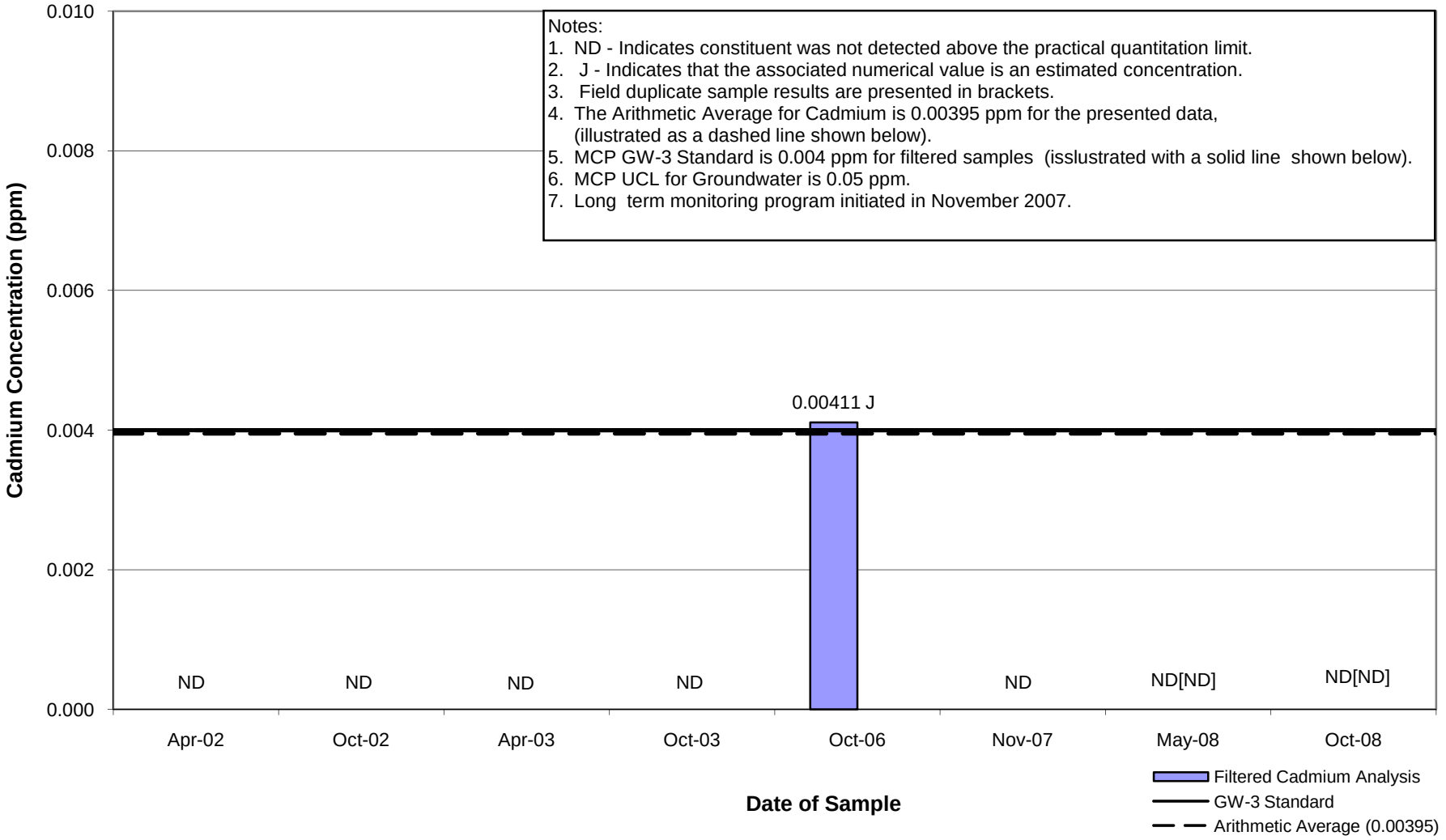
Cadmium Concentrations –
Well GMA5-4

**Appendix D**
**Well GMA5-4 Historical Cadmium Concentrations (Filtered Analysis)**

**Groundwater Management Area 5**
**General Electric Company - Pittsfield, Massachusetts**



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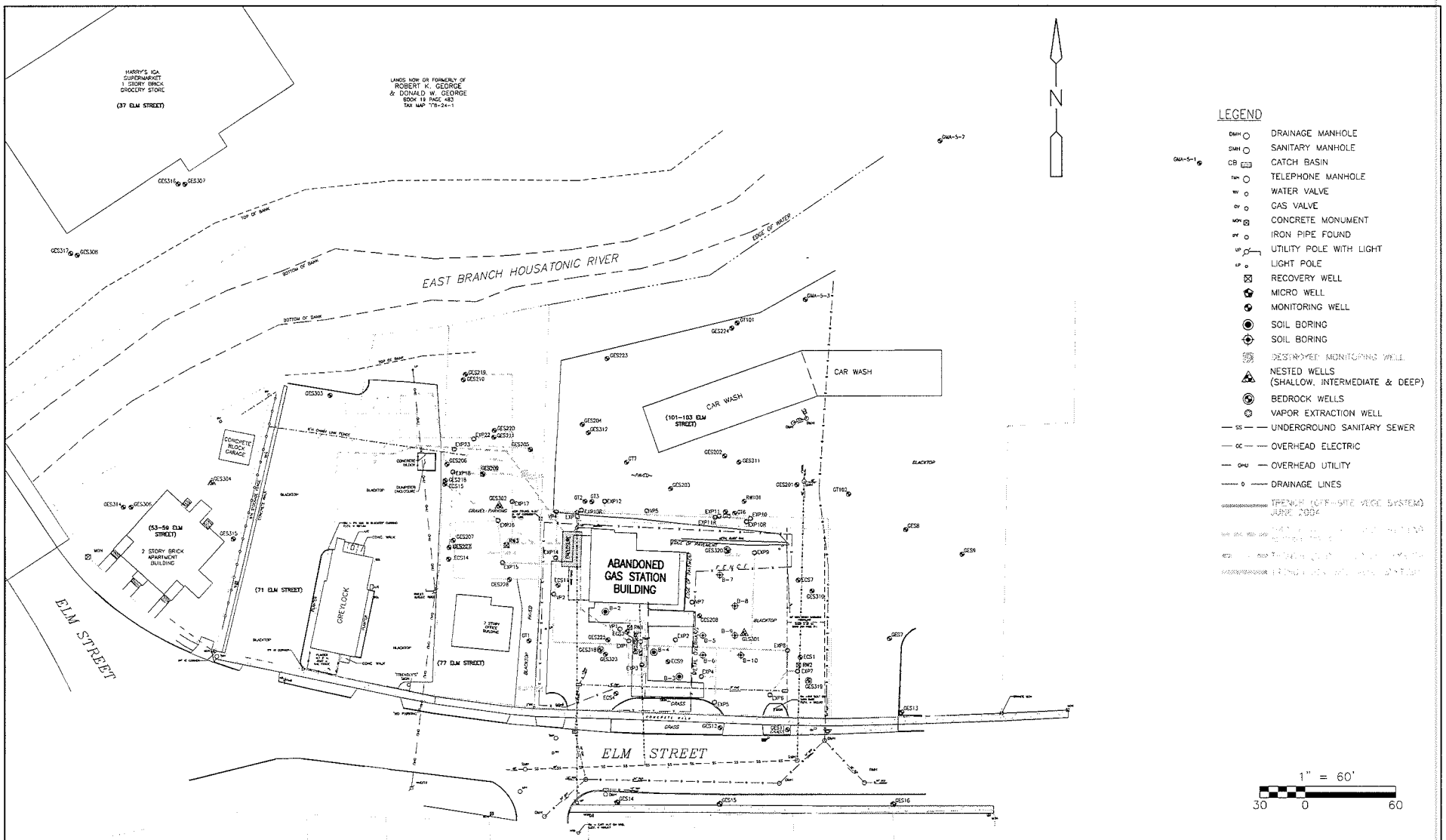
**Appendix E**

Monitoring Results for Adjacent MCP Disposal Site




FORMER MOBIL SERVICE STATION (#01-ECO)
83-89 ELM STREET
PITTSFIELD, MASSACHUSETTS

SITE PLAN

FIGURE 1-2

CDM

P:\20474\32302\01-ECO\CSTPL004.DWG

TABLE 2-1
NAPL GAUGING SUMMARY
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID: | | GES-301I | | EXP-7 | | EXP-10 | | EXP10R | | EXP-13 | | ECS9 | | GES-228 | | GT-6 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | | NAPL thickness (in) | Vol. Bailed (gal) | NAPL thickness (in) | Vol. Bailed (gal) | NAPL thickness (in) | Vol. Bailed (gal) | NAPL thickness (in) | Vol. Bailed (gal) | NAPL thickness (in) | Vol. Bailed (gal) | NAPL thickness (in) | Vol. Bailed (gal) | NAPL thickness (in) | Vol. Bailed (gal) | NAPL thickness (in) | Vol. Bailed (gal) | **Total volume bailed (gal)** | **Approx. % Product** |
| 4/26/2006 | April | 99.72 | NR | -- | -- | ND | NA | 9.36 | NR | 3.84 | NR | 33.6 | NR | 1.44 | NR | 1.32 | NR | not recorded | NR |
| 5/10/2006 | May | 39.72 | NR | -- | -- | 0.12 | NR | 5.76 | NR | 4.44 | NR | 9.36 | NR | 1.08 | NR | 1.44 | NR | not recorded | NR |
| 6/26/2006 | June | 50.52 | Y | -- | -- | ND | NA | 4.44 | Y | 3.48 | Y | 14.04 | N | 1.2 | N | 1.32 | N | 1.5 | NR |
| 7/24/2006 | July | 10.92 | 1.5 | -- | -- | ND | NA | 7.08 | 2 | ND | NA | 10.92 | N | ND | NA | 2.04 | 1.5 | 5 | 1 |
| 8/23/2006 | August | 73.92 | 0.5 | -- | -- | ND | NA | 5.88 | 0.125 | 3.84 | N | 10.32 | N | 1.32 | N | 0.48 | N | 0.6 | 94 |
| 9/21/2006 | September | 66.12 | Y | -- | -- | ND | NA | 7.2 | Y | 4.08 | Y | 7.56 | Y | 1.08 | N | 0.72 | N | 2.5 | NR |
| October | October | NG | NG | -- | -- | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG |
| 11/16/2006 | November | 111.72 | Y | -- | -- | ND | NA | NG | NG | 1.8 | Y | 33.84 | Y | 1.2 | Y | 0.48 | Y | 4 | 50 |
| 12/19/2006 | December | 67.56 | 1.5 | -- | -- | ND | NA | 0.48 | 0.01 | 2.76 | 0.01 | 3.6 | N | 0.6 | N | 0.48 | N | 1.5 | 95 |
| 1/9/2007 | January | 39.24 | 1.5 | -- | -- | ND | NA | 0.12 | N | 0.72 | 0.0264 | 9.96 | N | 0.24 | N | 0.24 | N | 1.526 | NR |
| February | February | NG | NG | -- | -- | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG |
| March | March | NG | NG | -- | -- | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG |
| 4/27/2007 | April | 85.56 | N | -- | -- | ND | NA | NG | NA | ND | NA | 12.96 | N | 0.48 | N | 0.24 | N | NA | NA |
| 5/17/2007 | May* | 11.40 | N | -- | -- | ND | NA | 0.12 | N | 0.24 | N | 3.72 | N | 0.36 | N | 0.12 | N | NA | NA |
| 6/26/2007 | June | 13.80 | Y | -- | -- | ND | NA | Trace | N | 0.72 | N | 2.28 | Y | Trace | N | 0.6 | Y | 0.5 | 10 |
| 7/20/2007 | July | 3.00 | 0.1 | -- | -- | ND | NA | ND | NA | 1.2 | 0.1 | 3 | 0.1 | 0.24 | N | 0.48 | 0.1 | 0.5 | 10 |
| 8/7/2007 | August | 3.24 | N | -- | -- | ND | NA | ND | NA | 2.64 | N | 2.04 | N | 0.36 | N | 0.6 | N | NA | NA |
| 9/9/2007 | September | 27.96 | 0.75 | -- | -- | NG | NG | 1.44 | N | 2.64 | 0.1 | 3.6 | 0.1 | 0.12 | N | 0.6 | N | 3 | 30 |
| October | October | NG | NG | -- | -- | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG | NG |
| 11/12/2007 | November | 15.00 | N | -- | -- | ND | NA | 2.64 | N | ND | NA | 2.04 | N | 0.36 | N | 0.96 | N | NA | NA |
| 12/18/2008 | December | NG | NG | -- | -- | NG | NG | NG | NG | NG | NG | 1.56 | 2.5 | 0.96 | 1.5 | NG | NG | 4 | NR |
| 1/16/2008 | January | 22.92 | 2 | -- | -- | NG | NG | NG | NG | NG | NG | 2.88 | N | 0.12 | N | NG | NG | 2 | NR |
| 2/7/2008 | February | 7.08 | Y | -- | -- | NG | NG | NG | NG | NG | NG | 4.32 | Y | 0.24 | Y | NG | NG | 1 | 25 |
| 3/27/2008 | March | 2.40 | Y | -- | -- | ND | NA | 3.12 | Y | NG | NG | 5.4 | Y | 0.12 | Y | 0.48 | Y | not recorded | NR |
| 4/28/2008 | April | 0.60 | 0.25 | -- | -- | ND | NA | 1.68 | 0.5 | ND | NA | 1.68 | 0.5 | 0.12 | N | 0.24 | 0.25 | 1.5 | 95 |
| 5/8/2008 | May | 0.72 | N | -- | -- | ND | NA | 1.56 | N | 0.48 | N | 1.56 | N | 0.12 | N | 0.36 | N | NA | NA |
| 6/17/2008 | June | 6.24 | 2 | -- | -- | ND | NA | 0.48 | N | 0.36 | N | 1.92 | 1.5 | Trace | N | 0.12 | N | 3.5 | 10 |
| 7/25/2008 | July | 0.12 | Y | 3.24 | Y | ND | NA | ND | NA | ND | NA | 0.96 | Y | Trace | N | Trace | N | 2.5 | 8 |
| 8/22/2008 | August | 0.12 | 0.03 | 0.12 | 0.03 | ND | NA | 0.36 | 0.07 | 0.96 | 0.26 | 0.24 | 0.07 | 0.12 | 0.03 | 0.12 | 0.03 | 0.5 | 100 |
| 9/24/2008 | September | Trace | N | Trace | N | ND | NA | ND | NA | 0.6 | 0.25 | 0.12 | Y | ND | NA | ND | NA | | |
| 10/16/2008 | October | ND | N | 0.36 | 2.5 | ND | NA | ND | NA | 0.72 | 2.5 | 0.24 | 1 | ND | NA | 0.24 | 2 | 8.0 | NR |
| 11/13/2008 | November | 0.12 | 0.07 | ND | NA | ND | NA | 0.6 | 0.13 | 0.24 | 0.07 | 0.24 | 0.07 | 0.12 | 0.07 | 0.12 | 0.07 | 0.48 | NR |

Notes
DTP = Depth to Product (Ft below top of riser pipe)
DTW = Depth to Water (Ft below top of riser pipe)
NA = Not Applicable
ND = NAPL not detected
NR = Not Recorded
NG = Not Gauged
Y = Product bailed, but quantity not recorded
N = Product not bailed
*Pumping began on these wells in May 2007. These measurements are during pumping.

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | | | | | MCP Method 1 GW-2 Standard: | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | | | | | MCP Method 1 GW-3 Standard: | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| ECS-4 | 21 Apr 00 | 8.93 | NA | NA | NA | NA | 31.6 | 216 | 40 | 385 | 673 | <5.0 | 83 | 750 | 1,920 | 1,270 |
| NA | 23 Aug 00 | 8.32 | NA | NA | NA | NA | <1.0 | <5.0 | <5.0 | 22.7 | 22.7 | <5.0 | 54.6 | 200 | 190 | 400 |
| | 20 Nov 00 | 11.43 | NA | NA | NA | NA | <1.0 | 6.3 | 23 | 65.7 | 95 | <5.0 | 30.2 | 640 | 550 | 630 |
| | 12 Jan 01 | 12.85 | NA | NA | NA | NA | <1.0 | 8.5 | 47.5 | 131.3 | 187.3 | 7.8 | 14.1 | 700 | 420 | 630 |
| | 11 Jul 01 | 10.45 | NA | NA | NA | NA | <1.0 | <5.0 | <5.0 | 22.7 | 22.7 | <5.0 | 36.8 | 350 | 170 | 150 |
| | 12 Oct 01 | 13.06 | NA | NA | NA | NA | <1.0 | <5.0 | <5.0 | <15.0 | ND | <5.0 | 13.5 | 160 | <100 | 100 |
| 992.14 | 20 Aug 02 | 13.51 | NA | NA | NA | 978.63 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Dec 02 | 9.54 | NA | NA | NA | 982.60 | <0.50 | <1.0 | <1.0 | 13.9 | 13.9 | <1.0 | 14.2 | 72.2 | <50 | 71 |
| | 01 Dec 03 | 9.05 | NA | NA | NA | 983.09 | <2.0 | 9.9 | 159 | 310.4 | 479.3 | <2.0 | 86.0 | 530 | <50 | 835 |
| | 24 Feb 04 | 16.05 | NA | NA | NA | 976.09 | <2.0 | <2.0 | <2.0 | <4.0 | ND | 2.0 | <3.0 | 219 | <50 | <50 |
| | 14 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | 92.3 | 9.3 | 101.6 | <2.0 | 40.7 | 919 | 861 | 1,120 |
| | 23 Feb 05 | 9.20 | NA | NA | NA | 982.94 | <2.0 | <2.0 | <2.0 | 13.1 | 13.1 | <2.0 | 6.2 | 279 | <50 | 194 |
| | 10 May 06 | 9.12 | NA | NA | NA | 983.02 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 21-Sep-06 | 11.49 | NA | NA | NA | 980.65 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 17-Oct-07 | 14.59 | NA | NA | NA | 977.55 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | 63 | <50 | <50 |
| | 28-Mar-08 | 6.66 | NA | NA | NA | 985.48 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 25-Jul-08 | 10.49 | NA | NA | NA | 981.65 | <2.0 | <2.0 | 5.0 | 21.0 | 26 | <2.0 | <3.0 | <50 | <50 | <50 |
| | 17-Oct-08 | 12.44 | NA | NA | NA | 979.70 | <2.0 | <2.0 | 4.2 | 4.0 | 8.2 | <1.0 | <3.0 | 79.6 | <50 | <50 |
| ECS-7 | 19 May 98 | 14.18 | NA | NA | NA | 977.48 | <25 | <50 | 372 | 270 | 642 | <25 | 129 | 310 | 1,730 | 770 |
| 991.66 | 30 Nov 98 | 17.33 | NA | NA | NA | 974.33 | 7.2 | <50 | 249 | <50 | 256.2 | 1,220 | <50 | <250 | 690 | 690 |
| | 01 Apr 99 | 14.55 | NA | NA | NA | 977.11 | <5.0 | 38 | 735 | 1,492 | 2,265 | 27 | 104 | 790 | 1,120 | 2,060 |
| | 24 Aug 99 | 16.35 | NA | NA | NA | 975.31 | 2.9 | 16.5 | 561 | 378.6 | 959 | 96.3 | 60.5 | 560 | 900 | 1,190 |
| | 24 Nov 99 | 16.46 | NA | NA | NA | 975.20 | <5.0 | <25 | 634 | 598 | 1,232 | 51 | 153 | <500 | 980 | 1,420 |
| | 21 Apr 00 | 14.44 | NA | NA | NA | 977.22 | <5.0 | 105 | 691 | 1,218 | 2,014 | <25 | 185 | 770 | 2,920 | 2,310 |
| | 23 Aug 00 | 13.73 | NA | NA | NA | 977.93 | 1.5 | 64 | 596 | 878 | 1,539.5 | <5.0 | 144 | <500 | 1,360 | 1,890 |
| | 20 Nov 00 | 15.47 | NA | NA | NA | 976.19 | 3.0 | 19.1 | 439 | 420.6 | 881.7 | 22.8 | 99.9 | 980 | 3,390 | 1,540 |
| | 11 Jul 01 | 14.40 | NA | NA | NA | 977.26 | <1.0 | 16.8 | 180 | 355 | 551.8 | 6.8 | 45.4 | 350 | 880 | 610 |
| | 12 Oct 01 | 16.75 | NA | NA | NA | 974.91 | 1.9 | <5.0 | 126 | 7.7 | 135.6 | 11.4 | 7.4 | 300 | 260 | 530 |
| 991.71 | 20 Aug 02 | 16.92 | NA | NA | NA | 974.79 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 May 03 | 18.30 | NA | NA | NA | 973.41 | <2.0 | <2.0 | 15.3 | 15.2 | 30.5 | <2.0 | <3.0 | 117.0 | <50 | 82.2 |
| | 01 Dec 03 | 16.73 | NA | NA | NA | 974.98 | <2.0 | <2.0 | 21.3 | 4.7 | 26 | <2.0 | <3.0 | <50 | <50 | 67.7 |
| | 25 Feb 04 | 20.08 | NA | NA | NA | 971.63 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 14 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 22 Feb 05 | 16.78 | NA | NA | NA | 974.93 | <2.0 | <2.0 | 5.7 | <4.0 | 5.7 | <2.0 | <3.0 | <50 | <50 | <50 |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | | | | | | MCP Method 1 GW-2 Standard: | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | | | | | | MCP Method 1 GW-3 Standard: | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| ECS-9 | 18 Oct 96 | 14.02 | NA | NA | NA | 977.41 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 991.43 | 25 Nov 96 | 17.06 | 16.44 | 0.62 | 0.30 | 974.84 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 19 Dec 96 | 11.88 | 11.80 | 0.08 | NA | 979.61 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 31 Jan 97 | 14.65 | 13.95 | 0.70 | 0.50 | 977.31 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 06 Mar 97 | 14.32 | 14.12 | 0.20 | NA | 977.26 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 19 May 98 | 14.66 | 14.31 | 0.35 | NA | 977.04 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 30 Nov 98 | 19.09 | 18.73 | 0.36 | NA | 972.61 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 01 Apr 99 | 12.35 | 12.24 | 0.11 | 0.20 | 979.16 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 24 Aug 99 | 18.87 | 18.65 | 0.22 | 0.10 | 972.73 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 24 Nov 99 | 17.52 | NA | 0.00 | NA | 973.91 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 28 Jan 00 | 16.60 | 16.28 | 0.32 | 0.10 | 975.07 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 991.43 * | 10 Feb 00 | 16.91 | 16.70 | 0.21 | 0.53 | 974.68 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 21 Apr 00 | 14.14 | 14.13 | 0.01 | 0.10 | 977.30 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 23 Aug 00 | 12.75 | 11.88 | 0.87 | 0.00 | 979.34 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 Dec 00 | Presumed DESTROYED, Well Found on 10/01/01 | | | | | | | | | | | | | | |
| | 11 Dec 02 | 14.95 | 13.81 | 1.14 | 0.00 | 977.35 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 May 03 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 01 Dec 03 | 13.00 | 12.88 | 0.12 | 0.00 | 978.52 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 27 Feb 04 | NA | 22.11 | 1.29 | 0.00 | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 09 Aug 05 | 20.23 | 20.10 | 0.13 | 0.00 | 971.30 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 10 May 06 | 16.22 | 15.44 | 0.78 | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| ECS-10 | 18 Oct 96 | 16.42 | NA | NA | NA | 977.02 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 993.44 | 25 Nov 96 | 17.43 | 16.83 | 0.60 | 0.30 | 976.47 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 19 Dec 96 | 16.35 | NA | NA | NA | 977.09 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 31 Jan 97 | 17.18 | 15.85 | 1.33 | 0.50 | 977.27 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 06 Mar 97 | 15.53 | 15.28 | 0.25 | NA | 977.91 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 19 May 98 | 16.25 | 16.20 | 0.05 | NA | 977.19 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 30 Nov 98 | 19.54 | 19.20 | 0.34 | NA | 973.90 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 993.44 | 01 Apr 99 | 16.34 | 16.32 | 0.02 | 0.10 | 977.12 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 24 Aug 99 | 19.23 | 19.08 | 0.15 | 0.10 | 974.32 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 24 Nov 99 | 18.15 | 18.14 | 0.01 | NA | 975.30 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 28 Jan 00 | 18.47 | 18.45 | 0.02 | 0.00 | 974.99 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 30 Mar 00 | 14.47 | 14.37 | 0.10 | <0.03 | 979.05 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 21 Apr 00 | 15.85 | 15.83 | 0.02 | 0.03 | 977.61 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 23 Aug 00 | 16.71 | 14.48 | 2.23 | 0.00 | 978.42 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 Dec 00 | DESTROYED | | | | | | | | | | | | | | |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | MCP Method 1 GW-2 Standard: | | | | | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | MCP Method 1 GW-3 Standard: | | | | | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| ECS-11 | 19 May 98 | 15.07 | 12.00 | 3.07 | NA | 980.09 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 992.83 | 30 Nov 98 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 24 Aug 99 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 28 Jan 00 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 10 Feb 00 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 21 Apr 00 | 11.03 | 11.01 | 0.02 | NA | 981.82 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 20 Nov 00 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 Dec 00 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 993.01 | 20 Aug 02 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Dec 02 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 May 03 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 01 Dec 03 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 27 Feb 04 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 09 Aug 05 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| ECS-14 | 01 Apr 99 | 8.90 | NA | NA | NA | NA | <1.0 | <5.0 | 11.6 | 139.4 | 151 | <5.0 | 33.1 | <50 | 95 | 407 |
| NA | 24 Nov 99 | 8.92 | NA | NA | NA | NA | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| | 21 Apr 00 | 6.70 | NA | NA | NA | NA | <1.0 | <5.0 | 5.4 | 117.2 | 122.6 | <5.0 | 14 | <100 | 400 | 490 |
| | 11 Dec 02 | 7.39 | NA | NA | NA | NA | <0.50 | 2.4 | <1.0 | 5.5 | 7.9 | <1.0 | <5.0 | <50 | <50 | <50 |
| | 01 Dec 03 | 7.65 | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 21 Feb 05 | 8.47 | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 07 | 13.38 | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 07 Dup | 13.38 | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 27 Mar 08 | 6.39 | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 24 Jul 08 | 4.30 | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 08 | 9.78 | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | ND | ND | <1.0 | <3.0 | <50 | <50 | <50 |
| ECS-15 | 21 Apr 00 | 10.16 | NA | NA | NA | 979.70 | <1.0 | 15 | 15.4 | 181.3 | 211.7 | <5.0 | 13.8 | 870 | 480 | 500 |
| 989.86 | 20 Nov 00 | 11.36 | NA | NA | NA | 978.50 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | 4,190 | <500 | <500 |
| | 11 Dec 02 | 10.73 | NA | NA | NA | 979.13 | 1.8 | 37.9 | 19.4 | 106 | 165.1 | <1.0 | 8.0 | 457 | 52.7 | 134 |
| | 07 Feb 03 | 11.39 | NA | NA | NA | 978.47 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 28 Feb 03 | 11.17 | NA | NA | NA | 978.69 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 22 Apr 03 | 10.81 | NA | NA | NA | 979.05 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 23 Apr 03 | 11.35 | NA | NA | NA | 978.51 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 30 May 03 | 13.95 | NA | NA | NA | 975.91 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 03 Dec 03 | 12.81 | NA | NA | NA | 977.05 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | | | | | | MCP Method 1 GW-2 Standard: | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | | | | | | MCP Method 1 GW-3 Standard: | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| GES-7 | 24 Nov 99 | 14.71 | NA | NA | NA | 983.07 | 1.2 | 19 | 10 | 56.6 | 87.1 | <5.0 | 8.5 | 140 | <100 | 120 |
| 997.78 | 21 Apr 00 | 12.78 | NA | NA | NA | 985.00 | <1.0 | <5.0 | <5.0 | 18.5 | 18.5 | <5.0 | 6.6 | <100 | <100 | <100 |
| | 23 Aug 00 | 10.31 | NA | NA | NA | 987.47 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| | 20 Nov 00 | 12.70 | NA | NA | NA | 985.08 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| 992.10 | 12 Jan 01 | 14.05 | NA | NA | NA | 978.05 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | 130 |
| | 11 Jul 01 | 10.73 | NA | NA | NA | 981.37 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| | 11 Dec 02 | 14.20 | NA | NA | NA | 977.90 | <0.50 | <1.0 | <1.0 | <1.0 | ND | <1.0 | <5.0 | <50 | <50 | <50 |
| | 01 Dec 03 | 14.76 | NA | NA | NA | 977.34 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| GES-8 | 24 Nov 99 | 12.03 | NA | NA | NA | 983.75 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| 995.78 | 21 Apr 00 | 9.83 | NA | NA | NA | 985.95 | <1.0 | 50.2 | 38.8 | 197.5 | 286.5 | <5.0 | 23.9 | <100 | 600 | 600 |
| | 23 Aug 00 | 10.67 | NA | NA | NA | 985.11 | <1.0 | <5.0 | <5.0 | 18.3 | 18.3 | <5.0 | <5.0 | <100 | <100 | <100 |
| | 20 Nov 00 | 11.77 | NA | NA | NA | 984.01 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| 995.78 | 12 Jan 01 | 13.17 | NA | NA | NA | 982.61 | <1.0 | <5.0 | <5.0 | 73.6 | 73.6 | <5.0 | <5.0 | <100 | 310 | 510 |
| | 11 Jul 01 | 10.82 | NA | NA | NA | 984.96 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| | 12 Oct 01 | 13.65 | NA | NA | NA | 982.13 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| 990.15 | 20 Aug 02 | 12.01 | NA | NA | NA | 978.14 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Dec 02 | 10.05 | NA | NA | NA | 980.10 | <0.50 | <1.0 | <1.0 | <1.0 | ND | <1.0 | <5.0 | <50 | <50 | <50 |
| | 02 Dec 03 | 14.52 | NA | NA | NA | 975.63 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| GES-9 | 24 Nov 99 | 14.91 | NA | NA | NA | 981.47 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | 4.7 | <100 | <100 | <100 |
| 996.38 | 21 Apr 00 | 13.36 | NA | NA | NA | 983.02 | <1.0 | <5.0 | <5.0 | 20.4 | 20.4 | <5.0 | <5.0 | <100 | <100 | <100 |
| | 23 Aug 00 | 12.23 | NA | NA | NA | 984.15 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| | 20 Nov 00 | 14.11 | NA | NA | NA | 982.27 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| | 12 Jan 01 | 14.83 | NA | NA | NA | 981.55 | <1.0 | <5.0 | <5.0 | 29.7 | 29.7 | <5.0 | 7.1 | <100 | 180 | 300 |
| 990.72 | 20 Aug 02 | 14.57 | NA | NA | NA | 976.15 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Dec 02 | 13.80 | NA | NA | NA | 976.92 | <0.50 | 1.1 | <1.0 | <1.0 | 1.1 | <1.0 | <5.0 | <50 | <50 | <50 |
| | 02 Dec 03 | 15.66 | NA | NA | NA | 975.06 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | MCP Method 1 GW-2 Standard: | | | | | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | MCP Method 1 GW-3 Standard: | | | | | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| GES-11 | 23 Aug 00 | 12.67 | NA | NA | NA | 985.44 | <5.0 | 54 | 346 | 2,100 | 2,500 | <25 | 143 | 1,940 | 2,560 | 3,390 |
| 998.11 | 20 Nov 00 | 14.86 | NA | NA | NA | 983.25 | <5.0 | <25 | 496 | 1,348 | 1,844 | <25 | 187 | 3,510 | 3,640 | 2,930 |
| | 12 Jan 01 | 15.23 | NA | NA | NA | 982.88 | <1.0 | 7.8 | 255 | 526.4 | 789.2 | 12 | 82 | 1,850 | 1,050 | 1,370 |
| | 19 Jan 01 | 15.65 | NA | NA | NA | 982.46 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Jul 01 | 14.46 | NA | NA | NA | 983.65 | <1.0 | 17 | 325 | 999 | 1,341 | <5.0 | 145 | 2,270 | 2,400 | 1,400 |
| | 12 Oct 01 | 17.23 | NA | NA | NA | 980.88 | <5.0 | <25 | 344 | 1,160 | 1,504 | <25 | 118 | 1,640 | 1,130 | 2,070 |
| 992.65 | 20 Aug 02 | 17.82 | NA | NA | NA | 974.83 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 May 03 | 16.70 | NA | NA | NA | 975.95 | <2.0 | 8.9 | 226 | 1,013.2 | 1,248.1 | <2.0 | 123 | 1,870 | 574 | 1,780 |
| | 01 Dec 03 | 16.90 | NA | NA | NA | 975.75 | <2.0 | <2.0 | 62.4 | 165.2 | 227.6 | <2.0 | 47 | 813 | <50 | 564 |
| | 25 Feb 04 | 19.49 | NA | NA | NA | 973.16 | <2.0 | 4.0 | 170 | 956.4 | 1,130.4 | <2.0 | 229 | 2,420 | <50 | 2,420 |
| | 14 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | 121 | 447.2 | 568.2 | <2.0 | 101 | 1,450 | 1,200 | 1,200 |
| | 23 Feb 05 | 16.10 | NA | NA | NA | 976.55 | <2.0 | <2.0 | 118 | 404.1 | 522.1 | <2.0 | 68.9 | 1,280 | 233 | 1,330 |
| | 10 Aug 05 | 19.20 | NA | NA | NA | 973.45 | <2.0 | <2.0 | 14.1 | 2.5 | 16.6 | <2.0 | 7.6 | 424 | <50 | <50 |
| | 09 May 06 | 16.21 | NA | NA | NA | 976.44 | <2.0 | 2.4 | 353 | 2,945 | 3,300.4 | <2.0 | 319 | 4,440 | 1,990 | 4,050 |
| | 20 Sep 06 | 18.11 | NA | NA | NA | 974.54 | <2.0 | <2.0 | 21 | 64 | 85.7 | <2.0 | 17 | 504 | 101 | 219 |
| | 28 Mar 08 | 12.38 | NA | NA | NA | 980.27 | <2.0 | <2.0 | 4.2 | 97.7 | 101.9 | <2.0 | 54.9 | 1,050 | <50 | 556 |
| | 25 Jul 08 | 14.15 | NA | NA | NA | 978.50 | <2.0 | 4.5 | 327 | 1,622.4 | 1,953.9 | <2.0 | 354 | 6,670 | 1,580 | 5,660 |
| | 25 Jul 08 Dup | 14.15 | NA | NA | NA | 978.50 | <10 | <10 | 298 | 1705.2 | 2,003.2 | <10 | 325 | 4,350 | 413 | 5,690 |
| | 17-Oct-08 | 16.96 | NA | NA | NA | 975.69 | <2.0 | <2.0 | 66.7 | 299.4 | 366.1 | <1.0 | 71.1 | 1,090 | <50 | 1,180 |
| GES-12 | 23 Aug 00 | 12.47 | NA | NA | NA | 985.38 | <5.0 | 2,740 | 2,030 | **10,120** | 14,890 | <25 | 490 | 22,700 | 14,400 | 12,800 |
| 997.85 | 20 Nov 00 | 14.34 | NA | NA | NA | 983.51 | 104 | 3,810 | 2,010 | **8,740** | 14,664 | <50 | 416 | 17,200 | 19,200 | 7,800 |
| | 12 Jan 01 | 14.70 | NA | NA | NA | 983.15 | 108 | 2,640 | 1,960 | **9,380** | 14,088 | <100 | 530 | 9,700 | 11,300 | 13,300 |
| | 19 Jan 01 | 15.04 | NA | NA | NA | 982.81 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Jul 01 | 13.90 | NA | NA | NA | 983.95 | 48 | 3,360 | 2,570 | **12,410** | 18,388 | <100 | 670 | 14,800 | 22,400 | 10,900 |
| | 12 Oct 01 | 16.66 | NA | NA | NA | 981.19 | 99 | 1,790 | 1,790 | **8,280** | 11,959 | <100 | 430 | 12,700 | 8,000 | 8,200 |
| | 20 Aug 02 | 17.26 | NA | NA | NA | 975.12 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 992.38 | 11 Dec 02 | 14.43 | NA | NA | NA | 977.95 | 84.5 | 955 | 1,480 | **7,300** | 9,819.5 | <2.0 | 448 | 8,650 | 7,180 | 9,800 |
| | 29 May 03 | 16.40 | NA | NA | NA | 975.98 | <10 | 333 | 1,470 | **6,310** | 8,113 | <10 | 549 | 15,600 | 4,480 | 11,300 |
| | 02 Dec 03 | 14.64 | NA | NA | NA | 977.74 | <2.0 | 54.1 | 410 | 3,716 | 4,180.1 | <2.0 | 423 | 4,610 | <50 | 18,300 |
| | 25 Feb 04 | 18.81 | NA | NA | NA | 973.57 | <10 | 53.1 | 1,090 | **5,047** | 6,190.1 | <10 | 959 | 38,700 | <250 | **126,000** |
| | 14 Sep 04 | NM | NA | NA | NA | NA | <10 | 293.0 | 1,280 | 4,958 | 6,531.0 | 543 | 566 | **86,400** | 41,000 | 28,800 |
| | 23 Feb 05 | 15.87 | NA | NA | NA | 976.51 | 14.6 | 125.0 | 612 | 4,110 | 4,861.6 | <10 | 343 | 12,900 | 4,720 | 13,200 |
| | 10 Aug 05 | 18.42 | NA | NA | NA | 973.96 | 18.3 | 48.8 | 52.2 | 47.7 | 167.0 | <2.0 | 32.6 | 498 | <50 | 248 |
| | 09 May 06 | 10.02 | NA | NA | NA | 982.36 | 42.2 | 414 | 981 | 3,064 | 4,501.2 | <2.0 | 481 | 2,620 | <50 | 5,880 |
| | 20 Sep 06 | 17.31 | NA | NA | NA | 975.07 | 22.8 | 341 | 619 | 2,540 | 3,522.8 | <4.0 | 292 | 5,450 | 2,860 | 4,840 |
| | 27 Apr 07 | 12.60 | NA | NA | NA | 979.78 | <4.0 | 19.5 | 264 | 1,671 | 1,954.5 | <4.0 | 130 | 2,180 | <100 | 3,290 |
| | 27 Apr 07 Dup | 12.60 | NA | NA | NA | 979.78 | <2.0 | 12.4 | 88.1 | 499.2 | 599.7 | <2.0 | 32.3 | 1,680 | 75.9 | 1,170 |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | | | | | MCP Method 1 GW-2 Standard: | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | | | | | MCP Method 1 GW-3 Standard: | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| **GES-13** | 23 Aug 00 | 12.22 | NA | NA | NA | 986.50 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| 998.72 | 20 Nov 00 | 15.63 | NA | NA | NA | 983.09 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| | 12 Jan 01 | 16.09 | NA | NA | NA | 982.63 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| | 19 Jan 01 | 16.65 | NA | NA | NA | 982.07 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Jul 01 | 15.42 | NA | NA | NA | 983.30 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| | 12 Oct 01 | 18.22 | NA | NA | NA | 980.50 | <1.0 | <5.0 | 5.0 | 23 | 28 | <5.0 | <5.0 | <100 | <100 | <100 |
| 993.27 | 20 Aug 02 | 18.72 | NA | NA | NA | 974.55 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Dec 02 | 15.12 | NA | NA | NA | 978.15 | <0.50 | <1.0 | <1.0 | 3.3 | 3.3 | <1.0 | <5.0 | <50 | <50 | <50 |
| | 01 Dec 03 | 13.51 | NA | NA | NA | 979.76 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| **GES-14** | 12 Jan 01 | NS | NA | NA | NA | NA | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| 998.65 | 19 Jan 01 | 7.20 | NA | NA | NA | 991.45 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 20 Aug 02 | 13.39 | NA | NA | NA | 979.83 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 30 May 03 | NS | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 993.22 | 02 Dec 03 | 3.81 | NA | NA | NA | 989.41 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| **GES-15** | 12 Jan 01 | NS | NA | NA | NA | NA | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| 998.52 | 19 Jan 01 | 6.07 | NA | NA | NA | 992.45 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 993.08 | 20 Aug 02 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 30 May 03 | NS | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 02 Dec 03 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| **GES-16** | 12 Jan 01 | NS | NA | NA | NA | NA | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| | 19 Jan 01 | 16.06 | NA | NA | NA | 982.80 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Jul 01 | 14.52 | NA | NA | NA | 984.34 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| 998.86 | 12 Oct 01 | 17.97 | NA | NA | NA | 980.89 | <1.0 | 9.0 | <5.0 | <15 | 9.0 | <5.0 | <5.0 | <100 | <100 | <100 |
| | 20 Aug 02 | 18.57 | NA | NA | NA | 974.85 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 993.42 | 30 May 03 | NA | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 02 Dec 03 | DRY | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| Units | | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| MCP Method 1 GW-2 Standard: | | | | | | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| MCP Method 1 GW-3 Standard: | | | | | | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| GT-101 | 09 Aug 94 | NS | NA | NA | NA | NA | 0.4 | ND | ND | ND | 0.4 | 11 | NS | NS | NS | NS |
| 989.72 | 07 Dec 94 | 16.38 | NA | NA | NA | 973.34 | ND | ND | ND | ND | ND | 23 | NS | NS | NS | NS |
| | 07 Apr 95 | 15.27 | NA | NA | NA | 974.45 | ND | ND | ND | 1 | 1 | 11 | NS | NS | NS | NS |
| | 03 Aug 95 | 15.01 | NA | NA | NA | 974.71 | 0.4 | 0.3 | ND | ND | 0.7 | 15 | NS | NS | NS | NS |
| | 14 Nov 95 | 16.98 | NA | NA | NA | 972.74 | ND | ND | ND | ND | ND | ND | NS | NS | NS | NS |
| 989.68 | 20 Aug 02 | 19.11 | NA | NA | NA | 970.57 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Dec 02 | 18.20 | NA | NA | NA | 971.48 | <0.50 | <1.0 | <1.0 | <1.0 | ND | 65.5 | <5.0 | <50 | <50 | <50 |
| | 29 May 03 | 21.35 | NA | NA | NA | 968.33 | <2.0 | <2.0 | <2.0 | <4.0 | ND | 123 | <3.0 | <50 | <50 | <50 |
| | 03 Dec 03 | 18.40 | NA | NA | NA | 971.28 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 24 Feb 04 | 19.93 | NA | NA | NA | 969.75 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 22 Feb 05 | 18.12 | NA | NA | NA | 971.56 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 10 Aug 05 | 18.85 | NA | NA | NA | 970.83 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| GT-102 | 09 Aug 94 | NS | NA | NA | NA | NA | ND | ND | ND | ND | ND | ND | NS | NS | NS | NS |
| 990.03 | 07 Dec 94 | 15.37 | NA | NA | NA | 974.66 | ND | ND | ND | ND | ND | 5 | NS | NS | NS | NS |
| | 07 Apr 95 | 14.85 | NA | NA | NA | 975.18 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 03 Aug 95 | 16.55 | NA | NA | NA | 973.48 | ND | ND | ND | ND | ND | ND | NS | NS | NS | NS |
| | 14 Nov 95 | 14.76 | NA | NA | NA | 975.27 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 23 Aug 00 | 14.03 | NA | NA | NA | 976.00 | <1.0 | <5.0 | <5.0 | 32.9 | 32.9 | <5.0 | <5.0 | <100 | <100 | <100 |
| | 12 Jan 01 | 15.48 | NA | NA | NA | 974.55 | <1.0 | <5.0 | <5.0 | 11 | 11 | <5.0 | <5.0 | <100 | <100 | <100 |
| | 11 Jul 01 | 14.47 | NA | NA | NA | 975.56 | <1.0 | <5.0 | <5.0 | <10 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| | 12 Oct 01 | 16.43 | NA | NA | NA | 973.60 | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| | 20 Aug 02 | 16.43 | NA | NA | NA | 973.72 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Dec 02 | 15.50 | NA | NA | NA | 974.65 | <0.50 | <1.0 | <1.0 | <1.0 | ND | <1.0 | <5.0 | <50 | <50 | <50 |
| | 02 Dec 03 | 16.87 | NA | NA | NA | 973.28 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| † GT-1 | 24 Aug 99 | 11.00 | NA | NA | NA | NA | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| | 23 Aug 00 | 7.23 | NA | NA | NA | NA | <1.0 | <5.0 | 6.1 | 105.3 | 111.4 | <5.0 | 18.2 | <100 | 590 | 860 |
| | 12 Jan 01 | 11.09 | NA | NA | NA | NA | <1.0 | <5.0 | 7.0 | 40 | 47.0 | <5.0 | <5.0 | <100 | <100 | <100 |
| | 11 Jul 01 | 9.13 | NA | NA | NA | NA | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| | 12 Oct 01 | 10.64 | NA | NA | NA | NA | <1.0 | <5.0 | <5.0 | <15 | ND | <5.0 | <5.0 | <100 | <100 | <100 |
| 992.80 | 20 Aug 02 | 12.17 | NA | NA | NA | 980.63 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Dec 02 | 7.95 | NA | NA | NA | 984.85 | <0.50 | <1.0 | <1.0 | <1.0 | ND | <1.0 | <5.0 | <50 | <50 | <50 |
| | 30 May 03 | 9.90 | NA | NA | NA | 982.90 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 01 Dec 03 | 7.01 | NA | NA | NA | 985.79 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 27 Feb 04 | 16.16 | NA | NA | NA | 976.64 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 09 Aug 05 | 11.15 | NA | NA | NA | 981.65 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

TABLE 2-2
HISTORICAL GROUNDWATER MONITORING DATA
VOLATILE PETROLEUM HYDROCARBONS
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| Units | | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| MCP Method 1 GW-2 Standard: | | | | | | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| MCP Method 1 GW-3 Standard: | | | | | | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| GT-2 | 19 May 98 | 15.01 | NA | NA | NA | 975.49 | **3,180** | 7,460 | 310 | **12,440** | 23,390 | <250 | 770 | 15,300 | 20,500 | 6,400 |
| 990.50 | 30 Nov 98 | 16.98 | NA | NA | NA | 973.52 | **5,520** | 12,900 | 1,140 | **10,570** | 30,130 | <250 | <500 | 14,100 | 15,100 | 7,300 |
| | 01 Apr 99 | 14.70 | NA | NA | NA | 975.80 | **3,580** | 8,270 | 510 | **8,330** | 20,690 | <130 | 340 | 16,900 | 5,000 | 7,800 |
| | 24 Aug 99 | 17.09 | NA | NA | NA | 973.41 | **2,960** | 6,650 | 530 | **7,550** | 17,690 | <100 | 300 | 14,200 | 4,300 | 5,600 |
| | 24 Nov 99 | 16.26 | NA | NA | NA | 974.24 | **2,650** | 5,660 | 310 | **6,000** | 14,620 | <100 | 260 | 10,600 | 4,300 | 3,700 |
| 990.50 | 21 Apr 00 | 15.03 | NA | NA | NA | 975.47 | **2,710** | 5,060 | 280 | **6,750** | 14,800 | <100 | 370 | 10,600 | 8,000 | 4,800 |
| | 23 Aug 00 | 14.49 | NA | NA | NA | 976.01 | **3,060** | 6,030 | 730 | **7,300** | 17,120 | <100 | 350 | 11,700 | 6,300 | 5,600 |
| | 12 Jan 01 | 15.84 | NA | NA | NA | 974.66 | **2,640** | 5,270 | 499 | **6,430** | 14,839 | <50 | 312 | 10,600 | 6,700 | 5,400 |
| | 11 Jul 01 | 15.03 | NA | NA | NA | 975.47 | 1,290 | 3,070 | 332 | **5,040** | 9,732 | <50 | 174 | 7,200 | 9,800 | 5,600 |
| | 12 Oct 01 | 16.73 | NA | NA | NA | 973.77 | **2,510** | 6,050 | 1,080 | **7,660** | 17,300 | <50 | 339 | 11,100 | 6,600 | 6,200 |
| 990.29 | 20 Aug 02 | 16.23 | 16.22 | 0.01 | NA | 974.07 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 May 03 | 20.90 | NA | NA | NA | 969.39 | 1,560 | 2,950 | 320 | **5,210** | 10,040 | <10 | 152 | 8,620 | 2,160 | 5,550 |
| | 03 Dec 03 | 18.96 | NA | NA | NA | 971.33 | 1,200 | 1,660 | 1,360 | **8,160** | 12,380 | <10 | 610 | **67,300** | <250 | 24,800 |
| | 25 Feb 04 | 21.60 | NA | NA | NA | 968.69 | 1,180 | 2,280 | 881 | 4,680 | 9,021 | <10 | 424 | **275,000** | <250 | 11,600 |
| | 13 Sep 04 | NM | NA | NA | NA | NA | 925 | 1,130 | 618 | 3,111 | 5,784 | <10 | 252 | 8,700 | 5,600 | 4,140 |
| | 22 Feb 05 | 20.05 | NA | NA | NA | 970.24 | 716 | 1,380 | 518 | 2,808 | 5,422 | <4.0 | 194 | 8,400 | 1,290 | 3,230 |
| | 10 May 06 | 18.71 | NA | NA | NA | 971.58 | 722 | 1,430 | 552 | 3,515 | 6,219 | <2.0 | 239 | 10,700 | 1,520 | 4,480 |
| | 20 Sep 06 | 19.31 | NA | NA | NA | 970.98 | 784 | 110 | 623 | 2,437 | 3,954 | <4.0 | 249 | 8,880 | 2,260 | 2,800 |
| | 26 Apr 07 | 16.55 | NA | NA | NA | 973.74 | 380 | 805 | 460 | 1,947 | 3,592 | <4.0 | 137 | 4,110 | <100 | 2,320 |
| | 17 Oct 07 | 19.84 | NA | NA | NA | 970.45 | 726 | 989 | 677 | 2,416 | 4,808 | <2.0 | 189 | 8,270 | 766 | 2,380 |
| | 27 Mar 08 | 16.68 | NA | NA | NA | 973.61 | 464 | 623 | 243 | 2,036 | 3,366 | <2.0 | 158 | 5,750 | 361 | 2,290 |
| | 24 Jul 08 | 16.67 | NA | NA | NA | 973.62 | 422 | 540 | 341 | 2,046 | 3,349 | <2.0 | 177 | 7,420 | 1,010 | 2,340 |
| | 16 Oct 08 | 19.06 | NA | NA | NA | 971.23 | 263 | 542 | 115 | 1,763 | 2,683 | <1.0 | 121 | 4,100 | 527 | 1,730 |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| Units | | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| MCP Method 1 GW-2 Standard: | | | | | | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| MCP Method 1 GW-3 Standard: | | | | | | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| GT-3 | 18 Oct 97 | 14.75 | 14.67 | 0.08 | NA | 975.58 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 990.27 | 25 Nov 96 | 14.96 | 14.94 | 0.02 | NA | 975.33 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 19 Dec 96 | 13.30 | 13.28 | 0.02 | NA | 976.99 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 31 Jan 97 | 14.18 | 14.16 | 0.02 | NA | 976.11 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 06 Mar 97 | 13.90 | NA | NA | NA | 976.37 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 01 Apr 99 | 13.80 | 13.78 | 0.02 | 0.10 | 976.49 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 990.27 | 24 Nov 99 | 17.05 | 15.95 | 1.10 | NA | 974.06 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 28 Jan 00 | 16.80 | 15.89 | 0.91 | 0.50 | 974.16 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 10 Feb 00 | 16.66 | 16.32 | 0.34 | 0.50 | 973.87 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 21 Apr 00 | 13.90 | 13.63 | 0.27 | 0.03 | 976.58 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 23 Aug 00 | 13.15 | NA | 0.00 | NA | 977.12 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 20 Nov 00 | 14.83 | 14.82 | 0.01 | 0.03 | 975.45 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 Dec 00 | 14.78 | 14.76 | 0.02 | 0.00 | 975.51 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 Jan 01 | 16.21 | 15.65 | 0.56 | 0.25 | 974.49 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Jul 01 | 14.04 | 13.93 | 0.11 | NA | 976.31 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 12 Oct 01 | 15.89 | 15.10 | 0.79 | 0.80 | 974.98 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 990.53 | 20 Aug 02 | 16.89 | NA | 0.00 | NA | 973.64 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Dec 02 | 15.69 | 14.50 | 1.19 | 0.80 | 975.74 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 May 03 | 17.65 | NA | NA | NA | 972.88 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 03 Dec 03 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GT-4 | 30 Nov 98 | 17.50 | NA | NA | NA | 975.59 | 298 | 170 | 369 | 3,500 | 4,337 | 1,020 | 500 | 1,630 | 15,400 | 11,800 |
| 993.09 | 01 Apr 99 | 13.54 | NA | NA | NA | 979.55 | 269 | 33 | 126 | 1,519 | 1,947 | 1,690 | 468 | <250 | 3,700 | 8,910 |
| | 24 Aug 99 | 16.97 | NA | NA | NA | 976.12 | 309 | 76 | 160 | 1,953 | 2,498 | 1,540 | - | <500 | 4,860 | 8,850 |
| | 24 Nov 99 | 15.55 | NA | NA | NA | 977.54 | 588 | 63 | 174 | 1,998 | 2,823 | 2,230 | 874 | <500 | 6,530 | 8,600 |
| | 21 Apr 00 | 12.17 | NA | NA | NA | 980.92 | 308 | 36 | 100 | 1,335 | 1,779 | 533 | 390 | <500 | 8,620 | 6,900 |
| | 23 Aug 00 | 11.32 | NA | NA | NA | 981.77 | 166 | 79 | 307 | 2,026 | 2,578 | 66 | 476 | <500 | 5,620 | 7,160 |
| | 09 Aug 05 | DESTROYED | | | | | | | | | | | | | | |
| GT-5 | 21 Apr 00 | 13.22 | 13.05 | 0.17 | 0.02 | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 23 Aug 00 | 12.67 | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Jul 01 | 12.52 | NA | NA | NA | NA | 21 | 1,230 | 875 | **9,730** | 11,856 | 133 | 431 | **4,700** | **23,400** | **13,200** |
| NA | 12 Oct 01 | 15.59 | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 990.15 | 20 Aug 02 | 15.58 | 15.57 | 0.01 | NA | 974.58 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Dec 02 | 13.85 | NA | NA | NA | 976.30 | 12.9 | 519 | 945 | **15,400** | 16,876.9 | 15.1 | 847 | **11,900** | **11,300** | **17,400** |
| | 29 May 03 | 17.20 | NA | NA | NA | 972.95 | <10 | 56.7 | 173 | **5,720** | 5,949.7 | <10 | 365 | **3,680** | 2,750 | **14,500** |
| | 24 Feb 04 | 18.43 | NA | NA | NA | 971.72 | <10 | 27.2 | 194 | **3,577** | 3,798.2 | 18.3 | 414 | **9,400** | <250 | **23,700** |
| | 27 Mar 08 | 13.03 | NA | NA | NA | 977.12 | <2.0 | 2.1 | 58 | 532 | 592.1 | <2.0 | 73.9 | 2,170 | 387 | 4,580 |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | | | | | | MCP Method 1 GW-2 Standard: | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | | | | | | MCP Method 1 GW-3 Standard: | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| GT-6 | 18 Oct 96 | 14.86 | 14.82 | 0.04 | NA | 975.44 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 990.27 | 25 Nov 96 | 14.91 | 14.87 | 0.04 | NA | 975.39 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 19 Dec 96 | 13.49 | 13.45 | 0.04 | NA | 976.81 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 31 Jan 97 | 14.34 | 14.31 | 0.03 | NA | 975.95 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 06 Mar 97 | 13.81 | NS | NS | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 01 Apr 99 | 14.14 | NS | NS | NA | NS | 1,220 | 5,010 | 560 | **8,160** | 14,950 | 230 | 410 | 6,400 | 5,100 | 10,200 |
| | 24 Nov 99 | 15.69 | NA | 0.00 | NA | 974.58 | 2,420 | 9,080 | 2,190 | **11,610** | 25,300 | 1,270 | 770 | 12,400 | 6,800 | 8,200 |
| | 28 Jan 00 | 15.99 | 15.97 | 0.02 | 0.00 | 974.30 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 21 Apr 00 | 13.43 | 13.28 | 0.15 | NA | 976.95 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 23 Aug 00 | 13.89 | 13.86 | 0.03 | 0.00 | 976.40 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 20 Nov 00 | 14.98 | 14.95 | 0.03 | 0.00 | 975.31 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 Jan 01 | 16.02 | 15.59 | 0.43 | 0.25 | 974.58 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Jul 01 | 14.30 | 14.27 | 0.03 | NA | 975.84 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 12 Oct 01 | 16.23 | 16.22 | 0.01 | NA | 973.90 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 20 Aug 02 | 16.42 | 16.41 | 0.01 | NA | 973.71 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 May 03 | 19.10 | 19.00 | 0.10 | NA | 971.10 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 02 Dec 03 | 17.20 | NA | NA | NA | 972.92 | 901 | 11,300 | **10,200** | **46,500** | 68,901 | <100 | 4,560 | **120,000** | <2500 | **135,000** |
| | 27 Feb 04 | NA | 20.44 | 0.02 | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 10 May 06 | 17.74 | 17.62 | 0.12 | NA | 972.53 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GT-7 | 19 May 98 | 14.08 | NA | NA | NA | 975.77 | <25 | <50 | <25 | 536 | 536 | <25 | 188 | <250 | 500 | <250 |
| 989.85 | 30 Nov 98 | 16.23 | NA | NA | NA | 973.62 | 6.3 | <10 | <5 | 22 | 28.6 | <5 | 94 | <50 | 195 | 138 |
| | 01 Apr 99 | 13.80 | NA | NA | NA | 976.05 | 2.6 | 37 | 49 | 667 | 756.2 | <5.0 | 118 | 434 | 1,210 | 1,980 |
| | 24 Aug 99 | 16.35 | NA | NA | NA | 973.50 | 8.2 | <5.0 | <5.0 | 14 | 22.2 | <5.0 | 108 | <100 | <100 | 110 |
| | 24 Nov 99 | 15.24 | NA | NA | NA | 974.61 | 7.6 | 15 | 60 | 156.4 | 239.5 | <5.0 | 123 | 230 | 280 | 380 |
| | 21 Apr 00 | 13.73 | NA | NA | NA | 976.12 | 5.9 | 10.5 | 31.8 | 176.1 | 224.3 | <5.0 | 75.7 | 410 | 400 | 380 |
| | 23 Aug 00 | 13.10 | NA | NA | NA | 976.75 | 6.1 | 12.4 | 25.1 | 160.6 | 204.2 | <5.0 | 93.8 | 280 | 280 | 440 |
| | 12 Jan 01 | 14.72 | NA | NA | NA | 975.13 | 3.8 | <5.0 | 7.8 | <15 | 11.6 | <5.0 | 12.5 | <100 | <100 | <100 |
| | 11 Jul 01 | 13.82 | NA | NA | NA | 976.03 | 5.6 | <5.0 | 19.3 | 43.1 | 68.0 | <5.0 | 63.3 | <100 | 260 | 250 |
| | 12 Oct 01 | 15.75 | NA | NA | NA | 974.10 | 7.6 | <5.0 | <5.0 | <15 | 7.6 | <5.0 | <5.0 | <100 | <100 | <100 |
| 989.76 | 20 Aug 02 | 13.23 | NA | NA | NA | 976.53 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Dec 02 | 14.82 | NA | NA | NA | 974.94 | 4.1 | 7.5 | 50.6 | 179.0 | 241.2 | <1.0 | 34.7 | 211 | 117 | 319 |
| | 29 May 03 | 19.20 | NA | NA | NA | 970.56 | <2.0 | <2.0 | <2.0 | 2.1 | 2.1 | <2.0 | <3.0 | <50 | <50 | <50 |
| | 02 Dec 03 | 17.31 | NA | NA | NA | 972.45 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | MCP Method 1 GW-2 Standard: | | | | | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | MCP Method 1 GW-3 Standard: | | | | | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| **RW-1** | 18 Oct 96 | 16.00 | NA | NA | NA | 976.48 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 992.48 | 31 Jan 97 | NS | NS | NS | 1.00 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 06 Mar 97 | NS | NS | NS | 0.10 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 01 Apr 99 | NS | NS | NS | 1.50 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 24 Aug 99 | 20.20 | 18.98 | 1.22 | 2.00 | 973.21 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 28 Jan 00 | 18.52 | 18.30 | 0.22 | 0.30 | 974.13 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 10 Feb 00 | NS | NS | 0.67 | 2.00 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 21 Apr 00 | 16.80 | 16.50 | 0.30 | 0.50 | 975.91 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 23 Aug 00 | 16.20 | 15.85 | 0.35 | NA | 976.55 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 20 Nov 00 | 16.80 | 14.00 | 2.80 | 1.75 | 977.81 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 Dec 00 | 16.75 | 16.70 | 0.05 | 2.00 | 975.77 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 Jan 01 | 17.86 | 17.76 | 0.10 | 0.25 | 974.70 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Jul 01 | 17.17 | 15.40 | 1.77 | 1.00 | 976.66 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 12 Oct 01 | 18.34 | 18.30 | 0.04 | 0.60 | 974.17 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 992.46 | 20 Aug 02 | 21.46 | 17.63 | 3.83 | 0.00 | 973.91 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 May 03 | 22.50 | 20.95 | 1.55 | NA | 971.14 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| **RW-101** | 24 Feb 04 | 20.33 | NA | NA | NA | 969.66 | <2.0 | <2.0 | <2.0 | 5.9 | 5.9 | <2.0 | <3.0 | <50 | <50 | <50 |
| 989.99 | | | | | | | | | | | | | | | | |
| **RW-2** | 28 Jan 00 | 17.50 | 16.05 | 1.45 | 1.10 | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| NA | 30 Mar 00 | 16.33 | 14.95 | 1.38 | 3.00 | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 21 Apr 00 | 14.52 | 14.39 | 0.13 | 0.50 | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 23 Aug 00 | 13.69 | 13.65 | 0.04 | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 20 Nov 00 | 15.22 | NS | NS | 0.60 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 Jan 01 | 17.10 | 16.00 | 1.10 | 1.75 | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Jul 01 | 15.59 | 14.57 | 1.02 | 1.20 | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 12 Oct 01 | 17.30 | 17.22 | 0.08 | 0.10 | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 991.49 | 20 Aug 02 | 17.58 | NA | NA | NA | 973.91 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Dec 02 | 16.45 | NA | NA | NA | 975.04 | 3,320 | 13,700 | 3,390 | **20,600** | 41,010 | 30 | 1,160 | 18,700 | 13,000 | 13,600 |
| | 29 May 03 | 18.60 | NA | NA | NA | 972.89 | 2,250 | 9,870 | 2,570 | **12,450** | 27,140 | <20 | 789 | 20,600 | 6,200 | 14,800 |
| | 10 Aug 05 | 19.38 | NA | NA | NA | 972.11 | 120 | 71 | 35 | 112 | 339 | 3 | 34 | 567 | 168 | 341 |
| | 25 Jul 08 | 16.13 | NA | NA | NA | 975.36 | 48.9 | 2,330 | 1,140 | **7,840** | 11,358.9 | <2.0 | 409 | 4,110 | 884 | 6,410 |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | | | | | | MCP Method 1 GW-2 Standard: | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | | | | | | MCP Method 1 GW-3 Standard: | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| **RW-3** | 31 Jan 97 | NS | NS | NS | 0.40 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 989.89 | 06 Mar 97 | NS | NS | NS | 1.20 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 28 Jan 00 | 16.96 | 15.32 | 1.64 | 0.60 | 974.18 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 30 Mar 00 | 14.30 | 13.52 | 0.78 | 1.00 | 976.18 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 21 Apr 00 | 14.60 | 14.09 | 0.51 | 0.06 | 975.68 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 23 Aug 00 | 13.66 | NA | 0.00 | NA | 976.23 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 20 Nov 00 | 14.83 | 14.82 | 0.01 | NA | 975.07 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 Jan 01 | 16.18 | 15.72 | 0.46 | 0.50 | 974.06 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Jul 01 | 14.55 | 14.34 | 0.21 | 0.50 | 975.50 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 12 Oct 01 | 16.07 | 15.87 | 0.20 | 0.20 | 973.97 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 20 Aug 02 | 16.16 | 16.15 | 0.01 | NA | 973.84 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Dec 02 | 15.65 | 14.15 | 1.50 | 0.20 | 975.48 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 29 May 03 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| **GES-201** | 11 Dec 02 | 15.14 | NA | NA | NA | 974.92 | 71.2 | 9.8 | 466 | 1,100 | 1,647 | 51.2 | 176 | 2,110 | 2,100 | 4,330 |
| 990.06 | 29 May 03 | 17.90 | NA | NA | NA | 972.16 | 41.1 | 74.5 | 353 | 519.5 | 988.1 | 46.1 | 69.3 | 3,160 | 542 | 2,970 |
| | 20 Jun 03 | 18.36 | NA | NA | NA | 971.70 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 24 Feb 04 | 17.10 | NA | NA | NA | 972.96 | 6.0 | <2.0 | 18.3 | 15.8 | 40.1 | 10 | 6.2 | 1,200 | <50 | 531 |
| | 13 Sep 04 | NM | NA | NA | NA | NA | 7.6 | <2.0 | 6.3 | <4.0 | 13.9 | <2.0 | 4.1 | 1,100 | 88 | 509 |
| | 22 Feb 05 | 16.80 | NA | NA | NA | 973.26 | 2.9 | 4.1 | 142.0 | 224.1 | 373.1 | <2.0 | 35.2 | 332 | 207 | 791 |
| | 10 Aug 05 | 18.04 | NA | NA | NA | 972.02 | 4.2 | <2.0 | 7.1 | <2.0 | 11.3 | <2.0 | <3.0 | 367 | <50 | 83 |
| | 10 May 06 | 16.88 | NA | NA | NA | 973.18 | 4.1 | <2.0 | 23.6 | 12.5 | 40.2 | <2.0 | 4.2 | 367 | 61.1 | 220 |
| | 20 Sep 06 | 17.63 | NA | NA | NA | 972.43 | 4.7 | <2.0 | 8.5 | 5.4 | 18.6 | <2.0 | <3.0 | 358 | 80.0 | 167 |
| | 26 Apr 07 | 14.66 | NA | NA | NA | 975.40 | <2.0 | <2.0 | 12.4 | 28.9 | 41.3 | <2.0 | 5.5 | 198 | <50 | 205 |
| | 17 Oct 07 | 18.22 | NA | NA | NA | 971.84 | 5.2 | 2.8 | 10.1 | 52.3 | 70.4 | <2.0 | 25.6 | 892 | 106.0 | 752 |
| | 24 Jul 08 | 15.09 | NA | NA | NA | 974.97 | 5.5 | 5.4 | 31.4 | 76.7 | 119.0 | <2.0 | 72.1 | 1,070 | 184 | 1,040 |
| | 16 Oct 08 | 16.92 | NA | NA | NA | 973.14 | <2.0 | <2.0 | 16.2 | ND | 16.2 | <1.0 | 17.5 | 254 | <50 | 183 |
| † **GES-202** | 11 Dec 02 | 13.69 | NA | NA | NA | 976.42 | <0.5 | <1.0 | <1.0 | <1.0 | ND | 5.6 | <5.0 | <50 | <50 | <50 |
| 990.11 | 29 May 03 | 17.60 | NA | NA | NA | 972.51 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 20 Jun 03 | 18.49 | NA | NA | NA | 971.62 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 02 Dec 03 | 16.35 | NA | NA | NA | 973.76 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 24 Feb 04 | 20.58 | NA | NA | NA | 969.53 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | MCP Method 1 GW-2 Standard: | | | | | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | MCP Method 1 GW-3 Standard: | | | | | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| † GES-203 | 11 Dec 02 | 11.90 | NA | NA | NA | 977.94 | <0.50 | 2.9 | 4.9 | 75.3 | 83.1 | <1.0 | 99.3 | 116 | <50 | 882 |
| 989.84 | 29 May 03 | 13.50 | NA | NA | NA | 976.34 | <2.0 | <2.0 | <2.0 | 10.0 | 10.0 | <2.0 | 67.0 | 104 | 109 | 581 |
| | 20 Jun 03 | 16.21 | NA | NA | NA | 973.63 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 02 Dec 03 | 13.67 | NA | NA | NA | 976.17 | <2.0 | <2.0 | <2.0 | 9.5 | 9.5 | <2.0 | 34.0 | 62.8 | <50 | 479 |
| | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | 72.8 |
| | 21 Feb 05 | 16.04 | NA | NA | NA | 973.80 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 17 Oct 07 | 17.35 | NA | NA | NA | 972.49 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 27 Mar 08 | 7.14 | NA | NA | NA | 982.70 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 24 Jul 08 | 13.02 | NA | NA | NA | 976.82 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 08 | 14.67 | NA | NA | NA | 975.17 | <2.0 | <2.0 | <2.0 | ND | ND | <1.0 | <3.0 | <50 | <50 | <50 |
| GES-204 | 11 Dec 02 | 14.86 | NA | NA | NA | 974.57 | <0.50 | <1.0 | <1.0 | <1.0 | ND | <1.0 | <5.0 | <50 | <50 | <50 |
| 989.43 | 29 May 03 | 17.00 | NA | NA | NA | 972.43 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 20 Jun 03 | 19.58 | NA | NA | NA | 969.85 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 02 Dec 03 | 14.69 | NA | NA | NA | 974.74 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 24 Feb 04 | 20.78 | NA | NA | NA | 968.65 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 07 | 18.86 | NA | NA | NA | 970.57 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| GES-205 | 11 Dec 02 | 14.07 | NA | NA | NA | 974.99 | <0.50 | <1.0 | <1.0 | <1.0 | ND | <1.0 | <5.0 | <50 | <50 | <50 |
| 989.06 | 30 May 03 | 18.50 | NA | NA | NA | 970.56 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 01 Dec 03 | 19.33 | NA | NA | NA | 969.73 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 10 May 06 | 16.64 | NA | NA | NA | 972.42 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 21 Sep 06 | 16.02 | NA | NA | NA | 973.04 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 07 | 18.46 | NA | NA | NA | 970.60 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 27 Mar 08 | 12.52 | NA | NA | NA | 976.54 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 24 Jul 08 | 16.17 | NA | NA | NA | 972.89 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 08 | 17.52 | NA | NA | NA | 971.54 | <2.0 | <2.0 | <2.0 | ND | ND | <1.0 | <3.0 | <50 | <50 | <50 |
| * GES-206 | 11 Dec 02 | 23.30 | 12.75 | 10.55 | NA | 973.78 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 989.06 | 04 Dec 03 | 21.34 | 19.48 | 1.86 | NA | 969.13 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 27 Feb 04 | 21.86 | 21.83 | 0.03 | NA | 967.22 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 12 Mar 04 | 22.96 | 22.55 | 0.41 | NR | 966.25 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | | | | | | MCP Method 1 GW-2 Standard: | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | | | | | | MCP Method 1 GW-3 Standard: | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| † GES-208 | 11 Dec 02 | 13.37 | NA | NA | NA | 980.10 | 470 | 3,790 | 1,980 | **13,400** | 19,640 | 401 | 416 | **7,810** | **10,300** | **8,990** |
| 993.47 | 29 May 03 | 16.00 | NA | NA | NA | 977.47 | 311 | 2,950 | 2,360 | **9,920** | 15,541 | 237 | 547 | **7,500** | **6,140** | **7,510** |
| | 02 Dec 03 | 16.85 | NA | NA | NA | 976.62 | 512 | 224 | 1,960 | **9,010** | 11,706 | 82.7 | 510 | **9,440** | 52.0 | **9,030** |
| | 27 Feb 04 | 20.00 | NA | NA | NA | 973.47 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 13 Sep 04 | NM | NA | NA | NA | NA | 630 | 298 | 1,520 | **5,591** | 8,039 | 26.3 | 720 | **4,790** | 4,850 | **8,720** |
| | 23 Feb 05 | 18.60 | NA | NA | NA | 974.87 | 745 | 616 | 2,070 | **7,300** | 10,731 | <10 | 588 | **9,720** | 3,400 | **10,400** |
| | 10 Aug 05 | 19.67 | NA | NA | NA | 973.80 | 207 | 55.7 | 286 | 1,167 | 1,715.7 | <2.0 | 147 | **6,140** | 305 | 6,810 |
| | 10 May 06 | 15.50 | NA | NA | NA | 977.97 | 314 | 632 | 3,000 | **15,580** | 19,526 | <2.0 | 598 | **6,210** | 1,080 | **33,600** |
| | 20 Sep 06 | 17.96 | NA | NA | NA | 975.51 | 302 | 525 | 2,090 | **10,020** | 12,937 | <2.0 | 1,100 | **8,710** | **10,900** | **17,800** |
| | 26 Apr 07 | 11.67 | NA | NA | NA | 981.80 | 10.4 | 212 | 388 | 3,714 | 4,324 | <4.0 | 200 | 1,450 | <100 | **8,940** |
| | 17 Oct 07 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | **NS** |
| | 28 Mar 08 | 11.76 | NA | NA | NA | 981.71 | 36.9 | 295 | 1,140 | 4,837 | 6,309 | <4.0 | 433 | 3,260 | 1,890 | **10,700** |
| | 25 Jul 08 | 15.94 | NA | NA | NA | 977.53 | 38.1 | 415 | 1,870 | **8,830** | 11,153 | <10 | 621 | **5,980** | **5,880** | **15,200** |
| | 17 Oct 08 | 18.42 | NA | NA | NA | 975.05 | 49.1 | 520 | 2,740 | **19,930** | 23,239 | <5.0 | 1,090 | **13,600** | **19,500** | **68,000** |
| | 17 Oct -08 Dup | 18.42 | NA | NA | NA | 975.05 | 48.6 | 457 | 2,420 | **11,596** | 14,522 | <2.0 | 808 | **8,950** | **6,850** | **27,700** |
| GES-209 | 21 Mar 03 | 12.96 | NA | NA | NA | 976.36 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 989.32 | 30 May 03 | 13.10 | NA | NA | NA | 976.22 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 03 Dec 03 | 13.09 | NA | NA | NA | 976.23 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 27 Feb 04 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 989.31 | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 22 Feb 05 | 16.00 | NA | NA | NA | 973.31 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| GES-210 | 30 May 03 | 9.80 | NA | NA | NA | 975.86 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 985.66 | 04 Dec 03 | 8.23 | NA | NA | NA | 977.43 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 27 Feb 04 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 09 Aug 05 | 13.00 | NA | NA | NA | 969.29 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GES-211 | 21 Mar 03 | 13.66 | NA | NA | NA | 977.21 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 990.87 | 30 May 03 | 14.40 | NA | NA | NA | 976.47 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 04 Dec 03 | 14.63 | NA | NA | NA | 976.24 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.1 | <3.1 | <50 | <50 | <50 |
| | 27 Feb 04 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 09 Aug 05 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GES-212 | 21 Mar 03 | 10.89 | NA | NA | NA | 976.74 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 987.63 | 30 May 03 | 11.65 | NA | NA | NA | 975.98 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 05 Dec 03 | MISSING under mud. | | | | | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 987.59 | 14 Sep 04 | NM | NA | NA | NA | NA | 12.2 | 55.3 | 61.4 | 2,047 | 2,175.9 | <2.0 | 232 | 1,290 | 2,590 | 7,440 |
| | 21 Feb 05 | 11.69 | NA | NA | NA | 975.90 | 3.3 | <2.0 | 19.2 | 292 | 314.5 | <2.0 | 49.6 | 490 | 411 | 942 |
| | 10 Aug 05 | 12.24 | NA | NA | NA | 975.35 | <2.0 | <2.0 | <2.0 | 34.6 | 34.6 | <2.0 | 6.7 | <50 | <50 | <50 |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| Units | | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| MCP Method 1 GW-2 Standard: | | | | | | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| MCP Method 1 GW-3 Standard: | | | | | | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| **GES-213** | 21 Mar 03 | 9.53 | NA | NA | NA | 979.67 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 989.20 | 30 May 03 | 9.90 | NA | NA | NA | 979.30 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 04 Dec 03 | 10.74 | NA | NA | NA | 978.46 | <2.0 | <2.0 | <2.0 | 3.3 | 3.3 | <2.0 | <3.0 | 348 | <50 | <50 |
| | 27 Feb 04 | 13.87 | 13.85 | 0.02 | NA | 975.35 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| **GES-214** | 21 Mar 03 | 10.65 | NA | NA | NA | 975.95 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 986.60 | 30 May 03 | 12.20 | NA | NA | NA | 974.40 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 05 Dec 03 | 11.79 | NA | NA | NA | 974.81 | 228 | 44.4 | 76.6 | 964 | 1,313 | <2.0 | 42.7 | 691 | 109 | 806 |
| | 27 Feb 04 | 15.94 | NA | NA | NA | 970.66 | 195 | 4.6 | 181 | 258.2 | 638.8 | <2.0 | 115 | 868 | <50 | 1,030 |
| 986.57 | 13 Sep 04 | NM | NA | NA | NA | NA | 3.2 | <2.0 | 4.0 | 26.3 | 33.5 | 7.8 | 60.0 | 71.3 | <50 | 564 |
| | 21 Feb 05 | 13.38 | NA | NA | NA | 973.19 | <2.0 | <2.0 | <2.0 | 3.3 | 3.3 | <2.0 | <3.0 | <50 | <50 | <50 |
| | 10 Aug 05 | 15.30 | NA | NA | NA | 971.27 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| **GES-215** | 21 Mar 03 | 11.46 | NA | NA | NA | 975.19 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 986.65 | 30 May 03 | 13.70 | NA | NA | NA | 972.95 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 04 Dec 03 | 11.66 | NA | NA | NA | 974.99 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 27 Feb 04 | 15.91 | NA | NA | NA | 970.74 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | 4.3 | <3.0 | <50 | <50 | <50 |
| | 21 Feb 05 | 15.39 | NA | NA | NA | 971.26 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 10 Aug 05 | 15.45 | NA | NA | NA | 971.20 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| **GES-216** | 10 Apr 03 | 14.05 | NA | NA | NA | NA | 245 | 559 | 602 | 2,777 | 4,183 | <4.0 | 261 | 2,820 | 1,000 | 4,110 |
| 986.88 | 30 May 03 | 20.50 | NA | NA | NA | NA | 66.7 | 1,330 | 2,010 | **9,010** | 12,416.7 | <10 | 1,110 | 9,730 | 4,380 | 20,300 |
| | 03 Dec 03 | 19.28 | 19.25 | 0.03 | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 01 Feb 04 | 20.91 | 20.80 | 0.11 | NA | 966.05 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 10 Aug 05 | 22.69 | NA | NA | NA | 964.19 | 10.5 | 72.9 | 201.0 | 3,403 | 3,687.4 | <10.0 | 465.0 | 6,240 | <250 | 22,900 |
| | 09 May 06 | 17.05 | NA | NA | NA | 969.83 | 11.1 | 14.5 | 11.0 | 42.8 | 79.4 | <2.0 | 7.1 | 230 | 100 | 541 |
| | 21 Sep 06 | 17.53 | NA | NA | NA | 969.35 | 245.0 | 327.0 | 267.0 | 672 | 1,511.0 | <2.0 | 103.0 | 2,790 | 751 | 1,160 |
| **GES-217** | 10 Apr 03 | 13.46 | NA | NA | NA | NA | 19.6 | 14.4 | 11.6 | 32 | 77.6 | 2.8 | <3.0 | 88.1 | <50 | <50 |
| 986.76 | 30 May 03 | 20.65 | NA | NA | NA | NA | 450 | 158 | 191 | 333.2 | 1,132.2 | <2.0 | 61.4 | 2,070 | 68.0 | 549 |
| | 05 Dec 03 | 19.10 | NA | NA | NA | NA | 539 | 10,100 | 4,540 | **40,100** | 55,279 | 100 | 5,120 | **67,700** | 3,400 | **85,600** |
| | 26 Feb 04 | 20.78 | NA | NA | NA | 965.98 | 28.1 | 442 | 300 | 2,636 | 3,406 | <2.0 | 416 | 14,700 | <50 | 14,200 |
| | 12 Mar 04 | 21.50 | NA | NA | NA | 965.26 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 21 Feb 05 | 21.13 | 20.53 | 0.60 | NA | 966.09 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 10 Aug 05 | 22.68 | NA | NA | NA | 964.08 | 383 | 1,360 | **5,250** | **36,850** | 43,843 | <50 | 4,550 | **220,000** | 34,000 | **171,000** |
| | 09 May 06 | 16.94 | NA | NA | NA | 969.82 | 90.5 | 15.5 | 96.8 | 906 | 1,109.2 | 6.3 | 176 | 6,380 | <50 | 11,000 |
| | 21 Sep 06 | 17.31 | NA | NA | NA | 969.45 | 119.0 | 39.5 | 337.0 | 673 | 1,168.3 | <2.0 | 295 | 16,900 | 7,110 | 5,820 |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | | | | | MCP Method 1 GW-2 Standard: | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | | | | | MCP Method 1 GW-3 Standard: | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| GES-218 | 03 Dec 03 | 21.10 | 20.46 | 0.64 | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 989.74 | 27 Feb 04 | 25.01 | NA | NA | NA | 964.73 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 12 Mar 04 | NM | 22.66 | NM | NR | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 09 Aug 05 | DRY | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| GES-219 | 30 May 03 | 16.10 | NA | NA | NA | NA | 416 | 259 | 199 | 477.9 | 1,351.9 | <4.0 | 64.0 | 1,850 | <100 | 695 |
| 981.58 | 05 Dec 03 | 13.84 | NA | NA | NA | NA | 232 | 19.7 | 22.0 | 68.4 | 342.1 | 90.7 | 32.6 | 1,280 | <50 | 199 |
| | 27 Feb 04 | 15.55 | NA | NA | NA | 966.03 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 12 Mar 04 | 16.99 | NA | NA | NA | 964.59 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 13 Sep 04 | NM | NA | NA | NA | NA | 2.8 | <2.0 | <2.0 | <4.0 | 2.8 | 2.7 | <3.0 | <50 | <50 | <50 |
| | 22 Feb 05 | 15.65 | NA | NA | NA | 965.93 | 115.0 | <2.0 | 13.4 | <4.0 | 128.4 | 33.6 | <3.0 | 400 | <50 | 73.0 |
| | 11 Aug 05 | 15.41 | NA | NA | NA | 966.17 | <2.0 | <2.0 | <2.0 | 12.8 | 12.8 | <2.0 | 6.1 | <50 | 93.7 | 295 |
| | 09 May 06 | 11.83 | NA | NA | NA | 969.75 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 21 Sep 06 | 12.24 | NA | NA | NA | 969.34 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 07 | 12.49 | NA | NA | NA | 969.09 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 27 Mar 08 | 10.40 | NA | NA | NA | 971.18 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | 226 | 96.5 |
| | 24 Jul 08 | 9.85 | NA | NA | NA | 971.73 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 08 | 12.29 | NA | NA | NA | 969.29 | <2.0 | <2.0 | <2.0 | ND | ND | <1.0 | <3.0 | <50 | <50 | <50 |
| GES-220 | 30 May 03 | 19.50 | NA | NA | NA | NA | 688 | 121 | 299 | 470.6 | 1,578.6 | 38.5 | 73.9 | 2,100 | <100 | 862 |
| | 05 Dec 03 | 18.70 | NA | NA | NA | NA | 683 | 134 | 253 | 557 | 1,627 | 69.4 | 104 | 3,600 | 112 | 822 |
| 988.39 | 26 Feb 04 | 20.78 | NA | NA | NA | 967.61 | 91.6 | 2.4 | <2.0 | 7.3 | 101.3 | 12.0 | 11.3 | 603 | <50 | 94.0 |
| | 12 Mar 04 | 20.56 | NA | NA | NA | 967.83 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Aug 05 | 27.25 | NA | NA | NA | 961.14 | 347 | 10.8 | 209 | 143.8 | 710.6 | 29.3 | 36.5 | 2,150 | 280 | 466 |
| | 16 Oct 07 | 19.55 | NA | NA | NA | 968.84 | 10.7 | <2.0 | <2.0 | <4.0 | 10.7 | <2.0 | <3.0 | <50 | <50 | <50 |
| | 27 Mar 08 | 15.61 | NA | NA | NA | 972.78 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 24 Jul 08 | 15.32 | NA | NA | NA | 973.07 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 08 | 16.95 | NA | NA | NA | 971.44 | <2.0 | <2.0 | <2.0 | ND | ND | <1.0 | <3.0 | <50 | <50 | <50 |
| GES-221 | 04 Dec 03 | 19.00 | NA | NA | NA | 968.28 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 987.28 | 27 Feb 04 | 20.38 | NA | NA | NA | 966.90 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 12 Mar 04 | 21.54 | NA | NA | NA | 965.74 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 21 Feb 05 | 20.09 | NA | NA | NA | 967.19 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 10 Aug 05 | 21.31 | NA | NA | NA | 965.97 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 09 May 06 | 17.25 | NA | NA | NA | 970.03 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 21 Sep 06 | 17.77 | NA | NA | NA | 969.51 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| GES-222 | 05 Dec 03 | 19.00 | NA | NA | NA | NA | 1,640 | 9,010 | 993 | **9,370** | 21,013 | 57.5 | 473 | 21,800 | 1,760 | 8,090 |
| 986.73 | 26 Feb 04 | 20.70 | NA | NA | NA | 966.03 | 37.9 | 127 | 54.2 | 700 | 919.1 | 11.0 | 44.8 | 1,690 | <50 | 959 |
| | 12 Mar 04 | 21.60 | 21.10 | 0.50 | NR | 965.51 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 09 Aug 05 | 19.05 | 19.00 | 0.05 | NA | 967.72 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | | | | | | MCP Method 1 GW-2 Standard: | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | | | | | | MCP Method 1 GW-3 Standard: | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| GES-223 | 02 Dec 03 | 17.63 | NA | NA | NA | NA | 674 | 3.6 | 9.3 | 7.6 | 694.5 | 1,600 | <3.0 | 1,090 | <50 | 177 |
| 989.16 | 24 Feb 04 | 21.00 | NA | NA | NA | 968.16 | 925 | <2.0 | <2.0 | <4.0 | 925 | 1,460 | <3.0 | 1,430 | <50 | 69.1 |
| | 13 Sep 04 | NM | NA | NA | NA | NA | 98.6 | <2.0 | <2.0 | <4.0 | 98.6 | 309 | <3.0 | <50 | <50 | <50 |
| | 22 Feb 05 | 19.45 | NA | NA | NA | 969.71 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 10 Aug 05 | 19.54 | NA | NA | NA | 969.62 | <2.0 | <2.0 | <2.0 | 5.3 | 5.3 | 7.7 | <3.0 | <50 | <50 | 76.5 |
| | 09 May 06 | 17.90 | NA | NA | NA | 971.26 | <2.0 | <2.0 | <2.0 | <4.0 | ND | 7.4 | <3.0 | <50 | <50 | <50 |
| | 20 Sep 06 | 18.50 | NA | NA | NA | 970.66 | <2.0 | <2.0 | <2.0 | <4.0 | ND | 30.9 | <3.0 | <50 | <50 | <50 |
| | 26 Apr 07 | 15.96 | NA | NA | NA | 973.20 | <2.0 | <2.0 | <2.0 | <4.0 | ND | 4.4 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 07 | 18.94 | NA | NA | NA | 970.22 | <2.0 | <2.0 | <2.0 | <4.0 | ND | 7.0 | <3.0 | <50 | <50 | <50 |
| | 27 Mar 08 | 16.03 | NA | NA | NA | 973.13 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 24 Jul 08 | 16.10 | NA | NA | NA | 973.06 | <2.0 | <2.0 | <2.0 | ND | ND | 8.8 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 08 | 18.27 | NA | NA | NA | 970.89 | <2.0 | <2.0 | <2.0 | ND | ND | 4.6 | <3.0 | <50 | <50 | <50 |
| GES-224 | 03 Dec 03 | 18.65 | NA | NA | NA | 970.83 | <2.0 | <2.0 | <2.0 | <2.0 | ND | 1,040 | <3.0 | <50 | <50 | <50 |
| 989.48 | 24 Feb 04 | 21.43 | NA | NA | NA | 968.05 | 3.6 | <2.0 | <2.0 | <4.0 | 3.6 | 232 | <3.0 | <50 | <50 | <50 |
| | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | 3.7 | <3.0 | <50 | <50 | <50 |
| | 22 Feb 05 | 20.15 | NA | NA | NA | 969.33 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 10 Aug 05 | 20.02 | NA | NA | NA | 969.46 | <2.0 | <2.0 | <2.0 | 2.8 | 2.8 | 104.0 | <3.0 | <50 | <50 | <50 |
| | 09 May 06 | 18.70 | NA | NA | NA | 970.78 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 20 Sep 06 | 19.28 | NA | NA | NA | 970.20 | <2.0 | <2.0 | <2.0 | <4.0 | ND | 12.5 | <3.0 | <50 | <50 | <50 |
| | 26 Apr 07 | 16.90 | NA | NA | NA | 972.58 | <2.0 | <2.0 | <2.0 | <4.0 | ND | 2.5 | <3.0 | <50 | <50 | <50 |
| | 17 Oct 07 | 17.79 | NA | NA | NA | 971.69 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| GES-225 | 02 Dec 03 | 18.17 | NA | NA | NA | NA | 611 | 9,160 | 2,410 | **12,610** | 24,791 | <2.0 | 549 | 21,200 | 211 | 10,900 |
| 992.82 | 27 Feb 04 | 23.20 | NA | NA | NA | 969.62 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 12 Mar 04 | 22.85 | 22.80 | 0.05 | NA | 970.01 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Aug 05 | 20.57 | NA | NA | NA | 972.25 | 115 | 314 | 2,100 | **8,546** | 11,075 | 49.7 | 363 | 9,240 | 7,460 | 9,380 |
| | 10 May 06 | 18.14 | NA | NA | NA | 974.68 | 243 | 587 | 1,930 | **8,285** | 11,045 | <2.0 | 468 | 8,170 | 354 | 9,600 |
| | 10 May 06 Dup | 18.14 | NA | NA | NA | 974.68 | 252 | 614 | 1,760 | **7,657** | 10,283 | <2.0 | 501 | 8,310 | <50 | 9,090 |
| | 21 Sep 06 | 19.87 | NA | NA | NA | 972.95 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 17 Oct 07 | 20.40 | NA | NA | NA | 972.42 | 27.6 | 21.0 | 1,460 | **5,369.6** | 6,878.2 | <2.0 | 603 | 8,430 | 898 | 8,440 |
| | 17 Oct 07 Dup | 20.40 | NA | NA | NA | 972.42 | 22.4 | 16.9 | 1,470 | **5,225.9** | 6,735.2 | <2.0 | 601 | 7,920 | 1,230 | 7,950 |
| | 28 Mar 08 | 16.32 | NA | NA | NA | 976.50 | 16.7 | 85.2 | 1,820 | **6,451** | 8,372.9 | <2.0 | 603 | 6,650 | 1,450 | 10,900 |
| | 28 Mar 08 Dup | 16.32 | NA | NA | NA | 976.50 | 16.0 | 82.8 | 1,650 | **5,656** | 7,404.8 | <2.0 | 582 | 6,850 | <50 | 11,400 |
| | 25 Jul 08 | 16.79 | NA | NA | NA | 976.03 | 16.2 | 25.6 | 1,520 | 4,414 | 5,975.8 | <10 | 620 | 6,600 | 695 | 8,430 |
| | 17 Oct 08 | 19.51 | NA | NA | NA | 973.31 | 23.3 | 137 | 1,340 | 3,695.4 | 5,195.7 | <5.0 | 606 | 4,510 | <250 | 7,910 |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | | | | | MCP Method 1 GW-2 Standard: | | **2,000** | **50,000** | **20,000** | **9,000** | - | **50,000** | **1,000** | **3,000** | **5,000** | **7,000** |
| | | | | | MCP Method 1 GW-3 Standard: | | **10,000** | **40,000** | **5,000** | **5,000** | - | **50,000** | **20,000** | **50,000** | **50,000** | **50,000** |
| **GES-226** | 04 Dec 03 | 17.53 | NA | NA | NA | NA | 128 | 578 | 92.6 | 408.8 | 1,207.4 | <2.0 | <3.0 | 12,800 | <50 | 375 |
| 989.27 | 24 Feb 04 | 19.70 | NA | NA | NA | 969.57 | 12.9 | 19.3 | 3.1 | 42.7 | 78.0 | 16.0 | 3.1 | 4,100 | <50 | 165 |
| | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | 217 | <50 | <50 |
| | 21 Feb 05 | 20.11 | NA | NA | NA | 969.16 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 11 Aug 05 | 20.84 | NA | NA | NA | 968.43 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <3.0 | <50 | <50 | <50 |
| **GES-227** | 27 Feb 04 | 23.02 | 23.00 | 0.02 | NA | 967.42 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 990.42 | 12 Mar 04 | 23.74 | 23.15 | 0.59 | NA | 967.13 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 21 Feb 05 | 25.90 | 25.00 | 0.90 | NA | 965.20 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| **GES-228** | 01 Dec 03 | 23.57 | NA | NA | NA | NA | 22.2 | 2,160 | 1,400 | **9,930** | 13,512.2 | <20 | **1,460** | 16,500 | <500 | 41,300 |
| 991.40 | 27 Feb 04 | 23.61 | 23.56 | 0.05 | NA | 967.83 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 13 Sep 04 | NM | NA | NA | NA | NA | 81.6 | 786 | 343 | 4,600 | 5,810.6 | <2.0 | 643 | 21,400 | 4,130 | 11,700 |
| | 09 Aug 05 | 26.30 | 26.20 | 0.05 | NA | 965.14 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 10 May 06 | 18.71 | 18.62 | 0.09 | NA | 972.76 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| **GES-229** | 04 Dec 03 | 24.13 | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | 2.3 | 2.3 | <2.0 | <3.0 | <50 | <50 | <50 |
| 990.80 | 25 Feb 04 | 23.81 | NA | NA | NA | 966.99 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 21 Feb 05 | 20.88 | NA | NA | NA | 969.92 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| **GES-230** | 04 Dec 03 | 20.12 | 20.06 | 0.06 | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 988.82 | 27 Feb 04 | 22.92 | NA | NA | NA | 965.90 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 12 Mar 04 | 23.81 | 23.79 | 0.02 | NA | 965.03 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| **GES-231** | 05 Dec 03 | 23.48 | 23.02 | 0.46 | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 987.72 | 26 Feb 04 | 21.68 | NA | NA | NA | 966.04 | 935 | 6,370 | 1,480 | **9,160** | 17,945 | <2.0 | 694 | 13,300 | <50 | 11,500 |
| | 10 Aug 05 | 25.15 | NA | NA | NA | 962.57 | 55.3 | 48.4 | 62.3 | 142.4 | 308.4 | 13.8 | 22.5 | 1,050 | 233 | 348 |
| | 09 May 06 | 17.91 | NA | NA | NA | 969.81 | 507 | 726 | 252 | 955 | 2,440 | <2.0 | 119 | 2,580 | 220 | 1,720 |
| | 21 Sep 06 | 18.27 | NA | NA | NA | 969.45 | 395 | 456 | 245 | 857 | 1,953 | <2.0 | 150 | 3,660 | 1,640 | 2,110 |
| **GES-232** | 04 Dec 03 | 20.19 | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 988.21 | 27 Feb 04 | 25.10 | 20.60 | 4.50 | NA | 963.11 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 12 Mar 04 | 22.42 | NM | NA | NA | 965.79 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| **GES-301D** | 26 Feb 04 | 16.51 | NA | NA | NA | 975.89 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 992.40 | 14 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 23 Feb 05 | 15.33 | NA | NA | NA | 977.07 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 10 Aug 05 | 17.03 | NA | NA | NA | 975.37 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | 268 | 205 |
| | 28 Mar 08 | 12.85 | NA | NA | NA | 979.55 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 17 Oct 08 | 16.40 | NA | NA | NA | 976.00 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <1.0 | <3.0 | <50 | <50 | <50 |
| **GES-301I** | 10 May 06 | 22.15 | 18.84 | 3.31 | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| **GES-301M** | 27 Feb 04 | 27.20 | 20.84 | 6.36 | NA | 970.03 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 992.40 | 09 Aug 05 | 20.86 | 22.25 | 1.39 | NA | 972.60 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | | | | | | MCP Method 1 GW-2 Standard: | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | | | | | | MCP Method 1 GW-3 Standard: | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| GES-301S | 26 Feb 04 | 11.64 | NA | NA | NA | 980.77 | <2.0 | <2.0 | 13.7 | 32.4 | 46.1 | <2.0 | 11.1 | 76.4 | <50 | 370 |
| 992.41 | 10 Aug 05 | 11.50 | NA | NA | NA | 980.91 | <2.0 | <2.0 | <2.0 | 2.4 | 2.4 | <2.0 | <3.0 | <50 | <50 | <50 |
| | 10 May 06 | 10.09 | NA | NA | NA | 982.32 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 20 Sep 06 | 10.91 | NA | NA | NA | 981.50 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 17 Oct 07 | 12.03 | NA | NA | NA | 980.38 | <2.0 | <2.0 | 2.8 | <4.0 | 2.8 | <2.0 | <3.0 | <50 | <50 | 152 |
| | 25 Jul 08 | 9.90 | NA | NA | NA | 982.51 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 17 Oct 08 | 10.94 | NA | NA | NA | 981.47 | <2.0 | <2.0 | <2.0 | ND | ND | <1.0 | <3.0 | <50 | <50 | <50 |
| GES-302D | 24 Feb 04 | 16.19 | NA | NA | NA | 974.19 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 990.38 | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | 2.4 | 2.4 | <2.0 | <3.0 | <50 | <50 | <50 |
| | 21 Feb 05 | 15.87 | NA | NA | NA | 974.51 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 28 Mar 08 | 15.87 | NA | NA | NA | 974.51 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| GES-302I | 24 Feb 04 | 22.05 | NA | NA | NA | 968.34 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 990.39 | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 21 Feb 05 | 20.25 | NA | NA | NA | 970.14 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| GES-302S | 27 Feb 04 | 14.95 | NA | NA | NA | 975.45 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 990.40 | | | | | | | | | | | | | | | | |
| GES-303 | 27 Feb 04 | 13.96 | NA | NA | NA | 973.20 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 987.16 | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | 3.3 | <3.0 | <50 | <50 | <50 |
| | 21 Feb 05 | 14.23 | NA | NA | NA | 972.93 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 10 Aug 05 | 15.38 | NA | NA | NA | 971.78 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 07 | 13.70 | NA | NA | NA | 973.46 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 27 Mar 08 | 11.49 | NA | NA | NA | 975.67 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 24 Jul 08 | 12.73 | NA | NA | NA | 974.43 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 08 | 13.30 | NA | NA | NA | 973.86 | <2.0 | <2.0 | <2.0 | ND | ND | <1.0 | <3.0 | <50 | <50 | <50 |
| † GES-304D | 24 Feb 04 | 16.98 | NA | NA | NA | 972.00 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 988.98 | 22 Feb 05 | 17.30 | NA | NA | NA | 971.68 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| † GES-304I | 24 Feb 04 | 17.00 | NA | NA | NA | 971.98 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 988.98 | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| † GES-304S | 24 Feb 04 | 10.99 | NA | NA | NA | 978.02 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 989.01 | | | | | | | | | | | | | | | | |
| † GES-305 | 25 Feb 04 | 17.96 | NA | NA | NA | 972.99 | <2.0 | <2.0 | <2.0 | 2.2 | 2.2 | <2.0 | <3.0 | <50 | <50 | <50 |
| 990.95 | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 21 Feb 05 | 12.20 | NA | NA | NA | 978.75 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| † GES-306 | 24 Feb 04 | 16.36 | NA | NA | NA | 974.59 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 989.37 | 10 Aug 05 | 18.57 | NA | NA | NA | 972.38 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| † GES-307 | 25 Feb 04 | 16.56 | NA | NA | NA | 972.33 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 988.89 | | | | | | | | | | | | | | | | |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | MCP Method 1 GW-2 Standard: | | | | | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | MCP Method 1 GW-3 Standard: | | | | | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| GES-308 | 27 Feb 04 | 13.81 | NA | NA | NA | 976.75 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 990.56 | | | | | | | | | | | | | | | | |
| GES-310 | 27 Feb 04 | 22.82 | NA | NA | NA | 968.91 | 2.8 | <2.0 | 2.4 | 2.8 | 8.0 | 6.5 | 3.8 | 295 | <50 | 223 |
| 991.73 | 13 Sep 04 | NM | NA | NA | NA | NA | 5.6 | <2.0 | 8.1 | 14.7 | 28.4 | <2.0 | <3.0 | 1,500 | 549 | 772 |
| | 22 Feb 05 | 18.20 | NA | NA | NA | 973.53 | 4.8 | 3.0 | 36.5 | 39.6 | 83.9 | <2.0 | 6.8 | 321 | 138 | 366 |
| | 09 May 06 | 18.26 | NA | NA | NA | 973.47 | <2.0 | <2.0 | 2.0 | 4.7 | 6.7 | <2.0 | <3.0 | <50 | <50 | 50.6 |
| | 20 Sep 06 | 19.33 | NA | NA | NA | 972.40 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 26 Apr 07 | 14.78 | NA | NA | NA | 976.95 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 17 Oct 07 | 19.94 | NA | NA | NA | 971.79 | 2.3 | <2.0 | 17.3 | 2.7 | 22.3 | <2.0 | 18.7 | 406 | 55 | 206.0 |
| | 25 Jul 08 | 16.26 | NA | NA | NA | 975.47 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 17 Oct 08 | 16.18 | NA | NA | NA | 975.55 | <2.0 | <2.0 | 4.3 | ND | 4.3 | <1.0 | 9.1 | 129 | <50 | 146 |
| GES-311 | 24 Feb 04 | 20.63 | NA | NA | NA | 969.52 | <2.0 | <2.0 | <2.0 | <4.0 | ND | 9.7 | <3.0 | <50 | <50 | <50 |
| 990.15 | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | 4.9 | <3.0 | <50 | <50 | <50 |
| | 21 Feb 05 | 17.95 | NA | NA | NA | 972.20 | <2.0 | <2.0 | <2.0 | <4.0 | ND | 3.2 | <3.0 | <50 | <50 | <50 |
| | 27 Mar 08 | 15.63 | NA | NA | NA | 974.52 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 27 Mar 08 (Dup) | 15.63 | NA | NA | NA | 974.52 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 24 Jul 08 | 15.93 | NA | NA | NA | 974.22 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 08 | 18.22 | NA | NA | NA | 971.93 | <2.0 | <2.0 | <2.0 | ND | ND | <1.0 | <3.0 | <50 | <50 | <50 |
| GES-312 | 24 Feb 04 | 20.58 | NA | NA | NA | 968.90 | 74.4 | <2.0 | <2.0 | 25.4 | 99.8 | 65.8 | 4.7 | 530 | <50 | 126 |
| 989.48 | 13 Sep 04 | NM | NA | NA | NA | NA | 3.5 | <2.0 | <2.0 | <4.0 | 3.5 | 2.0 | <3.0 | <50 | <50 | <50 |
| | 21 Feb 05 | 17.80 | NA | NA | NA | 971.68 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 27 Mar 08 | 15.67 | NA | NA | NA | 973.81 | 128 | 11.5 | 131 | 67.6 | 338.1 | <2.0 | 18.7 | 784 | <50 | 290 |
| | 24 Jul 08 | 15.70 | NA | NA | NA | 973.78 | 14.7 | <2.0 | 15.9 | 9.3 | 39.9 | <2.0 | 3.2 | 145 | <50 | <50 |
| | 16 Oct 08 | 18.90 | NA | NA | NA | 970.58 | 8.3 | <2.0 | 2.9 | ND | 11.2 | <1.0 | <3.0 | <50 | <50 | <50 |
| GES-314 | 24 Feb 04 | 19.01 | NA | NA | NA | 970.11 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 989.12 | | | | | | | | | | | | | | | | |
| GES-315 | 24 Feb 04 | 13.12 | NA | NA | NA | 977.25 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 990.37 | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 22 Feb 05 | 11.83 | NA | NA | NA | 978.54 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| GES-316 | 25 Feb 04 | 25.03 | NA | NA | NA | 964.21 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 989.24 | | | | | | | | | | | | | | | | |
| GES-317 | 27 Feb 04 | 15.98 | NA | NA | NA | 974.71 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 990.69 | | | | | | | | | | | | | | | | |
| GES-318D | 26 Feb 04 | 17.73 | NA | NA | NA | 975.13 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 992.86 | | | | | | | | | | | | | | | | |

TABLE 2-2
HISTORICAL GROUNDWATER MONITORING DATA
VOLATILE PETROLEUM HYDROCARBONS
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | MCP Method 1 GW-2 Standard: | | | | | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | MCP Method 1 GW-3 Standard: | | | | | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| † GES-318S | 26 Feb 04 | 19.42 | NA | NA | NA | 973.29 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 992.71 | 14 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | 3.2 | 3.2 | <2.0 | <3.0 | 295 | <50 | <50 |
| | 23 Feb 05 | 12.87 | NA | NA | NA | 979.84 | 3 | 516 | 205 | **5,500** | 6,223.6 | <2.0 | 135 | 762 | 1,980 | 3,010 |
| | 10 May 06 | 18.37 | NA | NA | NA | 974.34 | <2.0 | <2.0 | <2.0 | 2.2 | 2.2 | <2.0 | <3.0 | <50 | <50 | <50 |
| | 10 May 06 Dup | 18.37 | NA | NA | NA | 974.34 | <2.0 | <2.0 | <2.0 | 2.1 | 2.1 | <2.0 | <3.0 | <50 | <50 | <50 |
| | 21 Sep 06 | 19.69 | NA | NA | NA | 973.02 | 179 | 199 | 1,560 | **6,163.0** | 8,101.0 | <2.0 | 632 | **7,500** | **5,050** | **7,100** |
| | 17 Oct 07 | 20.76 | NA | NA | NA | 971.95 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 28 Mar 08 | 17.05 | NA | NA | NA | 975.66 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 25 Jul 08 | 17.58 | NA | NA | NA | 975.13 | <2.0 | <2.0 | <2.0 | ND | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 17 Oct 08 | 19.87 | NA | NA | NA | 972.84 | <2.0 | <2.0 | <2.0 | ND | ND | <1.0 | <3.0 | <50 | <50 | <50 |
| GES-319D | 26 Feb 04 | 19.76 | NA | NA | NA | 972.55 | <2.0 | 3.9 | <2.0 | <4.0 | 3.9 | <2.0 | <3.0 | <50 | <50 | <50 |
| 992.31 | 10 Aug 05 | 16.58 | NA | NA | NA | 975.73 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| GES-319S | 26 Feb 04 | 27.25 | NA | NA | NA | 965.07 | <2.0 | 5.2 | <2.0 | <4.0 | 5.2 | <2.0 | <3.0 | <50 | <50 | <50 |
| 992.32 | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 22 Feb 05 | 14.69 | NA | NA | NA | 977.63 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 10 Aug 05 | 16.57 | NA | NA | NA | 975.75 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | 68.3 | 197 | 114 |
| † GES-320D | 26 Feb 04 | 17.28 | NA | NA | NA | 975.88 | <2.0 | 24.5 | <2.0 | 3.2 | 27.7 | <2.0 | <3.0 | <50 | <50 | <50 |
| 993.16 | 10 Aug 05 | 17.81 | NA | NA | NA | 975.35 | <2.0 | 4.5 | <2.0 | 4.3 | 8.8 | <2.0 | <3.0 | <50 | <50 | <50 |
| † GES-320S | 26 Feb 04 | 32.31 | NA | NA | NA | 960.80 | <2.0 | 2.2 | <2.0 | 2.3 | 4.5 | <2.0 | <3.0 | <50 | <50 | <50 |
| 993.11 | 13 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 23 Feb 05 | 17.97 | NA | NA | NA | 975.14 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 10 Aug 05 | 18.23 | NA | NA | NA | 974.88 | <2.0 | <2.0 | <2.0 | 2.6 | 2.6 | <2.0 | <3.0 | <50 | <50 | <50 |
| † GES-321D | 27 Feb 04 | 12.14 | NA | NA | NA | 976.30 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 988.44 | | | | | | | | | | | | | | | | |
| † GES-321S | 27 Feb 04 | 20.18 | NA | NA | NA | 968.02 | <2.0 | 4.2 | 2.9 | 14.4 | 21.5 | <2.0 | <3.0 | <50 | <50 | <50 |
| 988.20 | 14 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | 2.7 | 2.7 | <2.0 | <3.0 | 231 | <50 | <50 |
| GES-322D | 27 Feb 04 | 10.10 | NA | NA | NA | 976.09 | <2.0 | 3.1 | <2.0 | <4.0 | 3.1 | <2.0 | <3.0 | <50 | <50 | <50 |
| 986.19 | 10 Aug 05 | 10.60 | NA | NA | NA | 975.59 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| GES-322S | 27 Feb 04 | 19.74 | NA | NA | NA | 966.62 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| 986.36 | 14 Sep 04 | NM | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | 6.0 | 6.0 | <2.0 | <3.0 | 420 | 66 | <50 |
| | 21 Feb 05 | 19.97 | NA | NA | NA | 966.39 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 10 Aug 05 | 20.93 | NA | NA | NA | 965.43 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| EXP-1 | 28 Mar 08 | 15.66 | NA | NA | NA | NA | 36.0 | 600 | 540 | 2,552 | 3,728 | <2.0 | 158 | 3,690 | 588 | 3,710 |
| † EXP-2 | 27 Feb 04 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 993.25 | 28 Mar 08 | 12.19 | NA | NA | NA | 981.06 | 78.3 | 34.0 | 128 | 1,071 | 1,311.3 | <2.0 | 233 | 658 | 156 | 6,450 |
| | 25 Jul 08 | 9.33 | NA | NA | NA | 983.92 | 58.8 | 667 | 119 | 1,581 | 2,425.8 | <2.0 | 38.7 | 1,030 | 666 | 1,670 |
| | 17 Oct 08 | 18.31 | NA | NA | NA | 974.94 | 189 | 1,060 | 224 | 2,567 | 4,040 | <1.0 | 117 | 1,300 | 1,130 | 3,520 |

TABLE 2-2
HISTORICAL GROUNDWATER MONITORING DATA
VOLATILE PETROLEUM HYDROCARBONS
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | MCP Method 1 GW-2 Standard: | | | | | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | MCP Method 1 GW-3 Standard: | | | | | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| EXP-4 | 26 Feb 04 | 13.91 | NA | NA | NA | 978.87 | <2.0 | <2.0 | <2.0 | 2.8 | 2.8 | <2.0 | <3.0 | <50 | <50 | <50 |
| 992.78 | | | | | | | | | | | | | | | | |
| EXP-5 | 28 Mar 08 | 11.11 | NA | NA | NA | NA | <2.0 | 13.6 | 341 | 1978 | 2,332.6 | <2.0 | 50.1 | 439 | 177 | 815 |
| EXP-6 | 01 Dec 03 | 18.37 | NA | NA | NA | 974.04 | 6.3 | 15.1 | 39.8 | 653 | 714.2 | <2.0 | 116 | 935 | <50 | 1,390 |
| 992.41 | 09 May 06 | 17.79 | NA | NA | NA | 974.62 | 5.4 | 5.4 | 220 | 435 | 665.8 | <2.0 | 111 | 1,940 | 244 | 1,330 |
| | 20 Sep 06 | 19.40 | NA | NA | NA | 973.01 | 3.8 | 7.7 | 121 | 348 | 480.5 | <2.0 | 71 | 13,220 | 388 | 822 |
| | 26 Apr 07 | 15.41 | NA | NA | NA | 977.00 | <2.0 | 5.8 | 27.7 | 183.4 | 216.9 | <2.0 | 25.2 | 567 | <50 | 420 |
| | 26 Apr 07 Dup | 15.41 | NA | NA | NA | 977.00 | <2.0 | 5.6 | 27.0 | 179.9 | 212.5 | <2.0 | 26.9 | 549 | 56 | 396 |
| | 28 Mar 08 | 14.92 | NA | NA | NA | 977.49 | <2.0 | <2.0 | 4.0 | 39.0 | 43.0 | <2.0 | 5.7 | 118 | <50 | 145 |
| | 25 Jul 08 | 16.57 | NA | NA | NA | 975.84 | <2.0 | 2.6 | 66.1 | 75.0 | 143.7 | <2.0 | 32.9 | 832 | 77.7 | 329 |
| | 17 Oct 08 | 18.95 | NA | NA | NA | 973.46 | <2.0 | <2.0 | 88.3 | 152.2 | 240.5 | <1.0 | 49.2 | 954 | 52.6 | 669 |
| EXP-7 | 01 Dec 03 | 19.10 | NA | NA | NA | NA | 247 | 118 | 237 | 930.8 | 1,532.8 | <2.0 | 79.1 | 2,560 | <50 | 1,850 |
| 992.30 | 27 Feb 04 | 21.84 | NA | NA | NA | 970.46 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 14 Sep 04 | NM | NA | NA | NA | NA | 14.8 | 2.7 | 31 | 100.4 | 148.9 | <2.0 | 11.9 | 968 | 429 | 418 |
| | 22 Feb 05 | 13.09 | NA | NA | NA | 980.11 | 19.8 | 10.8 | 15.0 | 49.3 | 94.9 | <2.0 | <3.0 | 116 | <50 | <50 |
| | 10 Aug 05 | 18.75 | NA | NA | NA | 973.55 | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 09 May 06 | 19.20 | NA | NA | NA | 973.10 | 50.0 | 39.2 | 192 | 419 | 700.2 | <2.0 | 33.0 | 744 | 116 | 558 |
| | 20 Sep 06 | 19.86 | NA | NA | NA | 972.44 | 64.4 | 4.8 | 44 | 256 | 369.6 | <2.0 | 28.7 | 805 | 231 | 521 |
| | 26 Apr 07 | 17.74 | NA | NA | NA | 974.56 | <2.0 | <2.0 | 2.1 | 3.7 | 5.8 | <2.0 | <3.0 | <50 | <50 | <50 |
| | 17 Oct 07 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 25 Jul 08 | 17.19 | 16.92 | 0.27 | 0.00 | 975.11 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 17 Oct 08 | 19.22 | 19.19 | 0.03 | 2.5 | 973.08 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| EXP-9 | 01 Dec 03 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 993.20 | 27 Feb 04 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| EXP-10 | 10 May 06 | 17.03 | 17.02 | 0.01 | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| EXP-10R | 03 Dec 03 | 19.96 | 19.84 | 0.12 | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 990.11 | 27 Feb 04 | 20.35 | NA | NA | NA | 969.76 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 21 Feb 05 | 17.85 | 17.86 | 0.01 | NA | 972.27 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 10 May 06 | 17.79 | 17.31 | 0.48 | NA | 972.68 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

TABLE 2-2
HISTORICAL GROUNDWATER MONITORING DATA
VOLATILE PETROLEUM HYDROCARBONS
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | MCP Method 1 GW-2 Standard: | | | | | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| | MCP Method 1 GW-3 Standard: | | | | | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| † EXP-11R | 03 Dec 03 | 18.70 | NA | NA | NA | NA | 135 | 589 | 290 | 1,811 | 2,825 | 13.8 | 243 | 2,090 | <50 | 3,070 |
| | 24 Feb 04 | 20.65 | NA | NA | NA | 969.61 | 234 | 25.9 | 567 | 1,423 | 2,249.9 | 23.2 | 418 | **5,360** | <50 | 4,670 |
| | 12 Mar 04 | 15.20 | NA | NA | NA | 975.06 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 990.26 | 11 Aug 05 | 13.72 | NA | NA | NA | 976.54 | 20 | 255 | 211 | 1,039 | 1,525 | <2.0 | 125 | 770 | <50 | 1,560 |
| | 10 May 06 | 17.82 | NA | NA | NA | 972.44 | 128 | 109 | 939 | 1,786.9 | 2,962.9 | <2.0 | 340 | **4,560** | 343 | 3,570 |
| | 20 Sep 06 | 18.53 | NA | NA | NA | 971.73 | 361 | 361 | 713 | 1,376 | 2,811.0 | <2.0 | 297 | **6,230** | 1,800 | 2,460 |
| | 27 Apr 07 | 15.70 | NA | NA | NA | 974.56 | 167 | 344 | 603 | 1,492 | 2,606 | 17.7 | 168 | 2,930 | <100 | 2,160 |
| | 17 Oct 07 | 19.15 | NA | NA | NA | 971.11 | 456 | 357 | 781 | 1,363 | 2,957 | <2.0 | 170 | **5,380** | 457 | 2,010 |
| | 27 Mar 08 | 15.58 | NA | NA | NA | 974.68 | 214 | 247 | 555 | 1,230 | 2,246 | <2.0 | 157 | **3,540** | 86.6 | 1,950 |
| | 24 Jul 08 | 15.91 | NA | NA | NA | 974.35 | 296 | 240 | 888 | 1,762 | 3,186 | <2.0 | 237 | **6,850** | 1,200 | 3,010 |
| | 16 Oct 08 | 18.23 | NA | NA | NA | 972.03 | 223 | 145 | 873 | 1,464 | 2,705 | <1.0 | 161 | **4,800** | 804 | 2,790 |
| † EXP-12 | 03 Dec 03 | 18.08 | NA | NA | NA | NA | 132 | 342 | 248 | 1,517 | 2,239 | 8.9 | 259 | **3,030** | <50 | 3,800 |
| 990.14 | 24 Feb 04 | 21.25 | NA | NA | NA | 968.89 | 134 | 61.1 | 360 | 640.5 | 1,195.6 | 16.5 | 365 | **5,610** | <50 | 2,600 |
| 990.08 | 12 Mar 04 | 15.60 | NA | NA | NA | 974.48 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 10 May 06 | 16.34 | NA | NA | NA | 973.74 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 20 Sep 06 | 17.33 | NA | NA | NA | 972.75 | <2.0 | 94.4 | 153 | 1,124.0 | 1,371.4 | <2.0 | 44 | 2,550 | 828 | 1,500 |
| | 26 Apr 07 | 17.45 | NA | NA | NA | 972.63 | 144 | 11.5 | 136 | 316.6 | 608.1 | <2.0 | 40.1 | 1,590 | <50 | 664 |
| | 17 Oct 07 | 18.91 | NA | NA | NA | 971.17 | 353 | 24.3 | 494 | 446.3 | 1,317.6 | <2.0 | 115 | **5,040** | 235 | 1,310 |
| | 27 Mar 08 | 15.63 | NA | NA | NA | 974.45 | <2.0 | 51.7 | 235 | 781.6 | 1,068.3 | <2.0 | 115 | 1,930 | <50 | 1,450 |
| | 24 Jul 08 | 16.06 | NA | NA | NA | 974.02 | 166 | 26.5 | 468.0 | 447.3 | 1,107.8 | <2.0 | 108 | **4,550** | 361 | 1,510 |
| | 16 Oct 08 | 18.24 | NA | NA | NA | 971.84 | 172 | 19.3 | 404 | 379.6 | 974.9 | <1.0 | 77.1 | 2,990 | 235 | 1,050 |
| EXP-13 | 03 Dec 03 | 19.68 | 19.17 | 0.51 | NA | 971.20 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 990.37 | 12 Mar 04 | 22.00 | 21.00 | 1.00 | NA | 969.13 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 10 May 06 | 18.85 | 18.48 | 0.37 | NA | 971.80 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| † EXP-13R | 03 Dec 03 | 18.80 | 18.77 | 0.03 | NA | 971.64 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 990.42 | 12 Mar 04 | 14.40 | NA | NA | NA | 976.02 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| EXP-14 | 27 Mar 08 | 9.72 | NA | NA | NA | NA | <2.0 | 20.3 | 75.2 | 1,093 | 1,189 | <2.0 | 54.3 | 1,490 | 59.6 | 2,180 |
| | 24 Jul 08 | 9.89 | NA | NA | NA | NA | <2.0 | 16.3 | 26.1 | 563 | 605.4 | <2.0 | 33.2 | 1,480 | 302 | 1,370 |
| | 17 Oct 08 | 19.58 | NA | NA | NA | NA | <2.0 | 21.1 | 26.9 | 477 | 525.0 | <1.0 | 37.3 | 1,240 | 63.6 | 1,290 |
| | 17 Oct 08 Dup | 19.58 | NA | NA | NA | NA | <2.0 | 21.2 | 26.8 | 459 | 507.0 | <1.0 | 31.7 | 1,170 | 196 | 1,160 |
| EXP-16 | 03 Dec 03 | 20.78 | NA | NA | NA | NA | 63.1 | 49.1 | 5.6 | 224.1 | 341.9 | <2.0 | 40.3 | 2,960 | <50 | 2,940 |
| 990.42 | | | | | | | | | | | | | | | | |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| Units | | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| MCP Method 1 GW-2 Standard: | | | | | | | 2,000 | 50,000 | 20,000 | 9,000 | - | 50,000 | 1,000 | 3,000 | 5,000 | 7,000 |
| MCP Method 1 GW-3 Standard: | | | | | | | 10,000 | 40,000 | 5,000 | 5,000 | - | 50,000 | 20,000 | 50,000 | 50,000 | 50,000 |
| EXP-17 | 05 Dec 03 | 21.20 | NA | NA | NA | NA | 857 | 13,100 | **5,050** | **26,570** | 45,577 | 126 | 3,130 | **73,200** | 4,690 | 43,600 |
| 990.39 | 26 Feb 04 | 21.11 | NA | NA | NA | 969.28 | <2.0 | <2.0 | <2.0 | <4.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| | 12 Mar 04 | 20.80 | NA | NA | NA | 969.59 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Aug 05 | 16.90 | NA | NA | NA | 973.49 | 326 | 61.8 | 234 | 316.4 | 938.2 | <2.0 | 54 | 1,120 | <50 | 544 |
| | 10 May 06 | 18.47 | NA | NA | NA | 971.92 | 243 | 62.1 | 178 | 161.7 | 644.8 | <2.0 | 49.5 | 1,710 | 72.1 | 414 |
| | 21 Sep 06 | 16.02 | NA | NA | NA | 974.37 | 134 | 53.1 | 149 | 64.1 | 400.2 | <2.0 | 21.6 | 1,190 | 145.0 | 177 |
| | 27 Apr 07 | 16.15 | NA | NA | NA | 974.24 | 24.4 | 58.1 | 45 | 88.1 | 216 | <2.0 | 5.8 | 339 | <50 | 81.3 |
| | 16 Oct 07 | 19.57 | NA | NA | NA | 970.82 | 5.3 | <2.0 | 3 | <4.0 | 7.9 | <2.0 | <3.0 | <50 | <50 | <50 |
| | 27 Mar 08 | 15.64 | NA | NA | NA | 974.75 | 5.6 | 13.1 | 16.1 | 23.1 | 57.9 | <2.0 | 3.9 | 123 | <50 | <50 |
| | 24 Jul 08 | 15.76 | NA | NA | NA | 974.63 | <2.0 | <2.0 | <2.0 | 4.2 | 4.2 | <2.0 | <3.0 | <50 | <50 | <50 |
| | 16 Oct 08 | 17.62 | NA | NA | NA | 972.77 | <2.0 | 4.2 | 5.6 | 11.0 | 20.8 | <1.0 | <3.0 | <50 | <50 | <50 |
| EXP-18 | 03 Dec 03 | 20.15 | 20.02 | 0.13 | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 988.87 | 26 Feb 04 | 22.05 | NA | NA | NA | 966.82 | <2.0 | 96.5 | 6.7 | 2,779 | 2,882.2 | <2.0 | 319 | 7,330 | <50 | 16,300 |
| | 12 Mar 04 | 22.69 | NA | NA | NA | 966.18 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 14 Sep 04 | NM | NA | NA | NA | NA | <2.0 | 589.0 | 267.0 | 2,386 | 3,242.0 | 201 | 200 | 39,600 | 24,700 | 5,780 |
| | 09 Aug 05 | DRY | NA | NA | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 10 May 06 | 18.77 | NA | NA | NA | 970.10 | 14.6 | 87.9 | 24.0 | 1,891 | 2,017.5 | <2.0 | 84.4 | 3,210 | 73.5 | 3,810 |
| | 21 Sep 06 | 19.23 | NA | NA | NA | 969.64 | 13.9 | 40.1 | 16.0 | 581 | 651.0 | <2.0 | 44.4 | 2,550 | 828.0 | 1,500 |
| | 27 Apr 07 | 16.74 | NA | NA | NA | 972.13 | 12.9 | 31.3 | 11.3 | 428 | 483.5 | <2.0 | 19.3 | 759 | <50 | 656 |
| | 16 Oct 07 | 19.39 | NA | NA | NA | 969.48 | 12.3 | 10.8 | 13.1 | 188 | 224.6 | <2.0 | 22.2 | 1,250 | 307.0 | 586 |
| | 27 Mar 08 | 16.96 | NA | NA | NA | 971.91 | 8.9 | 16.3 | 18.8 | 335.6 | 379.6 | <2.0 | 34.4 | 1,430 | <50 | 1,160 |
| | 24 Jul 08 | 16.61 | NA | NA | NA | 972.26 | 7.8 | 26.8 | 25.0 | 686 | 745.6 | <2.0 | 61.5 | 2,310 | 472 | 1,950 |
| | 24 Jul 08 Dup | 16.61 | NA | NA | NA | 972.26 | 7.4 | 30.7 | 29.4 | 837 | 904.5 | <2.0 | 72.2 | 2,300 | 545 | 2,060 |
| | 16 Oct 08 | 18.93 | NA | NA | NA | 969.94 | 7.7 | 25.0 | 25.9 | 633 | 691.6 | <1.0 | 69.6 | 2,170 | 130 | 1,830 |
| EXP-20 | 26 Feb 04 | 20.15 | NA | NA | NA | 966.09 | 21.1 | 4.6 | 6.9 | 34.8 | 67.4 | 3.5 | 3.4 | 243 | <50 | 65.3 |
| 986.24 | 12 Mar 04 | 20.95 | NA | NA | NA | 965.29 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 10 Aug 05 | 22.87 | NA | NA | NA | 963.78 | 9.5 | <2.0 | <2.0 | <2.0 | ND | 12.6 | <3.0 | <50 | <50 | <50 |

**TABLE 2-2**
**HISTORICAL GROUNDWATER MONITORING DATA**
**VOLATILE PETROLEUM HYDROCARBONS**
Former Mobil Service Station No. 01-ECQ
83-89 Elm Street
Pittsfield, Massachusetts

| Well ID/MP El (feet) | Date of Sampling | Depth to Water (feet) | Depth to Product (feet) | NAPL Thickness (feet) | NAPL Recovered (gallons) | Groundwater Elevation (feet) | VPH Target Analytes | | | | | | | VPH Fractions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Total BTEX | MTBE | Naphthalene | C5-C8 Aliphatics | C9-C12 Aliphatics | C9-C10 Aromatics |
| | Units | feet | feet | feet | gallons | feet | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L | µg/L |
| | | | | | | MCP Method 1 GW-2 Standard: | **2,000** | **50,000** | **20,000** | **9,000** | - | **50,000** | **1,000** | **3,000** | **5,000** | **7,000** |
| | | | | | | MCP Method 1 GW-3 Standard: | **10,000** | **40,000** | **5,000** | **5,000** | - | **50,000** | **20,000** | **50,000** | **50,000** | **50,000** |
| **EXP-21** | 27 Feb 04 | NA** | 20.12 | >2.59 | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 986.85 | 12 Mar 04 | NA** | 21.00 | >1.2 | NA | NA | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 10 Aug 05 | 20.40 | NA | NA | NA | NA | <2.0 | <2.0 | <2.0 | <2.0 | ND | <2.0 | <3.0 | <50 | <50 | <50 |
| **EXP-22** | 05 Dec 03 | 18.80 | NA | NA | NA | 969.43 | 284 | 1,720 | 368 | 3,629 | 6,001 | 41 | 170 | 9,800 | 1,200 | 2,470 |
| 988.23 | 26 Feb 04 | 20.62 | NA | NA | NA | 967.61 | 30.7 | 152 | 64.9 | 857 | 1,104.6 | <2.0 | 52.0 | 1,450 | <50 | 1,170 |
| | 12 Mar 04 | 20.66 | NA | NA | NA | 967.57 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 11 Aug 05 | 17.80 | NA | NA | NA | 967.61 | 2.3 | 2.4 | 4.3 | 100.8 | 109.8 | 8.0 | 13.2 | 739 | 167 | 420 |
| | 10 May 06 | 17.00 | NA | NA | NA | 971.23 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |

Notes:
BTEX = benzene, toluene, ethylbenzene, and xylenes
MTBE = methyl tert-butyl ether
NA = not applicable
"<" = less than the laboratory reporting limit
ND = not detected
NS = not sampled, analyzed and/or measured
VPH = volatile petroleum hydrocarbons (analyzed according to Massachusetts Department of Environmental Protection VPH Methodology)
MCP = Massachusetts Contingency Plan 310 CMR 40.0000
† MCP Method 1 Groundwater Standard "GW-3" is applicable to all wells; however, "GW-2" is also applicable to this well
**Bolded** values represent concentrations that exceed applicable groundwater standards
*Well was thought to have been destroyed, but was found and saved during 9/01 trenching activities
**Well was blocked therefore depth to groundwater could not be determined
NAPL = non aqueous-phase liquid
NAPL recovered = non aqueous-phase liquid recovered during bailing

ARCADIS

**Appendix F**

Results of Statistical Data Assessment

**Table F-1**
**Summary Of Historical Groundwater Analytical Results - Well GMA5-4**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 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 | GMA5-4 10/30/08 | Detection Frequency | Minimum Detect | Maximum Detect | Median Value | Arithmetic Average | Geometric Mean | Standard Deviation |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Inorganics-Filtered** | | | | | | | | | | | |
| Cadmium | Not Listed | 0.004 | 0.05 | ND(0.0100) [ND(0.0100)] | 1/8 | 0.00411 | 0.00411 | 0.00455 | 0.00395 | 0.00376 | 0.00124 |

Notes:

1. Samples were collected by ARCADIS between 2007and 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 fall 2008 sampling event are summarized.
5. Field duplicate sample results are presented in brackets.

**Table F-2**
**Summary Of Historical Groundwater Analytical Results - Well GMA5-7**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 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 | GMA5-7 10/30/08 | Detection Frequency | Minimum Detect | Maximum Detect | Median Value | Arithmetic Average | Geometric Mean | Standard Deviation |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics** | | | | | | | | | | | |
| Acetone | 50 | 50 | 100 | ND(0.0050) [ND(0.0050)] | 1/10 | 0.014 | 0.014 | 0.00500 | 0.00490 | 0.00420 | 0.00343 |
| Benzene | 2 | 10 | 100 | 0.00010 J [0.000090 J] | 1/10 | 0.00009 | 0.0001 | 0.00250 | 0.00166 | 0.00111 | 0.00109 |
| Chlorobenzene | 0.2 | 1 | 10 | 0.00071 J [0.00071 J] | 1/10 | 0.00071 | 0.00071 | 0.00250 | 0.00172 | 0.00136 | 0.00101 |
| Ethylbenzene | 20 | 5 | 100 | ND(0.0010) [ND(0.0010)] | 2/10 | 0.00018 | 0.00023 | 0.00250 | 0.00164 | 0.00110 | 0.00111 |
| Tetrachloroethene | 0.05 | 30 | 100 | 0.034 [0.034] | 10/10 | 0.0045 | 0.062 | 0.0290 | 0.0304 | 0.0254 | 0.0161 |
| Toluene | 50 | 40 | 100 | ND(0.0010) [ND(0.0010)] | 1/10 | 0.0011 | 0.0011 | 0.00180 | 0.00156 | 0.00121 | 0.00101 |
| trans-1,2-Dichloroethene | 0.09 | 50 | 100 | ND(0.0010) [ND(0.0010)] | 3/10 | 0.0008 | 0.0011 | 0.00180 | 0.00162 | 0.00133 | 0.000941 |
| Trichloroethene | 0.03 | 5 | 50 | 0.0014 [0.0014] | 7/10 | 0.0014 | 0.0067 | 0.00250 | 0.00290 | 0.00269 | 0.00141 |
| Vinyl Chloride | 0.002 | 50 | 100 | ND(0.0010) [ND(0.0010)] | 3/10 | 0.00059 | 0.0029 | 0.00100 | 0.00101 | 0.000874 | 0.000702 |
| Total VOCs | 5 | Not Listed | Not Listed | 0.036 J [0.036 J] | 10/10 | 0.0045 | 0.064 | 0.0350 | 0.0348 | 0.0294 | 0.0162 |

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 fall 2008 sampling event are summarized.
5. Field duplicate sample results are presented in brackets.

Organics

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

**Table F-3**
**Summary Of Historical Groundwater Analytical Results - Well GMA5-9**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 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 | GMA5-9 10/30/08 | Detection Frequency | Minimum Detect | Maximum Detect | Median Value | Arithmetic Average | Geometric Mean | Standard Deviation |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics** | | | | | | | | | | | |
| Chlorobenzene | 0.2 | 1 | 10 | ND(0.0010) | 1/3 | 0.00011 | 0.00011 | 0.000500 | 0.000437 | 0.000426 | 0.000110 |
| Tetrachloroethene | 0.05 | 30 | 100 | 0.026 | 3/3 | 0.02 | 0.026 | 0.0220 | 0.0230 | 0.0229 | 0.00265 |
| Total VOCs | 5 | Not Listed | Not Listed | 0.026 | 3/3 | 0.02 | 0.026 | 0.0220 | 0.0230 | 0.0229 | 0.00265 |

Notes:
1. Samples were collected by ARCADIS between 2007and 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 fall 2008 sampling event are summarized.
5. Field duplicate sample results are presented in brackets.

**Table F-4**
**Summary Of Historical Groundwater Analytical Results - Well GMA5-10**

**Groundwater Management Area 5 Long-Term Monitoring Program**
**Monitoring Event Evaluation Report for Fall 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 | GMA5-10 11/03/08 | Detection Frequency | Minimum Detect | Maximum Detect | Median Value | Arithmetic Average | Geometric Mean | Standard Deviation |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organics** | | | | | | | | | | | |
| Toluene | 50 | 40 | 100 | ND(0.0010) | 1/3 | 0.00016 | 0.00035 | 0.000500 | 0.000420 | 0.000402 | 0.000139 |
| Total VOCs | 5 | Not Listed | Not Listed | ND(0.10) | 1/3 | 0.00016 | 0.00035 | 0.0500 | 0.0334 | 0.00866 | 0.0287 |

Notes:

1. Samples were collected by ARCADIS between 2007and 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 fall 2008 sampling event are summarized.
5. Toluene was detected in duplicate samples analyzed during the December 2007 sampling event, which was the only sampling event where VOCs were detected in this well. The minimum and maximum detected concentrations represent the duplicate sample results from that single sampling event.