OBG

REPORT

Periodic Review

Brownfield Cleanup Program No. C360115
1-5 Holland Avenue
White Plains, New York

Prepared for:

One Holland Avenue Development, LLC

Prepared by:

O'Brien & Gere Engineers, Inc.

April 2017

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Periodic Review Report

1-5 Holland Avenue Site
Westchester, New York

Prepared for:

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EXECUTIVE SUMMARY

Site Summary

The 1-5 Holland Avenue Site is an approximately 0.72-acre property that is fully developed with a building and parking lots. Past commercial/industrial use of the Site resulted in contamination of groundwater, soil, and subsurface soil-vapor with tetrachloroethylene (PCE) and its degradation products. Observed concentrations of PCE in groundwater are highest near the suspected source area (former floor drains) and was also found exceeding groundwater standards at the downgradient property boundary and in downgradient off-site wells. Concentrations of contaminants in soils were generally found to be within regulatory criteria (6 NYCRR Part 375-6 restricted commercial and protection of groundwater soil cleanup objectives), with the exception of low levels of lead, mercury, copper, arsenic and semi-volatile organic compounds attributed to historic urban fill at the Site. The property was enrolled in the Brownfield Cleanup Program in December 2010 by the former owner One Holland Avenue Development LLC (OHAD). The New York State Department of Environmental Conservation (NYSDEC) issued a Certificate of Completion for the Site on December 23, 2014.

Remedial Program and Effectiveness

A Remedial Program was implemented that includes the following major elements: 1) two rounds of in-situ chemical oxidation (ISCO) were used to treat groundwater in the suspected source area, 2) an engineering control (EC) comprising a sub-slab depressurization (SSD) system was installed to mitigate potential for vapor intrusion (VI) at the Site and the neighboring 7-11 Holland Avenue building, 3) an EC comprising a composite site cover system was employed at the Site to prevent exposure to residual soil contamination, 4) Institutional Controls (ICs) recorded in an environmental easement limit Site use to commercial/industrial use and prohibit groundwater use, and 5) an Operations, Maintenance and Monitoring Plan that outlines the activities to be performed to verify that remedy performance, effectiveness and protectiveness are maintained and evaluated under the requirements of the *Site Management Plan*, *BCP No. C360115, 1-5 Holland Avenue, White Plains, New York* (SMP) dated December 2014 (OBG, 2014a).

The Remedial Program is proving effective at meeting remedial objectives for the Site. Site redevelopment facilitated by issuance of the Certificate of Completion is progressing. Over the past year the new owner of the Site (1 Holland LLC) continued redevelopment of the property into a self-storage facility undertaking a vertical building expansion to increase storage capacity. Building expansion work is being completed in accordance with the SMP and its Excavation Work Plan. Breaches in the composite cover system necessitated by the construction work were restored with asphalt as required under the SMP. Following the foundation building expansion work performance of the SSD System was re-evaluated to confirm that it continues to perform as designed. This evaluation indicated that the system continues to perform as designed and modifications/upgrades were not necessary. VI monitoring at the neighboring 2 Holland Avenue property was conducted and demonstrated that soil-vapor levels remain low and are below levels requiring further monitoring. Groundwater monitoring for both on-site and off-site wells was successfully completed and showed substantial reductions in PCE concentrations. Continued groundwater monitoring over the next several years will be required to assess groundwater trends and long-term effectiveness of the remedy.

Compliance

No areas of non-compliance regarding major elements of the SMP were identified. Periodic site inspections indicated the Site is being used and managed in compliance with the IC/EC Plan, the Monitoring Plan, and the Operations, Maintenance and Monitoring Plan.

Recommendations

At present no changes to the SMP are recommended. There is no need to increase or decrease the frequency of PRR submittals at this time.

In accordance with the SMP, the following is the Periodic Review Report for the Reporting Period of March 23, 2016 to March 23, 2017.

1. BACKGROUND AND SITE DESCRIPTION

One Holland Avenue Development, LLC (OHAD) entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) in December 2010 (last amended in August 2014), to investigate and remediate a 0.72-acre property located at 1-5 Holland Avenue, White Plains, Westchester County, New York (See **Figure 1**). The Site is bounded by Holland Avenue to the north, White Plains Rural Cemetery to the south, commercial buildings at 7-11 Holland Avenue to the east, and Harlem Line of Metro North Railroad tracks and parking area to the west (see **Figure 2**). The property was remediated to commercial use and received a NYSDEC BCP Certificate of Completion on December 23, 2014.

Based on historical reports and data collected during the Remedial Investigation (RI), the source of tetrachloroethylene (PCE) is believed to be from historical metal degreasing operations at the Site and possible releases through cracks in floor drains, which discharged to the sanitary sewer. The primary constituents of concern (COCs) associated with historical operations include PCE and associated degradation products: trichloroethene (TCE), 1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride (VC). Secondary COCs include semi-volatile organic compounds (SVOCs) and metals in shallow soils (less than 4 feet below grade). The source of the secondary COCs is believed to be associated with urban development (*e.g.,* historical backfill, asphalt constituents) and not Site related.

As documented in the RI Report (OBG, 2014b), the nature and extent of contamination prior to implementation of remedial measures was as follows:

- **Soil:** Concentrations of constituents detected in soils were generally within the regulatory criteria (6 NYCRR Part 375-6 restricted commercial and protection of groundwater soil cleanup objectives) with some isolated exceptions.
  - Metals in the surface and subsurface fill with concentrations exceeding the regulatory criteria were primarily limited to lead, mercury, copper and arsenic. These exceedances are considered to be related to the historic urban fill under the entire Site, and not related to historical Site activities.
  - SVOCs were observed in the surface soil samples in the front and rear of the building. SVOC exceedances of 6 NYCRR Part 375 Restricted Commercial and Protection of Groundwater Soil Cleanup Objectives (SCOs) were limited to the surface soil samples collected from the rear of the building. These SVOCs may be a result of vehicle emissions, asphalt dust, sealcoat paving operations and other urban factors; and are not considered to be related to historical Site activities.
- **Groundwater:** Results of groundwater sampling indicated the presence of PCE in overburden and bedrock groundwater, on-Site and along the hydraulically downgradient western edge of the property, at concentrations above the NYS Class GA groundwater standard of 5 µg/l. The most recent groundwater sampling event in June 2013 prior to the first of two groundwater in-situ chemical oxidation (ISCO) treatment events indicated the highest concentrations of PCE in suspected source area (near historic floor drains FD-2 and FD-3) wells MW-4S (overburden) and MW-4D (shallow bedrock) at 1,040 µg/l and 5,500 µg/l, respectively.

  The principal transport pathway is as a dissolved constituent in the overburden groundwater. Overburden groundwater flow, and PCE transport, is to the west/northwest toward the Bronx River. Groundwater transport of PCE, toward the Bronx River, also occurs in the upper bedrock zone.
- **Soil Vapor:** Sub-slab and indoor air sampling was conducted on-site as well as 7-11 Holland Avenue and 2 Holland Avenue as noted below.
  - On-Site PCE concentrations ranged from 4,300 to 180,000 µg/m^3 in sub-slab soil vapor and from 1.9 to 43 µg/m^3 in indoor air. The maximum sub-slab soil vapor concentrations of PCE were observed in the southeast quadrant of the Site in the area of the floor drains. Elevated sub-slab soil vapor concentrations

were also observed immediately to the east of the Site along the western most portion of the 7-11 Holland Ave building.

- Off-Site PCE concentrations at 7-11 Holland Ave ranged from 6.6 to 7,700 µg/m^3 in sub-slab soil vapor and 0.62 to 1.2 µg/m^3 in indoor air.
- Off-Site PCE concentrations at 2 Holland Ave ranged from 2.2 to 940 µg/m^3 in sub-slab soil vapor and 0.27 to 0.28 µg/m^3 in indoor air.

The building expansion project previously detailed in the 2015 reporting year PRR (OBG, 2016) is substantially complete. Soil excavation work associated with foundation footers and other activities that penetrated the composite cover system (Cap) are completed and received a final surface application of asphalt in April 2017, as documented in Attachment A.

2. SUMMARY OF SITE REMEDY

A summary of remedial measures and objectives are as follows:

Remedial Measures

As documented in the Final Engineering Report (OBG. 2014c) remedial measures for the Site are described below and detailed on **Figure 3**.

- Vapor Intrusion (VI) Mitigation: A VI mitigation system was installed in 2009 to address the potential for VI into on-site structures at 1-5 Holland Avenue and enhanced to include the neighboring property at 7-11 Holland Avenue in 2013. Overall the SSD system at 1-5 and 7-11 Holland Avenue includes five fans and eleven suction points.
- Surface Soil Excavation and Cap Placement: Surface soil excavation activities were conducted at the Site to remove exposed surface soil exhibiting concentrations greater than 6 NYCRR Part 375 SCOs for Commercial Use. These excavated areas were backfilled with 12 inches of clean soil or granular stone, asphalt pavement, or concrete. Excavation activities were conducted in July and September 2013 and February 2014.
- *In-Situ* Chemical Oxidation Groundwater Treatment: Groundwater treatment was implemented to address chlorinated VOCs in groundwater detected at concentrations greater than the NYS Class GA groundwater standards. The groundwater treatment remedial measure consisted of ISCO using an activated sodium persulfate process to treat PCE in subsurface soil, bedrock, and groundwater. Ten injection well (IW) clusters (three injection points discharging at different depths per cluster) were installed in the suspected source area in 2013. ISCO groundwater treatment events were conducted in June 2013 and September 2014.

As detailed in the SMP, four additional components were added to the site remedy.

- Institutional Controls (ICs) in the form of an Environmental Easement.
- Engineering Controls (ECs) including a Site Cover System and on-going operation of a SSD System to control the potential for VI.
- Monitoring Plan to assess concentrations of COCs in groundwater, effectiveness of the SSD System to control VI, and on-going integrity of site cover system.
- Operations and Maintenance Plan to maintain the existing SSD System.

Remedial Action Objectives

Based on the results of the RI, the following Remedial Action Objectives (RAOs) were identified for this Site and were included in the Decision Document dated November, 2014 (NYSDEC, 2014).

- Groundwater RAOs

  RAOs for Public Health Protection

  - Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
  - Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

  RAOs for Environmental Protection

  - Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable.
  - Prevent the discharge of contaminants from groundwater to surface water.
  - Remove the source of ground or surface water contamination.
- Soil RAOs

  RAOs for Public Health Protection

  - Prevent ingestion/direct contact with contaminated soil.

- » Prevent exposure to contaminants volatilizing from contaminated soil.

RAOs for Environmental Protection

- » Prevent migration of contaminants that would result in groundwater or surface water contamination.

- Soil Vapor RAOs

RAOs for Public Health Protection

- » Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at and adjacent to the Site.

3. EVALUATION OF REMEDY PERFORMANCE, EFFECTIVENESS, AND PROTECTIVENESS

The remedy performance, effectiveness and protectiveness for groundwater, soil, and soil vapor is presented below.

- **Groundwater**

  The ISCO groundwater treatment combined with natural attenuation processes have resulted in substantial reduction of PCE concentrations in groundwater. PCE concentrations in groundwater appear to continue on a declining trend and do not appear, as yet, to be reaching asymptotic concentrations. The most recent groundwater sampling results from October 2016 compared to groundwater results from June 2013 prior to the first ISCO injection indicate that PCE concentrations in:

  - source area wells MW-4S (overburden) and 4D (shallow bedrock) have been reduced significantly. PCE concentrations in MW-4S decreased approximately 90% from 1,040 µg/L in June 2013 to 107 µg/L in October 2016. Similarly, PCE concentrations in MW-4D decreased approximately 82% from 5,500 µg/L in June 2013 to 990 µg/L in October 2016;
  - two out of the seven on-site hydraulically downgradient/sidegradient wells exceeded the GA groundwater standard in October 2016, down from three out of seven wells that exceeded the standard in June 2013; and
  - two out of the six downgradient off-site wells exceeded the GA groundwater standard in October 2016, down from four out of six wells that exceeded the standard in June 2013.

- **Soil**

  As detailed in the Monitoring Compliance Report (Section 5), site wide inspection of the cover system and Excavation Work Plan presented in the SMP continues to be effective at protecting the public, on-site workers, and potential utility workers from exposures of COCs.

- **Soil Vapor**

  - On-site/7-11 Holland Avenue: The Site remedy to address the potential for VI includes a SSD System and Operations, Maintenance and Monitoring Plan (OMM Plan). Based on the December 2016 and April 2017 inspections conducted of the SSD System and assessment of negative pressure under 1-5 and 7 Holland Avenue, the remedy is performing as designed and is adequate to protect on-site workers and patrons that may enter the building.

    2 Holland Avenue: Sub-slab soil vapor PCE concentrations at 2 Holland Avenue have been reduced significantly since 2011, consistent with the trend in reduction of groundwater concentration at the Site. NYSDOH's *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* provides that no further actions are needed to address human exposures when the indoor air concentration of PCE is less than 3 µg/m^3 and the sub-slab soil vapor concentration of PCE is less than 100 µg/m^3. Monitoring at 2 Holland Avenue in December 2015 showed indoor air PCE concentration within background levels (well below 3 µg/m^3) and sub-slab soil vapor PCE concentration at 72 µg/m^3. Monitoring conducted in December 2016 again showed indoor air PCE concentrations well within background levels and a sub-slab soil vapor concentration at 6.8 µg/m^3. Successive monitoring at 2 Holland Avenue over a number of years demonstrates that the potential for vapor intrusion into the 2 Holland Avenue building has been mitigated. As such, consistent with the 2006 NYSDOH Guidance, no further action is required to address the potential for VI at the 2 Holland Avenue property. Additional details concerning VI monitoring are presented in Section 5.

4. INSTITUTIONAL CONTROL/ENGINEERING CONTROL PLAN COMPLIANCE REPORT

As a result of contaminated soil, groundwater, and soil vapor existing beneath the Site, Engineering Controls and Institutional Controls (IC/ECs) were established in place to protect human health and the environment. This PRR describes the IC/ECs in place, their objectives, and performance over the PRR time period.

- Engineering Controls

  Two engineering controls have been implemented at the Site, which include a composite cover system (Cap) and sub-slab depressurization system. A review of these ECs and their performance is presented below.

  - Composite Cover System

    The objective of the Cap is to prevent human exposure to remaining contamination in soil/fill at the Site. This cover system comprises a combination of 12 inches of clean soil or granular stone, asphalt pavement, concrete-covered sidewalks, and concrete building foundation slabs. This EC is coupled with an Excavation Work Plan that is required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and underlying remaining contaminated soil is disturbed.

    The building expansion project previously detailed in the 2015 reporting year PRR (OBG, 2016) is substantially complete. Soil excavation work associated with foundation footers and other activities that penetrated the composite cover system (Cap) received the final surface application of asphalt in April 2017, as documented in Attachment A.

    The composite cover system was inspected on March 1, 2017 in accordance with Section 3.4 *Site-Wide Inspection* and Attachment H *Site-Wide Inspection Form* of the SMP. Results of this inspection indicated that the composite cover system was performing as expected. A completed SMP Cap inspection form is presented in **Attachment B.**

  - VI Mitigation Sub-Slab Depressurization System

    A SSD System was installed with the objective of maintaining acceptable indoor air concentrations at the 1-5 Holland Ave and 7-11 Holland Ave buildings by inducing a sub-slab vacuum. A visual inspection of the SSD Systems was conducted on December 14, 2016 in accordance with the OMM Plan presented in Appendix J of the SMP. This inspection was conducted to verify that the SSD Systems installed at 1-5 Holland Avenue were operating as designed, and were providing depressurization beneath the slab at 1-5 Holland Avenue and in the western portion of 7-11 Holland Avenue. Some components of the SSD Systems installed at 1-5 Holland Avenue are no longer accessible due to building modifications (6 of the 11 system suction points are not accessible following installation of the storage units), however, the system fans are electronically monitored to indicate that are still in operation.

    Results of the SSD inspection did not identify needed corrective actions to the SSD System with the exception of the following:

    - One suction fan alarm (3B) was inoperable and was replaced on the day of the inspection.
    - Three exhaust stacks in the area of the building expansion need to be extended to the new roofline (modifications completed in April 2017 as noted in Section 6).

    The completed SSD System inspection forms are presented in Attachment B**.** Additional information on the SSD Systems performance and corrective actions taken are detailed in the OMM Plan Compliance Report presented in Section 6.

    The SSD System will be operational until a request to terminate the system along with supporting environmental data is submitted to and approved by the NYSDEC and NYSDOH.

- Institutional Controls

  Institutional Controls required by the BCP Decision Document (NYSDEC, 2014) include: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the Site to Commercial and Industrial uses only. Adherence to these Institutional Controls on the Site is required by the Environmental Easement (Westchester County, Control No. 542943402).

  Institutional Controls currently in-place in the form of required activities identified in the Environmental Easement are as follows:

  - Compliance with the Environmental Easement and SMP
  - Operation and maintenance of ECs
  - Implementing an inspection program for ECs
  - Monitoring of groundwater and soil vapor
  - Reporting data and information collected as part of the SMP at the required frequency.

  Institutional Controls currently in-place in the form of Site restrictions identified in the Environmental Easement are as follows:

  - The property may only be used for restricted commercial and industrial use
  - The property may not be used for a higher level of use, such as unrestricted, residential or restricted residential use without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC
  - All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP
  - The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use
  - The potential for vapor intrusion must be evaluated for any new structure on the property, or any horizontal expansion of an existing structure on the property, and any potential impacts that are identified must be monitored or mitigated
  - Vegetable gardens and farming on the property are prohibited

The completed and New York State Professional Engineer signed IC/EC Certification Form is presented in Attachment C.

5. MONITORING PLAN COMPLIANCE REPORT

- Components of Monitoring Plan

  The Monitoring Plan for the Site consists of the following three components:

  - Groundwater monitoring for VOCs is conducted semi-annually and includes 17 groundwater monitoring wells. Monitoring is conducted to assess the performance of the ISCO injection events conducted in 2013/2014 and natural attenuation of COCs. As detailed in the SMP, this monitoring frequency will continue for a minimum of three years prior to submitting a request to the NYSDEC to modify the scope and frequency of sampling
  - VI monitoring at 2 Holland Avenue is required for two years during the winter heating season to evaluate the continued absence of VI impacts to indoor air. The monitoring program includes one indoor air, one sub-slab soil vapor, and one ambient air sample
  - Site-Wide Inspections are to be conducted once per year at the level of detail necessary to assess compliance with ICs, condition and effectiveness of ECs, including sub-slab depressurization at 7-11 Holland Avenue.

- Summary of PRR Monitoring Activities

  Monitoring conducted during this PRR period was as follows:

  - Groundwater sampling was conducted on May 4 and October 26, 2016. Groundwater monitoring reports for these events, which incorporate field and laboratory data, tables, figures and conclusions are presented in **Attachment D.** Well locations are detailed on **Figure 4**. The groundwater monitoring program was compliant with requirements of the SMP.
  - Vapor intrusion monitoring for 2 Holland Avenue was last conducted on December 14, 2016. A VI monitoring report, which incorporates field and laboratory data, tables, figures and conclusions; and a property notification letter are presented in **Attachment E.** VI monitoring was conducted as detailed in the SMP with two exceptions:
    - Consistent with prior VI sampling events acceptable to the NYSDEC and NYSDOH a duplicate sub-slab soil vapor sample was not collected.
  - Site wide and monitoring well inspections were completed on December 5, 2016 and March 1, 2017, respectively. Completed inspection forms are presented in **Attachment B.**

- Comparisons with Remedial Objectives
  - Groundwater

    A summary table of PCE concentrations in groundwater for the prior three years is presented in **Table 1**. Groundwater analytical results exceeding Class GA groundwater standards for the May 4 and October 26, 2016 sampling events are presented on **Figure 4.**

    A review of this data indicates:

    - Source Area Wells: The PCE concentrations detected during the October 26, 2016 sampling event in MW-4S and MW-4D are approximately 90% and 82% less in concentration when compared to the pre-ISCO June 10, 2013 sampling event, respectively.
    - On-site Hydraulically Downgradient Wells: The most recent round of groundwater data indicates that two out of the seven property boundary wells exceed the Class GA groundwater standard for PCE, down from three out of seven wells that exceeded the standard in June 2013.

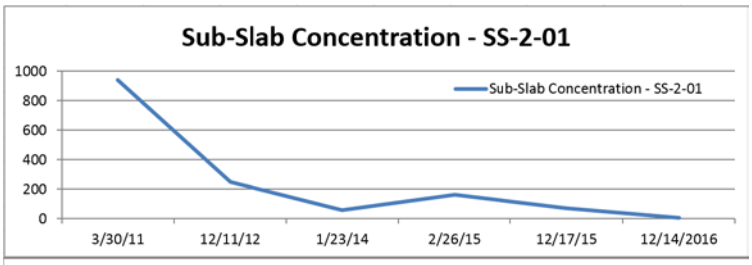
- Downgradient Off-site Wells: Only two out of the six downgradient off-site wells exhibit concentrations of PCE exceeding the Class GA standard, down from four out of six wells that exceeded the standard in June 2013.

A review of the current and historical data indicates that the concentrations of PCE in the source area (represented by MW-4S and MW-4D) appear to continue on a declining trend and do not appear, as yet, to be reaching asymptotic concentrations. Additional groundwater monitoring should continue to assess trends.

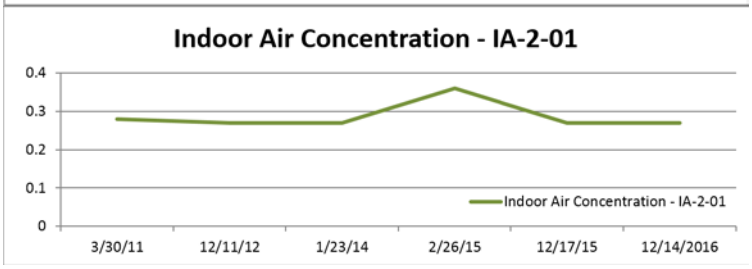
- Sub-slab Soil Vapor

A graphical presentation of current and historical sub-slab soil vapor and indoor air monitoring data for PCE at 2 Holland Avenue property is presented below:

Units = µg/m³



Units = µg/m³



NYSDOH's *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* recommends that no further actions are needed to address human exposures when indoor air concentration of PCE is less than 3 µg/m³ and sub-slab soil vapor concentration of PCE is less than 100 µg/m³ (see Matrix 2). The latest air guideline value for PCE is 30 µg/m³. In the six consecutive years of indoor air monitoring, beginning in 2011, indoor air sampling results for PCE at 2 Holland Avenue have been well below 3 µg/m³. Following a substantial decline in 2011 and 2012, the average sub-slab soil vapor PCE concentration over the past 4 years has been less than 100 µg/m³. The December 2016 sampling event results show indoor air PCE concentration well below 3.0 µg/m³ (<0.27 µg/m³), as well as the air guideline value of 30 µg/m³, and sub-slab soil vapor PCE concentration well below 100 µg/m³ (6.8 µg/m³).

The reduction in sub-slab soil vapor PCE concentration since 2011 and consistently low indoor air results indicate that the RAO selected for 2 Holland Avenue has been met. The December 2016 monitoring confirms that consistent with NYSDOH Guidance no further action, including continued VI monitoring at the 2 Holland Avenue property, is required to address the potential for vapor intrusion at the 2 Holland Avenue property.

6. OPERATIONS, MAINTENANCE AND MONITORING PLAN COMPLIANCE REPORT

Operations, maintenance and monitoring activities for the Site pertain to the operation of the SSD System. Annual inspections are conducted to assess System performance and to conduct a visual inspection of the structure and the System's installation, both indoors and outdoors. The latest SSD System annual inspection report, which includes a completed copy of the systems inspection forms, detailed in the SMP, is presented in **Attachment B.** In general, the inspection included:

- Structure – Checking for changes in the structure that could affect the system's performance.
- Fan and Electrical – Recording suction point vacuums and comparison with the prior commissioned vacuums as well as inspections of electrical connections.
- Piping, Slab and Wall – Inspecting piping supports, connections, and exhaust stack. Checking for visible new cracks in walls and floors.

The latest inspection was conducted on December 14, 2016 to assess that the SSD System installed at 1-5 Holland Avenue was operating as designed, and was providing depressurization beneath the slab at 1-5 and 7-11 Holland Avenue. Some components of the SSD System installed at 1-5 Holland Avenue are no longer accessible due to building modifications (six of the eleven system suction points are not accessible following installation of the storage units). Visual inspection of accessible SSD System components similarly indicates that the SSD System components are operating as designed. Results of the SSD assessment did not identify needed corrective actions to the SSD System with the exception of the following:

- One suction system alarm (3B) was inoperable and was replaced on the day of the inspection.
- Three exhaust stacks in the area of the building expansion needed to be extended to the new roofline, which was completed in April 2017.

As a result of ongoing construction activities associated with the vertical expansion of the building, three SSD System exhaust stacks were modified and extended by the building owner in April 2017. Following extension of the stacks, the SSD System was again inspected in April 2017. During this inspection, new communication test points (CTPs) were installed in accessible/unfinished areas of the building to replace previously installed CTPs that were no longer accessible. Measurements made at the new CTPs during the April 2017 inspection indicate that the System operation of the 6 inaccessible suction points are performing as designed.

The completed SSD System inspection forms are presented in Attachment B.

7. OVERALL PRR CONCLUSIONS AND RECOMMENDATIONS

As documented in this PRR the Site is being managed in compliance with the SMP.

- Groundwater Monitoring

  A review of current and historical data indicates that the concentrations of PCE in the source area (as represented by MW-4S and MW-4D) have not stabilized and groundwater sampling should continue to assess trends.

- VI Monitoring – 2 Holland Avenue

  The reduction in sub-slab soil vapor PCE concentrations since 2011 and consistently low indoor air results indicate that the RAO selected for 2 Holland Avenue has been met. The December 2016 monitoring confirms that consistent with NYSDOH Guidance no further action is required to address the potential for vapor intrusion at the 2 Holland Avenue property.

- SSD System

  Based on the SSD system inspections conducted in December 2016 and April 2017, the SSD system continues to operate as designed and has not been negatively impacted by recent building expansion activities.

- Composite Cover System

  Based on documentation provided by 1 Holland, LLC and OBG's site inspection in April 2017, the Cap has been repaired following breaches made as a result of building expansion construction activities and is effective at protecting the public and on-site workers from exposures of COCs.

REFERENCES

OBG, 2014a. *Site Management Plan, 1-5 Holland Avenue, Brownfield Cleanup Program, Site No. C360115, White Plains, New York.* December 2014.

OBG, 2014b. *Remedial Investigation Report, BCP No. C360115, 1-5 Holland Avenue, White Plains, New York.* April 2014.

OBG, 2014c. *Final Engineering Report, 1-5 Holland Avenue, Brownfield Cleanup Program, Site No. C360115, White Plains, New York.* December 2014.

OBG, 2016. *Periodic Review Report, Brownfield Cleanup Program No. C360115, White Plains, New York*, April 2016.

NYSDEC, 2014. *Decision Document, 1-5 Holland Avenue, Brownfield Cleanup Program, White Plains, Westchester County, Site No. C360115*, November 2014.

Tables

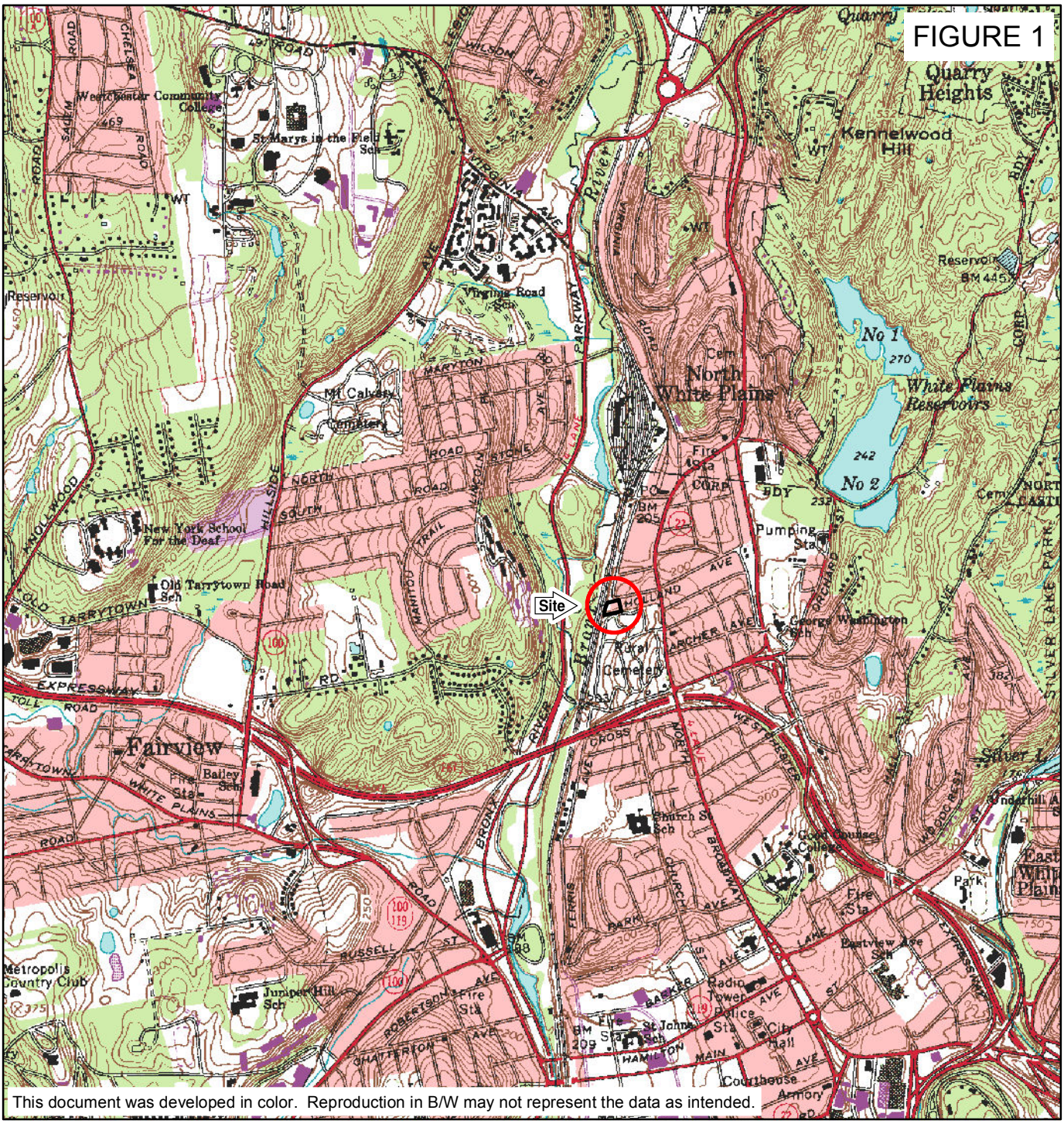
Monitoring Well No.	06/10/13 (Pre-ISCO)	1st ISCO Event	11/14/13 (Post ISCO)	01/14/14 (Post ISCO)	07/17/14 (Post ISCO)	2nd ISCO Event	10/10/14 (Post ISCO)	5/8/15 (Post ISCO)	10/09/15 (Post ISCO)	5/4/16 (Post ISCO)	10/25/16 (Post ISCO)
On-site Wells											
MW-4S (Source Area)	**1,040**		**10**	**21** (Blind Duplicate **21**)	**890**		**327**	**460**	**730**	**400**	**107**
MW-4D (Source Area)	**5,500**		**332**	**317**	**2000** (Blind Duplicate **1750**)		**54** (Blind Duplicate **63**)	**29** (Blind Duplicate **25**)	**2490** (Blind Duplicate **840**)	**1300** (Blind Duplicate **1300**)	**990** (Blind Duplicate **860**)
MW-1 (Sidegradient)	2		0.39	3	**16**		3	**10**	3	1	2
MW-2 (Downgradient)	**27**		**6**	**19**	**94**		**158**	**33**	**64**	**55**	**15**
MW-2SB (Downgradient)	0.78		0.71	1	0.52		0.48	0.34	0.24	0.36	0.22
MW-2DB (Downgradient)	3		0.42	3	4		4	3	3	3	2
MW-5 (Downgradient)	**165**		**5**	**67**	**5**		4	4	2	2	**32**
MW-5SB (Downgradient)	4		3	3	3		2	2	2	1	2
MW-5DB (Downgradient)	1		0.81	0.95	0.41		0.48	0.55	0.39	0.31	0.25
Off-site Downgradient Wells											
MW-7	**14**		Not Sampled	Not Sampled	**57**		**71**	**47**	**32**	**34**	**15**
MW-7SB	**6**		Not Sampled	Not Sampled	**7**		3	1	0.97	0.86	0.59
MW-8	1 (Blind Duplicate <0.67)		Not Sampled	Not Sampled	4		1	2	1	1	1
MW-8SB	**265**		Not Sampled	Not Sampled	**292**		3	**280**	**359**	**240**	**190**
MW-9	0.18		Not Sampled	Not Sampled	<1.0		0.38	<1.0	0.25	<1.0	0.31
MW-9SB	0.3		Not Sampled	Not Sampled	0.34		0.26	0.21	<1.0	<1.0	<1.0

Notes: 1st ISCO injection event occurred June 11-14, 2013.
2nd ISCO injection event occurred September 9-11, 2014
Units = ug/L, ppb

Bold values exceed Class GA standard of 5 ug/L.

Figures

FIGURE 1



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PATH: I:\Feintool-Ny.14206\STDS\GIS\White-Plains\MXD\GIS10\SITE_loc.mxd

PLOT DATE: 10/29/14 1:58:44 PM stantosa

ADAPTED FROM: WHITE PLAINS, NY USGS QUADRANGLE

BROWNFIELD FINAL ENGINEERING REPORT
PROGRAM NO. C360115
1-5 HOLLAND AVENUE
WHITE PLAINS, NY

MAP LOCATION

N

PROJECT SITE MAP

0 1,000 2,000 4,000 6,000 8,000

Feet

NOVEMBER 2014
14206.47376

1:24,000

O'BRIEN & GERE

I:\Feintool-Ny.14206\47376.R1-Implementati\Docs\DWG\MXD\Final Engineering Rpt\SITE_PLAN.mxd

FIGURE 2

N

LEGEND

PROPERTY BOUNDARY

BROWNFIELD FINAL
ENGINEERING REPORT
PROGRAM NO. C360115
1-5 HOLLAND AVENUE
WHITE, PLAINS, NY

SITE PLAN

0 62.5 125 250
Feet

NOVEMBER 2014
14206.47376

O'BRIEN & GERE

PLOTDATE: 10/29/14 2:04:45 PM stantosa

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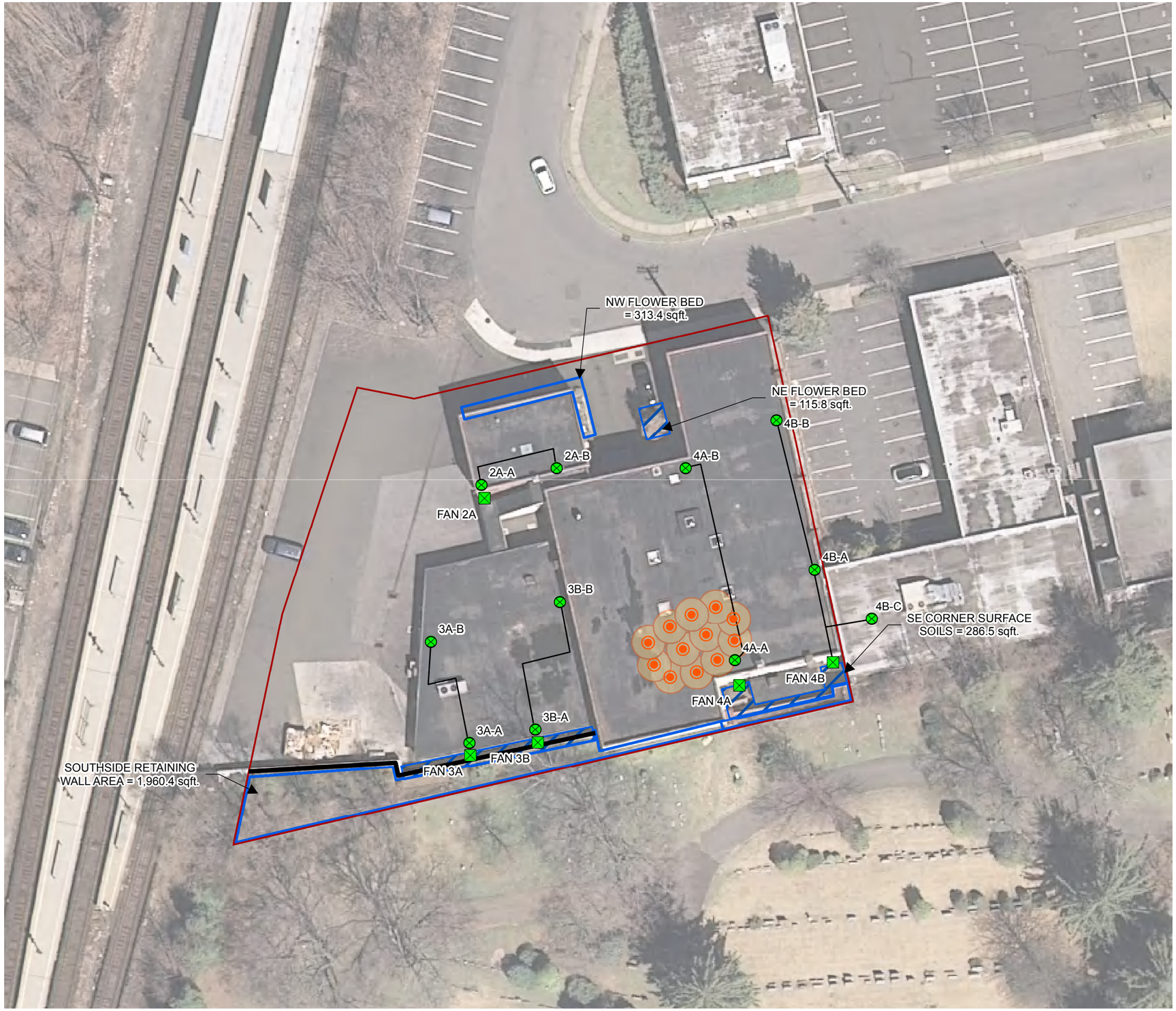

FIGURE 3

N

LEGEND

APPROXIMATE SUB-SLAB DEPRESSURIZATION SYSTEM

- FAN
- SUCTION POINT
- EXHAUST PIPE
- RETAINING WALL
- APPROXIMATE PROPERTY BOUNDARY AND LIMITS OF COMPOSITE COVER SYSTEM
- EXPOSED SURFACE SOIL AREA REMAINING IN PLACE
- EXPOSED SURFACE SOIL AREA EXCAVATED
- IP CLUSTER LOCATION

PERIODIC REVIEW REPORT
BROWNFIELD CLEANUP
PROGRAM NO. C360115
1-5 HOLLAND AVENUE
WHITE PLAINS, NY

REMEDIAL MEASURES ENGINEERING CONTROLS

0 20 40 80
Feet

APRIL 2016
14206.60464

O'BRIEN & GERE

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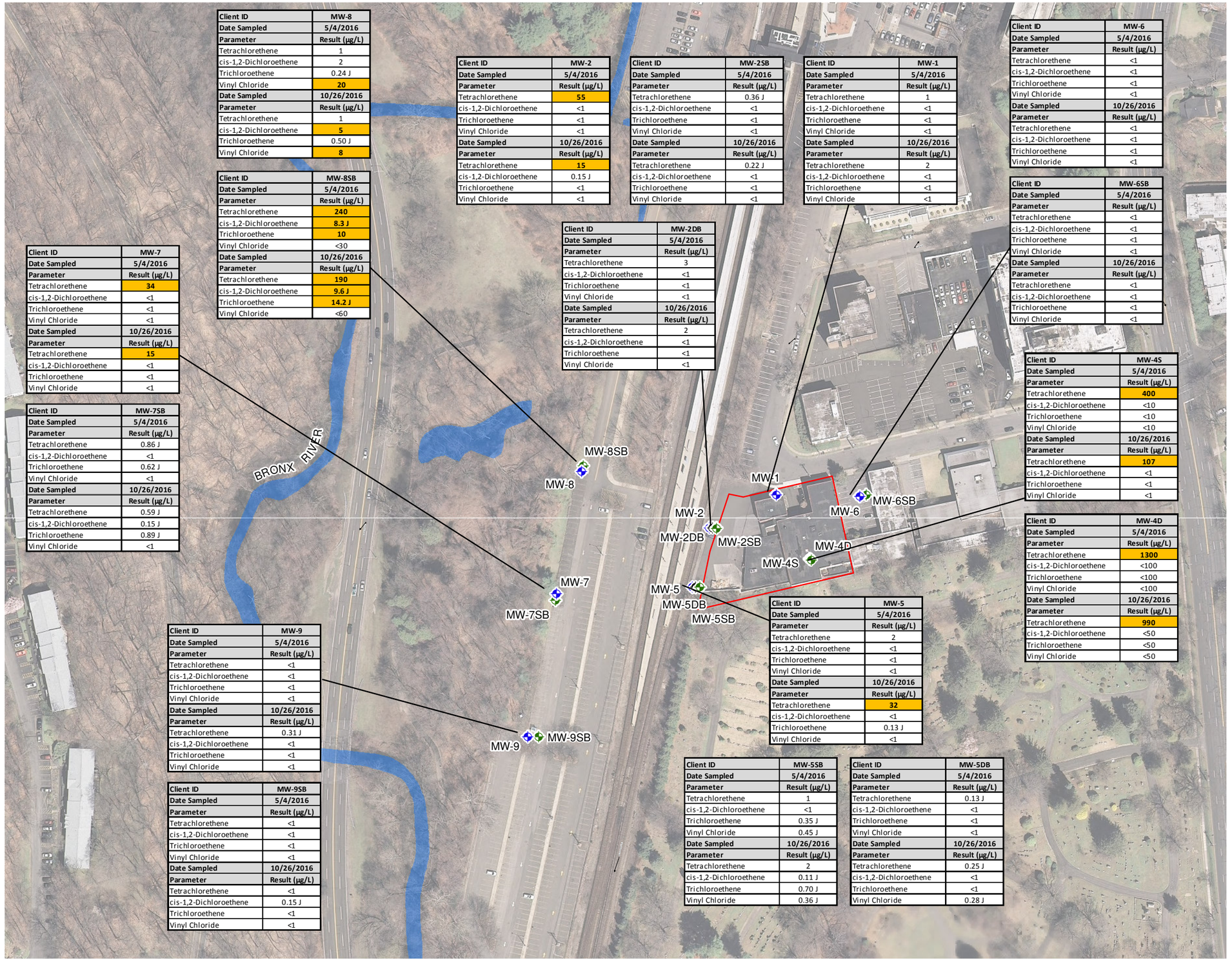
PLOTDATE: 02/28/17 4:08:47 PM DomaszP

FIGURE 4



Client ID	MW-8
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	1
cis-1,2-Dichloroethene	2
Trichloroethene	0.24 J
Vinyl Chloride	20
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	1
cis-1,2-Dichloroethene	5
Trichloroethene	0.50 J
Vinyl Chloride	8

Client ID	MW-8SB
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	240
cis-1,2-Dichloroethene	8.3 J
Trichloroethene	10
Vinyl Chloride	<30
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	190
cis-1,2-Dichloroethene	9.6 J
Trichloroethene	14.2 J
Vinyl Chloride	<60

Client ID	MW-7
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	34
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	15
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1

Client ID	MW-7SB
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	0.86 J
cis-1,2-Dichloroethene	<1
Trichloroethene	0.62 J
Vinyl Chloride	<1
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	0.59 J
cis-1,2-Dichloroethene	0.15 J
Trichloroethene	0.89 J
Vinyl Chloride	<1

Client ID	MW-9
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	0.31 J
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1

Client ID	MW-9SB
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	<1
cis-1,2-Dichloroethene	0.15 J
Trichloroethene	<1
Vinyl Chloride	<1

Client ID	MW-2
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	55
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	15
cis-1,2-Dichloroethene	0.15 J
Trichloroethene	<1
Vinyl Chloride	<1

Client ID	MW-2DB
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	3
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	2
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1

Client ID	MW-2SB
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	0.36 J
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	0.22 J
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1

Client ID	MW-1
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	2
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1

Client ID	MW-6
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1

Client ID	MW-6SB
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	<1
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1

Client ID	MW-4S
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	400
cis-1,2-Dichloroethene	<10
Trichloroethene	<10
Vinyl Chloride	<10
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	107
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1

Client ID	MW-4D
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	1300
cis-1,2-Dichloroethene	<100
Trichloroethene	<100
Vinyl Chloride	<100
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	990
cis-1,2-Dichloroethene	<50
Trichloroethene	<50
Vinyl Chloride	<50

Client ID	MW-5
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	2
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	32
cis-1,2-Dichloroethene	<1
Trichloroethene	0.13 J
Vinyl Chloride	<1

Client ID	MW-5SB
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	1
cis-1,2-Dichloroethene	<1
Trichloroethene	0.35 J
Vinyl Chloride	0.45 J
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	2
cis-1,2-Dichloroethene	0.11 J
Trichloroethene	0.70 J
Vinyl Chloride	0.36 J

Client ID	MW-5DB
Date Sampled	5/4/2016
Parameter	Result (µg/L)
Tetrachlorethene	0.13 J
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1
Date Sampled	10/26/2016
Parameter	Result (µg/L)
Tetrachlorethene	0.25 J
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	0.28 J

LEGEND

- OVERBURDEN MONITORING WELL
- SHALLOW BEDROCK MONITORING WELL
- DEEP BEDROCK MONITORING WELL
- PROPERTY BOUNDARY
- SURFACE WATER

Client ID	MW-1
Date Sampled	5/8/2015
Parameter	Result (µg/L)
Tetrachlorethene	10
cis-1,2-Dichloroethene	<1
Trichloroethene	<1
Vinyl Chloride	<1

(EXCEEDS TOGS 1.1.1 CLASS GA STANDARDS/CRITERIA) VALUES IN UG/L

J = THE CONCENTRATION WAS DETECTED AT A VALUE BELOW THE REPORTING LIMIT AND ABOVE THE METHOD DETECTION LIMIT.

PERIODIC REVIEW REPORT BROWNFIELD CLEANUP PROGRAM NO. C360115 1-5 HOLLAND AVENUE WHITE PLAINS, NY

TETRACHLOROETHENE AND DEGRADATION PRODUCTS GROUNDWATER RESULTS (MAY AND OCTOBER 2016)

0 75 150 300

Feet

APRIL 2016
14206.63124

O'BRIEN & GERE

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Attachments

Building Expansion Work Summary Memorandum (1 Holland LLC)

CAP DISTURBANCE & EXCAVATION ACTIVITIES NARRATIVE
1-5 HOLLAND AVENUE, WHITE PLAINS, NY
BCP SITE # C360115

The building expansion project at the 1-5 Holland Avenue Site ("Site") was completed in April 2017. All excavation work and off-site soil shipment in connection with building expansion project was completed during the prior reporting period and documented in the Periodic Review Report (PRR) submitted in April 2016. The remainder of this narrative discusses work completed during the current PRR reporting period, including completion of elevator pit masonry work, stormwater retention system, and final asphalt cover application.

Concrete base slab and masonry block wall installation of the elevator pit and installation of the subsurface stormwater retention system were completed in late 2016. The elevator pit area is is integral to the building foundation and slab and comprises a portion of the site cover system in the elevator pit area preventing direct contact with site soils. The stormwater retention system is installed below the surface of the asphalt parking lot.

Following completion of construction work for the building expansion project, a final application of asphalt was applied to provide a uniform finished surface on April 5, 2017. Hot mix asphalt from MSY Group, Inc. was supplied and applied over the concrete cover previously installed over the excavated areas associated with the foundation, footer and stormwater retention system work. Photographs showing the surface of the site cover system following the final asphalt application are included in the attachments.

Excavation activities did not physically impact the existing monitoring wells or the active sub-slab depressurization system (SSDS). In connection with the building expansion project, three of the vents for the SSDS were extended so that they discharge above the new roofline of the building. Monitoring of the SSDS operational parameters was performed by O'Brien & Gere (OBG) to confirm that the construction activities have not adversely impacted the SSDS operations.

Thomas Attonito
1 Holland LLC

Inspection Forms (Site Wide, Wells, and Sub-slab Depressurization System)

Site Inspection Form

Date Performed:	3/1/2017	Weather:	Cloudy/Rain
Site Name:	1-5 Holland Ave	Inspector Name:	Mark Randazzo
Site Location:	White Plains, NY	Inspector Signature:	

Cap/Cover Inpection					
Cap/Cover Type (e.g. gravel, pavement)	Cap/Cover Area (e.g. west lot, building south)	Inspected (Y/N)	Acceptable (Y/N)	Maintenance Required (Y/N)	Description of Required Maintenance or Comments
Concrete	Interior of building	Y	N	Y	An approximately 6 square foot area (2'X3') of earthen surface is present under the western stairwell. This area should be sealed with concrete.
Asphalt	West side of building	Y	N	Y	Exposed soils are present around each of the new footer columns. Each area is approximately 49 sq. ft. or 7 ft X 7 ft. These areas should be sealed with asphalt.
Asphalt	North side of building	Y	Y	No	No penetrations noted.
Gravel	South side of building	Y	Y	No	

Conditions to Review

a. erosion
b. missing cap/cover material
c. vegetation growing through cap/cover (excluding vegetated covers)
d. areas of ponded water
e. areas of settlement
f. damage from burrowing animals

Site Fence Inspection			
Inspected (Y/N)	Acceptable (Y/N)	Maintenance Required	Description of Required Maintenance or Comments
Y	N	Y	Approximately 45 feet of fencing was noted absent between the cemetery and west side asphalted area as a result of the construction work currently on-going.

Site Inspection Form

Date Performed:	12/5/2016	Weather:	Sunny
Site Name:	1-5 Holland Ave	Inspector Name:	Kalvin Teitsma/Mark Randazzo
Site Location:	White Plains, NY	Inspector Signature:	

Well Integrity Inspection				
Well ID	Inspected (Y/N)	Acceptable (Y/N)	Maintenance Required (Y/N)	Description of Required Maintenance or Comments
MW-1	Y	Y	N	Bolts to cover changed. Well depths and locks are acceptable based on October 2016 sampling round.
MW-2	Y	Y	N	Bolts to cover changed. Well depths and locks are acceptable based on October 2016 sampling round.
MW-2SB	Y	Y	N	Well depths and locks are acceptable based on October 2016 sampling round.
MW-2DB	Y	Y	N	Well depths and locks are acceptable based on October 2016 sampling round.
MW-4S	Y	Y	N	Well depths and locks (24 hr security) are acceptable based on October 2016 sampling round.
MW-4D	Y	Y	N	Well depths and locks (24 hr security) are acceptable based on October 2016 sampling round.
MW-5	Y	Y	N	Replaced bolts and gasket. Well depths and locks are acceptable based on October 2016 sampling round.
MW-5SB	Y	Y	N	Well depths and locks are acceptable based on October 2016 sampling round.
MW-5DB	Y	Y	N	Well depths and locks are acceptable based on October 2016 sampling round.
MW-6	Y	Y	N	Well depths and locks are acceptable based on October 2016 sampling round.
MW-6SB	Y	Y	N	Well depths and locks are acceptable based on October 2016 sampling round.
MW-7	Y	Y	N	Well depths and locks are acceptable based on October 2016 sampling round.
MW-7SB	Y	Y	N	Well depths and locks are acceptable based on October 2016 sampling round.
MW-8	Y	Y	N	Well depths and locks are acceptable based on October 2016 sampling round.
MW-8SB	Y	Y	N	Well depths and locks are acceptable based on October 2016 sampling round.
MW-9	Y	Y	N	Well depths and locks are acceptable based on October 2016 sampling round.
MW-9SB	Y	Y	N	Replaced well lid, bolt and gasket. Well depths and locks are acceptable based on October 2016 sampling round.

Conditions to Review

a. depth Sounding matches construction
b. well pad is not broken or falling apart
c. lock functions properly
d. well cap is functional and properly preventing water infiltration
e. well casing or flush mount protective cover is protective the well

VI System Inspection*			
Inspected (Y/N)	Acceptable (Y/N)	Maintenance Required (Y/N)	Description of Required Maintenance or Comments
Completed December 14, 2016.	N	Y	See completed SSDS Inspection Form for details.

* Complete VI System Field Inspection Form contained in Operation and Maintenance Manual and append.

O'BRIEN & GERE

System Inspection Field Form

STRUCTURE INSPECTION

(Routine) or Non-Routine (circle one)

Address: 1 Holland Avenue **Structure ID #:** +

Performed by: EA **Date:** 12/14/16

Have the following items changed since the last visit?

	Yes	No
Building Foot Print	✓	
Basement/Slab Occupancy		✓
Heating / Ventilating Systems		✓
Basement Finish		✓
Crawlspaces		✓
Drains, Sumps, Floor Cracks		✓
Wall Penetrations, Cracks		✓
Appliances (in basement)		✓
Siding		✓
Are there any new buildings on the property or conversion of spaces in previously existing building? *If Yes, describe in comments section below.*		✓
Ownership		✓

If Yes, write new owner name contact information below

Date of Ownership Change _____

Owner Name _____

Telephone No. _____

If any of these items have changed, a redesign may be required. Contact the maintenance supervisor for field review.

Documentation

Were digital photographs taken of the entire system?	☐ Yes	☐ No	
Was Property Owner provided "Operational Fact Sheet"?	☐ Yes	☐ No	☐ No - has already been provided
Was the drawing updated to show any changes?	☐ Yes	☐ No	☐ N/A
Was a Service Call filed for items that could not be addressed during this visit?	☐ Yes	☐ No	☐ N/A

Comments

CTP 7-1 Reading at 7-11 Holland was -0.008 in. wc. Building is under construction for Vertical + Lateral Expansion

O'BRIEN & GERE

System Inspection Field Form

FAN AND ELECTRICAL

Routine or Non-Routine (circle one)

Address: 1 Holland Avenue **Structure ID #:** _____

Performed by: EA **Date:** 12/14/16

Equipment Documentation

Manometer Reading at Fan Inlet (" w.c. vacuum)

Fan #	2A	3A	3B	4A	4B					
Fan Model	HP-220	GP-501	GP-501	HS-3000	GP-501					
Manometer Reading (Prior Commissioned)	-2 1/4	-1 3/4	-3 1/4	-2 1/2	-2 3/8					
Manometer Reading (As Found)	-2 1/4	NAC	NAC	-2 1/2	-2 1/4					
Manometer Reading (As Left)	-2 1/4	NA	NA	-2 1/2	-2 1/4					

Manometer Reading at Sub-Slab SSPs (" w.c. vacuum)

Note: For SSPs located in accessible crawlspaces with EPDM membrane, use the crawlspace field form to record the SSP manometer reading.

SSP #	2A-A	2A-B	3A-A	3A-B	3B-A	3B-B	4B-A	4B-B	4A-A	4A-B	4B-C
Manometer Reading (Prior Commissioned)	-2 3/8	-2 1/4	-1 7/8	-1 3/8	-3 1/2	-3 3/8	-2 3/8	-2 1/4	-2 1/2	-2 1/2	-2 1/4
Manometer Reading (As Found)	-2 3/8	-2 1/4	NAC	-1 1/2	NAC	-3 3/8	NAC	NAC	-2 1/4	-2 1/4	NAC
Meet Criteria?**	YES	YES	NA	YES	NA	YES	NA	NA	YES	YES	NA
Manometer Reading (As Left)	-2 3/8	-2 1/4	NA	-1 1/2	NA	-3 3/8	NA	NA	-2 1/4	-2 1/4	NA
STORAGE UNIT NUMBER			1249		1237		1047	1009			1069

Fan System Inspection	As Found			As Left		
Is fan cover still present?	☑ Yes	☐ No	☐ NA	☐ Yes	☐ No	☑ UC
Each fan mounted securely?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Coupling connections secure?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Is excessive noise heard when fan is running?	☐ Yes	☑ No		☐ Yes	☐ No	☑ UC
Switch is locked in the ON position?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Is set point indicated on speed controller?	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Has fan been in continuous operation since previous visit?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Is the pipe penetration sealed on the structure's exterior?	☑ Yes	☐ No	☐ NA	☐ Yes	☐ No	☑ UC
Is the downspout/PVC junction sufficiently sealed?	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Is conduit penetration sealed on the structure's exterior?	☑ Yes	☐ No	☐ NA	☐ Yes	☐ No	☑ UC
Each fan runs when switch is ON position?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Each fan stops when switch is in OFF position?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Does the condensate line appear to be functioning correctly?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Is each fan below its maximum vacuum?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC

(HP220 = 2.5" w.c., GP501 = 4.25" w.c., FR-250 = 2.6" w.c., HS-5000 = 53" w.c.)

If fan vacuum is at maximum, measure velocity at each SSP (record below).

SSP #										
Velocity at SSP (As Found)										
Velocity at SSP (As Left)										

Does the SSP velocity meet criteria (> 1 ft/min)? ☐ Yes ☐ No ☑ NA ☐ Yes ☐ No ☑ UC

Electrical System Inspection

	As Found			As Left		
Are all electrical connections secure?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Each junction box closed?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Conduit/Wire properly supported?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Are audible alarm(s) present and working properly?	☐ Yes	☑ No	☐ NA	☑ Yes	☐ No	☐ UC
Are appliances affected by fan operation?	☐ Yes	☑ No		☐ Yes	☐ No	☑ UC

Labeling Inspection

Correct labels applied in proper location? ***	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Are labels still legible?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Is SSDS breaker identified in the electrical panel?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Commissioned value written on SSP sticker?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC

Comments/Corrective Action

NAC - No Access, NA - Not Applicable. Fan cover 4B is Cracked. Fans 3A + 3B were not Accessible Due to Construction Activities. Alarm for Fan 3B was Replaced

* As Found conditions = before corrective action. [NA = Not Applicable]

* As Left conditions = after corrective action. [UC = Unchanged from As Found conditions]

** Criteria is met if deviation is less than or equal to 0.25"wc (for all fans with the exception of the HS-5000). For an HS-5000 fan, criteria is met if deviation is less than or equal to 10% of the prior commissioned value or less than or equal to 0.25"wc, whichever is greater.
If deviation exceeds criteria (0.25"wc or 10% of prior commissioned value, as applicable), conduct communication testing and document on Re-Commissioning Field Form.

*** Correct labels are at least one green label per floor and one white sticker at every suction point.

O'BRIEN & GERE

System Inspection Field Form

PIPING, SLAB AND WALL

(Routine) or Non-Routine (circle one)

Address: 1 Hollands Avenue **Structure ID #:** _____

Performed by: EA **Date:** 12/14/16

	As Found			As Left		
Piping Check						
System suction point seals are accessible?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
System suction points are sealed to the slab?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Each component is installed?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Piping system is properly supported **(6'-horizontal/8'-vertical)**	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Excessive noise is heard in piping joints?	☐ Yes	☑ No		☐ Yes	☐ No	☑ UC
Smoke 10% of all pipe joints and/or piping modifications?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Did smoke enter joints? **	☐ Yes	☑ No		☐ Yes	☐ No	☑ UC
Floor Check						
Are areas of the slab not visible (e.g. floor covering)?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Are areas of the slab not accessible (e.g. stored items)?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Were drawing-identified slab crack repairs/modifications smoke tested?	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Did smoke enter? **	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Are other cracks present that did not draw smoke?	☑ Yes	☐ No	☐ NA	☐ Yes	☐ No	☑ UC
Are other cracks present that did draw smoke?**	☐ Yes	☑ No	☐ NA	☐ Yes	☐ No	☑ UC
Were newly identified slab cracks indicated on drawing?	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Check and clean Dranjer(s)?	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Smoke Dranjer(s)?	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Wall Check						
Are areas of the walls not visible (e.g. finished walls)?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Are areas of the walls not accessible (e.g. stored items)?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Were drawing-identified wall crack repairs/modifications smoke tested?	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Did smoke enter wall crack(s)? **	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Are other wall cracks/penetrations present that did not draw smoke?	☑ Yes	☐ No	☐ NA	☐ Yes	☐ No	☑ UC
Are other wall cracks/penetrations present that did draw smoke?**	☐ Yes	☑ No	☐ NA	☐ Yes	☐ No	☑ UC
Were newly identified wall cracks indicated on drawing?	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Is top course of block wall open?	☐ Yes	☑ No	☐ NA	☐ Yes	☐ No	☑ UC
Smoke top course of block wall (open-top block only)?	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Did smoke enter top course? **	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Are utility penetrations sealed so they don't draw smoke?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC
Sump Check						
Have any non-approved modifications been made to sump cover?	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Is sump cover structurally sound?	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Verify integrity of sump cover seal?	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC
Does sealed sump cover draw smoke? **	☐ Yes	☐ No	☑ NA	☐ Yes	☐ No	☑ UC

Exhaust Stack Check

Distance above eave	Commissioned distance: SEE			Criteria: ≥ 1 ft		
Distance from nearest opening	Commissioned distance: COMMENTS			Criteria: ≥ 10 ft		
Distance above nearest opening	Commissioned distance: BELOW			Criteria: ≥ 2 ft		
Are vertical exhaust stack supports installed every 8' maximum?	☑ Yes	☐ No	☐ NA	☐ Yes	☐ No	☑ UC
Distances from stack exhaust to openings appear to be unchanged?	☑ Yes	☐ No		☐ Yes	☐ No	☑ UC

*** If the existing exhaust stack is modified and/or removed and replaced as part of non-routine system maintenance, complete the "Stack Modification Field Form" and attach

Comments

FANS 3A+3B EXHAUSTS WERE MODIFIED BY OWNER AS PART OF CONSTRUCTION. FAN 2A EXHAUST WAS MODIFIED AS WELL. EXHAUST LOCATIONS WILL BE EVALUATED FOLLOWING CONSTRUCTION COMPLETION.

Notes:

* As Found conditions = before corrective action. [NA = Not Applicable]

* As Left conditions = after corrective action. [UC = Unchanged from As Found conditions]

**** If answered YES to this question, perform corrective action and re-test.**

O'BRIEN & GERE

System Inspection Field Form

CRAWLSPACE

Routine or Non-Routine (circle one)

Address: 1 Hollands Avenue **Structure ID #:** _____

Performed by: EA **Date:** 12/14/14

Inaccessible Crawlspace (Ventilation) ☑ NA

As Found*	Crawlspace 1	Crawlspace 2	Crawlspace 3	Crawlspace 4
SSP#				
Target Velcocity (fpm)				
Measured Velocity (fpm)				
Meets Criteria? **				

As Left*	Crawlspace 1	Crawlspace 2	Crawlspace 3	Crawlspace 4
SSP#				
Target Velcocity (fpm)				
Measured Velocity (fpm)				
Meets Criteria? **				

Is sampling port to Inaccessible crawl space threaded with a plug? ☐ Yes ☐ No ☐ Yes ☐ No ☐ UC

Accessible Crawlspace (Sub-Membrane Depressurization) ☑ NA

As Found*	Crawlspace 1	Crawlspace 2	Crawlspace 3	Crawlspace 4
SSP#				
Prior Commissioned Manometer reading (" w.c.)				
As found Manometer reading (" w.c.)				

As Left*	Crawlspace 1	Crawlspace 2	Crawlspace 3	Crawlspace 4
SSP#				
Manometer reading (" w.c.)				

Accessible Crawlspace Performance Inspection	As Found		As Left		
Was each membrane joint smoke tested?	☐ Yes	☐ No	☐ Yes	☐ No	☐ UC
Did smoke enter? ***	☐ Yes	☐ No	☐ Yes	☐ No	☐ UC
Was the membrane perimeter smoke tested?	☐ Yes	☐ No	☐ Yes	☐ No	☐ UC
Did smoke enter? ***	☐ Yes	☐ No	☐ Yes	☐ No	☐ UC
Is the suction point manometer(s) reading ≤ -1/10" w.c.?****	☐ Yes	☐ No	☐ Yes	☐ No	☐ UC

Comments

_____

_____

_____

* As Found conditions = before corrective action. [NA = Not Applicable]

* As Left conditions = after corrective action. [UC = Unchanged from As Found conditions]

** Inaccessible Crawlspace Criteria: Measured velocity ≥ 90% of Target Velocity (adjust if >110% of target velocity)

***** If answered YES to this question, perform corrective action and re-test.**

****** If answered NO to this question, adjust valve accordingly and re-check all SSP and fan readings.**

IC/EC Certification Form

Enclosure 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. **C360115**

Site Name 1-5 Holland Avenue

Site Address: 1-5 Holland Avenue Zip Code: 10603
City/Town: White Plains
County: Westchester
Site Acreage: 0.7

Reporting Period: March 23, 2016 to March 23, 2017

	YES	NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☒	☐

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

Box 2A

	YES	NO
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	☒

If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.

9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	☒	☐

If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.

SITE NO. C360115

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
125.07-1-1	1 Holland LLC	Ground Water Use Restriction Soil Management Plan Landuse Restriction Monitoring Plan Site Management Plan O&M Plan IC/EC Plan

Imposition of an institutional control in the form of an environmental easement for the controlled property that:

- requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allows the use and development of the controlled property for commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- requires compliance with the Department approved Site Management Plan.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
125.07-1-1	Vapor Mitigation Cover System

1. Site cover system which is comprised of structures such as buildings, pavement, sidewalks comprising the site development and a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs) for commercial use.

2. Vapor mitigation system in the on-site building, consisting of five separate sub-slab depressurization systems to mitigate the entire building. The system also influences a portion of the adjacent property building.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☒	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☒	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C360115

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Thomas Attonito (print name) at 1 Holland Ave. White Plains, NY 10603 (print business address)

am certifying as OWNER (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Thomas Attonito
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

4/13/2017
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Douglas M. Crawford (print name) at O'Brien + Gere Engineers, Inc. 333 W. Washington St. Syracuse, N.Y. 13202 (print business address),

am certifying as a Professional Engineer for the 1 Holland LLC (Owner or Remedial Party)

STATE OF NEW YORK
DOUGLAS M CRAWFORD
066649
LICENSED PROFESSIONAL ENGINEER

Doug M. Crawford

Signature of Professional Engineer, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

4/20/2017

Date

Groundwater Sampling Reports
D1 – May 4, 2016
D2 – October 26, 2016

August 24, 2016

Kiera Thompson
Engineering Geologist
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, NY 12233-7014

RE: NYSDEC BCP No. C360115 - GW Monitoring Report, 1-5 Holland Avenue, White Plains
FILE: 14206/63124

Dear Ms. Thompson:

In accordance with the *Site Management Plan*, *BCP No. C360115, 1-5 Holland Avenue, White Plains, New York* (SMP; OBG December 2014), the following is the Groundwater Monitoring Report for the above referenced Brownfield site.

This report has been organized into the following sections:

- Section 1 - Background
- Section 2 - Field Activities
- Section 3 - Sample Results
- Section 4 – Remedial Action Objectives Assessment

1. BACKGROUND

As detailed in the *Remedial Investigation Report, BCP No. C360115, 1-5 Holland Avenue, White Plains, New York* (OBG, April 2014), results of groundwater sampling indicated the presence of tetrachloroethylene (PCE) in on-site monitoring wells in the source area, in on-site monitoring wells at the downgradient/sidegradient property boundary, and in off-site downgradient monitoring wells, at concentrations above the NYS Class GA groundwater standard of 5 ug/L.

The site cleanup goal for groundwater is, to the extent practicable, to meet NYS Class GA standards. The Class GA standards for the Site's Constituents of Concern (COC) are as follows:

- Tetrachloroethylene – 5 ug/L
- cis-1,2-Dichloroethylene – 5 ug/L
- Trichloroethylene – 5 ug/L
- Vinyl chloride – 2 ug/L

As detailed in the *Interim Remedial Measure Construction Completion Report, BCP No. C360115, 1-5 Holland Avenue, White Plains, New York* (IRM CCR; OBG, October 2014), groundwater treatment by In-situ Chemical Oxidation (ISCO) was selected to meet this goal. Two ISCO groundwater treatment injection events were conducted as part of the IRM in June 2013 and September 2014.

As detailed in the SMP, a minimum of two complete (17 wells) rounds of groundwater samples are to be conducted per year for three years prior to requesting modification to the scope and frequency of sampling. This report presents groundwater data for the first of two rounds scheduled in 2016. The purpose of the groundwater monitoring is to evaluate concentrations of the Site's COC that exceed Class GA standards, primarily PCE and associated degradation products; to assess the extent of concentration rebound following ISCO treatment; and to monitor their continued attenuation thereafter.

2. FIELD ACTIVITIES

On April 7, 2016, OBG set passive diffusion bags (PDBs) in on-site (MW-1, -2, -2S, -2D, -4S, -4D, -5, -5S, -5D) and off-site (MW-6, -6S, -7, -7S, -8, -8S, -9, -9S) groundwater monitoring wells, as depicted on Figure 1. PDBs were retrieved on May 4, 2016. Sampling activities were conducted in accordance with the *SMP Field Activities Plan* (OBG, December 2014). Groundwater sampling logs and a summary of field water quality parameters are presented in **Appendix A**. Groundwater samples were submitted under chain-of-custody to Merit Laboratories, Inc., a NYSDOH ELAP certified laboratory, for analysis of volatile organic compounds (VOCs) by USEPA Test Method 8260.

3. SAMPLE RESULTS

Groundwater analytical results for this sampling event and historical sampling events are summarized on **Table 1**. Merit's laboratory analytical report and OBG's *Data Usability Summary Report* (DUSR) for this sampling event are presented in **Appendices B and C**, respectively. These data have been entered into the NYSDEC Environmental Information Management System. A summary of groundwater analytical results are as follows:

- Upgradient Off-site Groundwater Characterization

  Consistent with prior sampling rounds PCE and its degradation compounds were not detected in the upgradient overburden (MW-6) and shallow bedrock (MW-6SB) wells.

- On-site Groundwater Characterization – Source Area

  A summary table of PCE concentrations in source area groundwater for the prior three years is presented below.

Monitoring Well No.	06/10/13 (Pre-ISCO)	1st ISCO Event	11/14/13 (Post ISCO)	01/14/14 (Post ISCO)	07/17/14 (Post ISCO)	2nd ISCO Event	10/10/14 (Post ISCO)	5/8/15 (Post ISCO)	10/09/15 (Post ISCO)	5/04/16 (Post ISCO)
MW-4S	**1,040**		**10**	**21** (Blind Duplicate **21**)	**890**		**327**	**460**	**730**	**400**
MW-4D	**5,500**		**332**	**317**	**2,000** (Blind Duplicate **1,750**)		**54** (Blind Duplicate **63**)	**29** (Blind Duplicate **25**)	**2490** (Blind Duplicate **840**)	**1,300** (Blind Duplicate **1,300**)

Notes: 1st ISCO injection event occurred June 11-14, 2013.
2nd ISCO injection event occurred September 9-11, 2014
Units = ug/L, ppb
Bold values exceed Class GA standards.

Compared to the prior sampling event, the PCE concentrations in MW-4S and 4D are within the same order of magnitude with a decrease in PCE concentration of approximately 45% and 48%, respectively. PCE degradation compounds were not detected in source area wells. The blind duplicate sample collected at MW-4D indicates an increase in concentration of approximately 35% compared to the blind duplicated from the prior sampling event. A review of the current and historical data indicates that the concentrations of PCE have not stabilized and groundwater sampling should continue to assess trends. This groundwater data is presented in graphical form in **Appendix D**.

- On-site Groundwater Characterization – Downgradient/Sidegradient Property Boundary

  A summary of groundwater data since June 2013 for wells exhibiting concentrations of PCE above the Class GA groundwater standard is presented below.

Monitoring Well No.	06/10/13	1st ISCO Event	11/15/13	01/14/14	07/17/14	2nd ISCO Event	10/10/14	5/8/15	10/9/15	5/4/16
MW-1 (Sidegradient)	2		0.39	3	**16**		3	**10**	3	1
MW-2 (Downgradient)	**27**		**6**	**19**	**94**		**158**	**33**	**64**	**55**
MW-2SB (Downgradient)	0.78		0.71	1	0.52		0.48	0.34	0.24	0.36
MW-2DB (Downgradient)	3		0.42	3	4		4	3	3	3
MW-5 (Downgradient)	**165**		**5**	**67**	**5**		4	4	2	2
MW-5SB (Downgradient)	4		3	3	3		2	2	2	1
MW-5DB (Downgradient)	1		0.81	0.95	0.41		0.48	0.55	0.39	0.31

Notes: 1st ISCO injection event occurred June 11-14, 2013. Bold values exceed Class GA standards.
2nd ISCO injection event occurred September 9-11, 2014
Units = ug/L, ppb

The most recent round of groundwater data indicates that 1 out of the 7 property boundary wells exceeded the GA groundwater standard for PCE. Consistent with the last round of groundwater sampling, no PCE degradation compounds were detected in these wells above the GA groundwater standard. This groundwater data is presented in graphical form in **Appendix D**.

- Downgradient Off-site Groundwater Characterization

  A summary of groundwater data since June 2013 for wells exhibiting concentrations of PCE is presented below.

Monitoring Well No.	06/10/13	1st ISCO Event	07/17/14	2nd ISCO Event	10/10/14	5/7/15	10/9/15	5/4/2016
MW-7	**14**		**57**		**71**	**47**	**32**	**34**
MW-7SB	**6**		**7**		3	1	0.97	0.86
MW-8	1 (Blind Duplicate <0.67)		4		1	2	1	1
MW-8SB	**265**		**292**		3	**280**	**359**	**240**
MW-9	0.18		<1.0		0.38	<1.0	0.25	<1.0
MW-9SB	0.3		0.34		0.26	0.21	<1.0	<1.0

Notes: 1st ISCO injection event occurred June 11-14, 2013. **Bold** values exceed Class GA standards.
2nd ISCO injection event occurred September 9-11, 2014
Units = ug/L, ppb

Consistent with the previous groundwater sampling event 2 out of 6 of the downgradient off-site wells exceeded the GA standard for PCE in the May 2016 sampling event. This groundwater data is presented in graphical form in **Appendix D**.

PCE degradation compounds detected were primarily limited to cis-1,2-dichloroethene between non detected to 8.3 ug/L; trichloroethylene ranging between non- detected to 10 ug/L in MW-8SB; and vinyl chloride ranging between non detected and 20 ug/L in MW-8. The GA groundwater standards for cis-1,2-dichloroethene, trichloroethylene, and vinyl chloride are 5 ug/L, 5 ug/L and 2 ug/L, respectively.

4. RAO ASSESSMENT

As detailed in the *Final Engineering Report, NYSDEC Site Number: C360115, 1-5 Holland Avenue, White Plains, New York* (OBG, December 2014), the Remedial Action Objectives (RAOs) for groundwater are as follows:

- RAOs for Public Health Protection
  - Prevent ingestion of groundwater with COC concentrations exceeding drinking water standards.
  - Prevent contact with, or inhalation of volatiles, from contaminated groundwater.
- RAOs for Environmental Protection
  - Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable.
  - Prevent the discharge of COCs to surface water.
  - Remove the source of ground or surface water COCs.

Based on the groundwater analytical results collected as part of this sampling event and the institutional and engineering controls currently in-place at the site, the remedy is effective for protection of human health and the environment.

Should you have any questions or concerns regarding this matter, please feel free to contact me at (781) 883-6432.

Very truly yours,
O'BRIEN & GERE ENGINEERS, INC.

Mark A. Randazzo, CHMM, CPG, CSP
Project Manager

Attachments: Table 1 – Historical Summary of Groundwater Monitoring Data
Figure 1 – Groundwater Monitoring Well Location Map
Appendix A – Groundwater Sampling Logs
Appendix B – Merit's Laboratory Analytical Report
Appendix C – Data Usability Summary Report
Appendix D – Graphical Presentation of PCE Groundwater Data

cc: David Crosby – NYSDEC
Stephanie Selmer – NYSDOH
Karen Puckett – OHAD
Neal Frink, Esq. – The Frink Law Firm, LLC
Douglas Crawford, PE – OBG
Guy Swenson, CPG – OBG

Tables

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		Well ID:	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-2	MW-2	MW-2	MW-2	MW-2
		Screen Interval (ft above msl):	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4
		Date Sampled:	10/19/2011	5/1/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/21/2011	5/2/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	On-Site Locations														
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																
1,1,1-Trichloroethane	ug/L	5	<0.350	<0.330	<0.27	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.330	<0.27	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<0.310	<0.320	<0.27	<1	<1	<1	<1	<1	<1	<1	<0.310	<0.320	<0.27	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<0.440	<0.420	<0.46	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.420	<0.46	<1	<1
1,1,2-Trichloroethane	ug/L	1	<0.360	<0.220	<0.34	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.220	<0.34	<1	<1
1,1-Dichloroethane	ug/L	5	<0.430	<0.260	<0.15	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.260	<0.15	<1	<1
1,1-Dichloroethene	ug/L	5	<0.710	<0.410	<0.27	<1	<1	<1	<1	<1	<1	<1	<0.710	<0.410	<0.27	<1	<1
1,2,3-Trichlorobenzene	ug/L	5	<0.420	<0.210	<0.25	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.210	<0.25	<1	<1
1,2,4-Trichlorobenzene	ug/L	5	<0.390	<0.200	<0.24	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.200	<0.24	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.00855	<0.00855	<0.0080	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1	<1	<0.00855	<0.00855	<0.12	<1	<1
1,2-Dichlorobenzene	ug/L	3	<0.360	<0.230	<0.13	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.230	<0.13	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<0.420	<0.200	<0.17	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.200	<0.17	<1	<1
1,2-Dichloropropane	ug/L	1	<0.520	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.250	<0.18	<1	<1
1,3-Dichlorobenzene	ug/L	3	<0.420	<0.230	<0.20	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.230	<0.20	<1	<1
1,4-Dichlorobenzene	ug/L	3	<0.330	<0.230	<0.18	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.230	<0.18	<1	<1
1,4-Dioxane	ug/L	NC	<22.5 R	<0.301	<0.97	<5	<5	<5	<5	<5	<3	<1	<22.5 R	<0.301	<0.97	<5	<5
2-Butanone (MEK)	ug/L	50	<0.630	<0.550	3.4 J	<10	0.79 J	0.63 J	<10	<10	<10	0.43 J	<0.630	<0.550	4.7 J	<10	0.69 J
2-Hexanone	ug/L	50	<0.260	<0.370	<0.19	<10	<10	<10	<10	<10	<10	<10	<0.260	<0.370	<0.19	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<0.510	<0.350	<0.35	<10	<10	<10	0.37 J	<10	<10	<10	<0.510	<0.350	<0.35	<10	<10
Acetone	ug/L	50	<0.870	<0.280	<4.0	1.38 J	4.24 J	2.67 J	<10	1.27 J	<10	2.89 J	<0.870	<0.280	<4.0	0.96 J	1.92 J
Benzene	ug/L	1	<0.430	<0.250	<0.11	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.250	<0.11	<1	<1
Bromochloromethane	ug/L	5	<0.470	<0.300	<0.36	<1	<1	<1	<1	<1	<1	<1	<0.470	<0.300	<0.36	<1	<1
Bromodichloromethane	ug/L	50	<0.350	<0.260	<0.19	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.260	<0.19	<1	<1
Bromoform	ug/L	50	<0.260	<0.460	<0.35	<1	<1	<1	<1	<1	<1	<1	<0.260	<0.460	<0.35	<1	<1
Bromomethane	ug/L	5	<0.510	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<0.670	<0.250	<0.18	<1	<1
Carbon disulfide	ug/L	NC	<0.670	<0.300	<0.13	<1	<1	<1	<1	<1	<1	<1	<0.500	<0.300	<0.13	<1	<1
Carbon tetrachloride	ug/L	5	<0.500	<0.360	[illegible]	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.360	<0.19	<1	<1
Chlorobenzene	ug/L	5	<0.400	<0.220	<0.16	<1	<1	<1	<1	<1	<1	<1	<0.480	<0.220	<0.16	<1	<1
Chloroethane	ug/L	5	<0.480	<0.360	<0.21	<1	<1	<1	<1	<1	<1	<1	<0.780	<0.360	<0.21	<1	<1
Chloroform	ug/L	7	<0.340	<0.220	<0.15	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.220	<0.15	<1	<1
Chloromethane	ug/L	5	<0.350	<0.280	<0.20	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.280	<0.20	<1	<1
cis-1,2-Dichloroethene	ug/L	5	<0.380	<0.300	<0.21	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.300	<0.21	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4	<0.360	<0.250	<0.17	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.250	<0.17	<1	<1
Cyclohexane	ug/L	NC	<0.460	<0.380	<0.32	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.380	<0.32	<1	<1
Dibromochloromethane	ug/L	50	<0.360	<0.240	<0.20	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.240	<0.20	<1	<1
Dichlorodifluoromethane	ug/L	5	<0.420	<0.290	<0.57	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.290	<0.57	<1	<1
Ethylbenzene	ug/L	5	<0.340	<0.220	<0.10	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.220	<0.10	<1	<1
Isopropylbenzene	ug/L	5	<0.390	<0.210	<0.12	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.210	<0.12	<1	<1
Methyl acetate	ug/L	NC	<0.350	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.220	<0.20	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<0.380	<0.240	<0.25	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.240	<0.25	<1	<1
Methylcyclohexane	ug/L	NC	<0.460	<0.360	<0.13	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.360	<0.13	<1	<1
Methylene chloride	ug/L	5	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	<1	<1	<1.98	<1.98	<0.16	<1	<1
Styrene	ug/L	5	<0.330	<0.250	<0.13	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.250	<0.13	<1	<1
Tetrachloroethene	ug/L	5	**57.9**	**17.1**	2	0.39 J	3	**16**	3	**10**	3	1	**71.7**	**189 D**	**27**	**6**	**19**
Toluene	ug/L	5	<0.390	<0.270	<0.17	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.270	<0.17	<1	<1
trans-1,2-Dichloroethene	ug/L	5	<0.550	<0.350	<0.14	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.350	<0.14	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4	<0.320	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.220	<0.20	<1	<1
Trichloroethene	ug/L	5	<0.550	<0.270	<0.29	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.270	<0.29	<1	<1
Trichlorofluoromethane	ug/L	5	<0.660	<0.450	<0.28	<1	<1	<1	<1	<1	<1	<1	<0.660	<0.450	<0.28	<1	<1
Vinyl Chloride	ug/L	2	<0.460	<0.290	<0.24	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.290	<0.24	<1	<1
Xylenes (Total)	ug/L	5	<0.630	<0.690	<0.58	<3	<3	<3	<3	<3	<3	<3	<0.630	<0.690	<0.58	<3	<3
Total VOCs	ug/L	NA	57.9	17.1	5.4 J	1.77 J	7.24 J	19.3 J	0.37 J	11.27 J	3	4.32 J	71.7	189 D	31.7 J	6.96 J	21.61 J

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

* = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB
			Screen Interval (ft above msl):	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3
			Date Sampled:	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	5/5/2011	10/20/2011	5/2/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																
1,1,1-Trichloroethane	ug/L	5		<1	<1	<1	<1	<1	<0.420	<0.350	<0.330	<0.27	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5		<1	<1	<1	<1	<1	<0.280	<0.310	<0.320	<0.27	<1	<1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<1	<1	<1	<1	<1	<0.320	<0.440	<0.420	<0.46	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1		<1	<1	<1	<1	<1	<0.570	<0.360	<0.220	<0.34	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5		<1	<1	<1	<1	<1	<0.440	<0.430	<0.260	<0.15	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5		<1	<1	<1	<1	<1	<0.410	<0.710	<0.410	<0.27	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5		<1	<1	<1	<1	<1	<0.550	<0.420	<0.210	<0.25	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5		<1	<1	<1	<1	<1	<0.340	<0.390	<0.200	<0.24	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.05	<0.05	<0.05	<0.05	<0.02	<0.660	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006		<1	<1	<1	<1	<1	<0.400	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3		<1	<1	<1	<1	<1	<0.340	<0.360	<0.230	<0.13	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6		<1	<1	<1	<1	<1	<0.460	<0.420	<0.200	<0.17	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1		<1	<1	<1	<1	<1	<0.460	<0.520	<0.250	<0.18	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3		<1	<1	<1	<1	<1	<0.410	<0.420	<0.230	<0.20	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3		<1	<1	<1	<1	<1	<0.430	<0.330	<0.230	<0.18	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC		<5	<5	<5	<3	<1	<20.2 R	<22.5 R	<0.301	<0.97	<5	<5	<5	<5	<5	<3
2-Butanone (MEK)	ug/L	50		0.56 J	<10	<10	<10	0.34 J	<0.510	<0.630	<0.550	3.4 J	<10	1.15 J	0.54 J	<10	<10	<10
2-Hexanone	ug/L	50		<10	<10	<10	<10	<10	<0.370	<0.260	<0.370	<0.19	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<10	<10	<10	<10	<10	<0.410	<0.510	<0.350	<0.35	<10	<10	<10	<10	<10	<10
Acetone	ug/L	50		3.36 J	<10	1.39 J	<10	2.04 J	<0.610	<0.870	<0.280	<4.0	1.23 J	5.22 J	2.07 J	<10	1.30 J	<10
Benzene	ug/L	1		<1	<1	<1	<1	<1	<0.250	<0.430	<0.250	<0.11	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	5		<1	<1	<1	<1	<1	<0.560	<0.470	<0.300	<0.36	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	50		<1	<1	<1	<1	<1	<0.350	<0.350	<0.260	<0.19	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	50		<1	<1	<1	<1	<1	<0.520	<0.260	<0.460	<0.35	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	5		<1	<1	<1	<1	<1	<0.680	<0.670	<0.250	<0.18	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	NC		<1	0.18 J	<1	<1	<1	<0.330	<0.500	<0.300	<0.13	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5		<1	<1	<1	<1	<1	<0.290	<0.400	<0.360	<0.19	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	5		<1	<1	<1	<1	<1	<0.420	<0.480	<0.220	<0.16	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	5		<1	<1	<1	<1	<1	<0.480	<0.780	<0.360	<0.21	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	7		<1	<1	<1	<1	<1	2.41	<0.340	<0.220	0.26 J	<1	<1	0.30 J	0.19 J	<1	0.24 J
Chloromethane	ug/L	5		<1	<1	<1	<1	<1	<0.430	<0.350	<0.280	<0.20	<1	<1	<1	0.24 J	<1	<1
cis-1,2-Dichloroethene	ug/L	5		<1	<1	<1	<1	<1	<0.560	<0.380	<0.300	<0.21	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4		<1	<1	<1	<1	<1	<0.360	<0.360	<0.250	<0.17	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	NC		<1	<1	<1	<1	<1	<0.230	<0.460	<0.380	<0.32	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	50		<1	<1	<1	<1	<1	<0.430	<0.360	<0.240	<0.20	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5		<1	<1	<1	<1	<1	<0.420	<0.420	<0.290	<0.57	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	5		<1	<1	<1	<1	<1	<0.340	<0.340	<0.220	<0.10	<1	<1	<1	<1	<1	<1
Isopropylbenzene	ug/L	5		<1	<1	<1	<1	<1	<0.300	<0.390	<0.210	<0.12	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	NC		<1	<1	<1	<1	<1	<0.600	<0.350	<0.220	<0.20	<1	<1	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC		<1	<1	<1	<1	<1	<0.450	<0.380	<0.240	<0.13	<1	<1	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC		<1	<1	<1	<1	<1	<0.290	<0.460	<0.360	<0.16	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5		<1	<1	<1	<1	<1	<1.98	<1.98	<1.98	<0.13	<1	<1	<1	<1	<1	<1
Styrene	ug/L	5		<1	<1	<1	<1	<1	<0.380	<0.330	<0.250	<0.25	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5		**94**	**158**	**33**	**64**	**55**	4.83	4.96	4.41	3	0.42 J	3	4	4	3	3
Toluene	ug/L	5		<1	<1	<1	<1	<1	1.19	<0.390	<0.270	<0.17	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	5		<1	<1	<1	<1	<1	<0.500	<0.550	<0.350	<0.58	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4		<1	<1	<1	<1	<1	<0.450	<0.320	<0.220	<0.14	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5		<1	<1	<1	<1	<1	<0.440	<0.550	<0.270	<0.20	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	5		<1	<1	<1	<1	<1	<0.220	<0.660	<0.450	<0.29	<1	<1	<1	<1	<1	<1
Vinyl Chloride	ug/L	2		<1	<1	<1	<1	<1	<0.300	<0.460	<0.290	<0.28	<1	<1	<1	<1	<1	<1
Xylenes (Total)	ug/L	5		<3	<3	<3	<3	<3	<0.660	<0.630	<0.690	<0.24	<3	<3	<3	<3	<3	<3
Total VOCs	ug/L	NA		97.92 J	158.18 J	34.39 J	64	57.38 J	8.43	4.96	4.41	6.66 J	1.65 J	9.37 J	6.91 J	4.43 J	4.3 J	3.24 J

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

* = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		Well ID:	MW-2DB	MW-2SB	MW-2SB	MW-2SB	(DUP) MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-4D	MW-4D
		Screen Interval (ft above msl):	126.3 - 136.3	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	158 - 168	158 - 168
		Date Sampled:	5/4/2016 (Post ISCO)	5/5/2011	10/21/2011	5/2/2012	5/2/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	5/5/2011	10/19/2011
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards															
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																
1,1,1-Trichloroethane	ug/L	5	<1	<0.420	<0.350	<0.330	<0.330	<0.27	<1	<1	<1	<1	<1	<1	<1	<8.40	<17.5
1,1,2,2-Tetrachloroethane	ug/L	5	<1	<0.280	<0.310	<0.320	<0.320	<0.27	<1	<1	<1	<1	<1	<1	<1	<5.60	<15.5
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<1	<0.320	<0.440	<0.420	<0.420	<0.46	<1	<1	<1	<1	<1	<1	<1	<6.40	<22.0
1,1,2-Trichloroethane	ug/L	1	<1	<0.570	<0.360	<0.220	<0.220	<0.34	<1	<1	<1	<1	<1	<1	<1	<11.4	<18.0
1,1-Dichloroethane	ug/L	5	<1	<0.440	<0.430	<0.260	<0.260	<0.15	<1	<1	<1	<1	<1	<1	<1	<8.80	<21.5
1,1-Dichloroethene	ug/L	5	<1	<0.410	<0.710	<0.410	<0.410	<0.27	<1	<1	<1	<1	<1	<1	<1	<8.20	<35.5
1,2,3-Trichlorobenzene	ug/L	5	<1	<0.550	<0.420	<0.210	<0.210	<0.25	<1	<1	<1	<1	<1	<1	<1	<11.0	<21.0
1,2,4-Trichlorobenzene	ug/L	5	<1	<0.340	<0.390	<0.200	<0.200	<0.24	<1	<1	<1	<1	<1	<1	<1	<6.80	<19.5
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.02	<0.660	<0.00855	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<13.2	<0.00855
1,2-Dibromoethane (EDB)	ug/L	0.0006	<1	<0.400	<0.00855	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1	<1	<8.00	<0.00855
1,2-Dichlorobenzene	ug/L	3	<1	<0.340	<0.360	<0.230	<0.230	<0.13	<1	<1	<1	<1	<1	<1	<1	<6.80	<18.0
1,2-Dichloroethane (EDC)	ug/L	0.6	<1	<0.460	<0.420	<0.200	<0.200	<0.17	<1	<1	<1	<1	<1	<1	<1	<9.20	<21.0
1,2-Dichloropropane	ug/L	1	<1	<0.460	<0.520	<0.250	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<9.20	<26.0
1,3-Dichlorobenzene	ug/L	3	<1	<0.410	<0.420	<0.230	<0.230	<0.20	<1	<1	<1	<1	<1	<1	<1	<8.20	<21.0
1,4-Dichlorobenzene	ug/L	3	<1	<0.430	<0.330	<0.230	<0.230	<0.18	<1	<1	<1	<1	<1	<1	<1	<8.60	<16.5
1,4-Dioxane	ug/L	NC	<1	<20.2 R	<22.5 R	<0.301	<0.301	<0.97	<5	<5	<5	<5	<5	<3	<1	<404	<1130 R
2-Butanone (MEK)	ug/L	50	<10	<0.510	<0.630	<0.550	<0.550	4.7 J	<10	0.62 J	0.64 J	<10	<10	<10	<10	<10.2	<31.5
2-Hexanone	ug/L	50	<10	<0.370	<0.260	<0.370	<0.370	<0.19	<10	<10	<10	<10	<10	<10	<10	<7.40	<13.0
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<10	<0.410	<0.510	<0.350	<0.350	<0.35	<10	<10	<10	<10	<10	<10	<10	<8.20	<25.5
Acetone	ug/L	50	<10	<0.610	<0.870	<0.280	<0.280	5.0 J	1.38 J	3.13 J	3.81 J	<10	2.26 J	<10	2.07 J	<12.2	<43.5
Benzene	ug/L	1	<1	<0.510	<0.430	<0.250	<0.250	<0.11	<1	<1	<1	<1	<1	<1	<1	<5.00	<21.5
Bromochloromethane	ug/L	5	<1	<0.560	<0.470	<0.300	<0.300	<0.36	<1	<1	<1	<1	<1	<1	<1	<11.2	<23.5
Bromodichloromethane	ug/L	50	<1	<0.440	<0.350	<0.260	<0.260	<0.19	<1	<1	<1	<1	<1	<1	<1	<7.00	<17.5
Bromoform	ug/L	50	<1	<0.520	<0.260	<0.460	<0.460	<0.35	<1	<1	<1	<1	<1	<1	<1	<10.4	<13.0
Bromomethane	ug/L	5	<1	<0.680	<0.670	<0.250	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<13.6	<33.5
Carbon disulfide	ug/L	NC	<1	<0.330	<0.500	<0.300	<0.300	<0.13	<1	<1	<1	<1	<1	<1	<1	<6.60	<25.0
Carbon tetrachloride	ug/L	5	<1	<0.290	<0.400	<0.360	<0.360	<0.19	<1	<1	<1	<1	<1	<1	<1	<5.80	<20.0
Chlorobenzene	ug/L	5	<1	<0.420	<0.480	<0.220	<0.220	<0.16	<1	<1	<1	<1	<1	<1	<1	<8.40	<24.0
Chloroethane	ug/L	5	<1	<0.480	<0.780	<0.360	<0.360	<0.21	<1	<1	<1	<1	<1	<1	<1	<9.60	<39.0
Chloroform	ug/L	7	<1	**13**	2.69	2.5	2.49	1	0.96 J	0.84 J	0.60 J	0.63 J	0.55 J	0.36 J	0.36 J	<8.20	<17.0
Chloromethane	ug/L	5	<1	<0.430	<0.350	<0.280	<0.280	<0.20	<1	<1	<1	<1	<1	<1	<1	<8.60	<17.5
cis-1,2-Dichloroethene	ug/L	5	<1	<0.560	<0.380	<0.300	<0.300	<0.21	<1	<1	<1	<1	<1	<1	<1	<11.2	<19.0
cis-1,3-Dichloropropene	ug/L	0.4	<1	<0.360	<0.360	<0.250	<0.250	<0.17	<1	<1	<1	<1	<1	<1	<1	<7.20	<18.0
Cyclohexane	ug/L	NC	<1	<0.230	<0.460	<0.380	<0.380	<0.32	<1	<1	<1	<1	<1	<1	<1	<4.60	<23.0
Dibromochloromethane	ug/L	50	<1	<0.430	<0.360	<0.240	<0.240	<0.20	<1	<1	<1	<1	<1	<1	<1	<8.60	<18.0
Dichlorodifluoromethane	ug/L	5	<1	<0.420	<0.420	<0.290	<0.290	<0.57	<1	<1	<1	<1	<1	<1	<1	<8.40	<21.0
Ethylbenzene	ug/L	5	<1	<0.340	<0.340	<0.220	<0.220	<0.10	<1	<1	<1	<1	<1	<1	<1	<6.80	<17.0
Isopropylbenzene	ug/L	5	<1	<0.300	<0.390	<0.210	<0.210	<0.12	<1	<1	<1	<1	<1	<1	<1	<6.00	<19.5
Methyl acetate	ug/L	NC	<1	<0.600	<0.350	<0.220	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<12.0	<17.5
Methyl tert-butyl ether (MTBE)	ug/L	NC	<1	<0.450	<0.380	<0.240	<0.240	<0.25	<1	<1	<1	<1	<1	<1	<1	<9.00	<19.0
Methylcyclohexane	ug/L	NC	<1	<0.290	<0.460	<0.360	<0.360	<0.13	<1	<1	<1	<1	<1	<1	0.24 J	<5.80	<23.0
Methylene chloride	ug/L	5	<1	<1.98	<1.98	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	<1	<1	<39.6	<99.0
Styrene	ug/L	5	<1	<0.380	<0.330	<0.250	<0.250	<0.13	<1	<1	<1	<1	<1	<1	<1	<7.60	<16.5
Tetrachloroethene	ug/L	5	3	0.988 J	0.670 J	<0.330	<0.330	0.78 J	0.71 J	1	0.52 J	0.48 J	0.34 J	0.24 J	0.36 J	**2570**	**6070**
Toluene	ug/L	5	<1	<0.230	<0.390	<0.270	<0.270	<0.17	<1	<1	<1	<1	<1	<1	<1	<4.60	<19.5
trans-1,2-Dichloroethene	ug/L	5	<1	<0.500	<0.550	<0.350	<0.350	<0.14	<1	<1	<1	<1	<1	<1	<1	<10.0	<27.5
trans-1,3-Dichloropropene	ug/L	0.4	<1	<0.450	<0.320	<0.220	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<9.00	<16.0
Trichloroethene	ug/L	5	<1	<0.440	<0.550	<0.270	<0.270	<0.29	<1	<1	<1	<1	<1	<1	<1	<8.80	<27.5
Trichlorofluoromethane	ug/L	5	<1	<0.220	<0.660	<0.450	<0.450	<0.28	<1	<1	<1	<1	<1	<1	<1	<4.40	<33.0
Vinyl Chloride	ug/L	2	<1	<0.300	<0.460	<0.290	<0.290	<0.24	<1	<1	<1	<1	<1	<1	<1	<6.00	<23.0
Xylenes (Total)	ug/L	5	<3	<0.660	<0.630	<0.690	<0.690	<0.58	<3	<3	<3	<3	<3	<3	<3	<13.2	<31.5
Total VOCs	ug/L	NA	3	13.988 J	3.36 J	2.5	2.49	11.48 J	3.05 J	5.59 J	5.57 J	1.11 J	3.15 J	0.60 J	3.03 J	2,570	6,070

Notes:

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ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

* = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		Well ID:	MW-4D	MW-4D	MW-4D	MW-4D	MW-4D	DUP (MW-4D)	MW-4D	DUP (MW-4D)	MW-4D	DUP (MW-4D)	MW-4D	DUP (MW-4D)	MW-4D	DUP (MW-4D)	MW-4S
		Screen Interval (ft above msl):	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	178.4 - 188.5
		Date Sampled:	5/1/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	5/4/2016 (Post ISCO)	10/19/2011
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards															
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																
1,1,1-Trichloroethane	ug/L	5	<16.5	<54	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.50
1,1,2,2-Tetrachloroethane	ug/L	5	<16.0	<53	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.10
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<21.0	<93	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<4.40
1,1,2-Trichloroethane	ug/L	1	<11.0	<69	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.60
1,1-Dichloroethane	ug/L	5	<13.0	<29	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<4.30
1,1-Dichloroethene	ug/L	5	<20.5	<54	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<7.10
1,2,3-Trichlorobenzene	ug/L	5	<10.5	<49	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<4.20
1,2,4-Trichlorobenzene	ug/L	5	<10.0	<49	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.90
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.00855
1,2-Dibromoethane (EDB)	ug/L	0.0006	<0.00855	<24	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<0.00855
1,2-Dichlorobenzene	ug/L	3	<11.5	<27	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.60
1,2-Dichloroethane (EDC)	ug/L	0.6	<10.0	<34	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<4.20
1,2-Dichloropropane	ug/L	1	<12.5	<36	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<5.20
1,3-Dichlorobenzene	ug/L	3	<11.5	<40	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<4.20
1,4-Dichlorobenzene	ug/L	3	<11.5	<36	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.30
1,4-Dioxane	ug/L	NC	<0.301	<0.97	<5	<5	<5	<5	<5	<5	<5	<5	<3	<3	<1	<1	<225 R
2-Butanone (MEK)	ug/L	50	<27.5	<650	<10	0.78 J	<200	<200	<10	<10	<10	<10	20 J	2.9 J	<1000	<1000	<6.30
2-Hexanone	ug/L	50	<18.5	<37	<10	<10	<200	<200	<10	<10	<10	<10	<500	<100	<1000	<1000	<2.60
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<17.5	<70	<10	<10	<200	<200	<10	<10	<10	<10	<500	<100	<1000	<1000	<5.10
Acetone	ug/L	50	<14.0	<800	5.06 J	4.61 J	12 J	<200	<10	<10	1.97 J	2.02 J	<500	<100	<1000	<1000	<8.70
Benzene	ug/L	1	<12.5	<22	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<4.30
Bromochloromethane	ug/L	5	<15.0	<72	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<4.70
Bromodichloromethane	ug/L	50	<13.0	<38	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.50
Bromoform	ug/L	50	<23.0	<70	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<2.60
Bromomethane	ug/L	5	<12.5	<37	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<5.10
Carbon disulfide	ug/L	NC	<15.0	<25	<1	<1	<20	<20	0.35 J	0.19 J	<1	0.28 J	<50	<10	<100	<100	<6.70
Carbon tetrachloride	ug/L	5	<18.0	<38	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<5.00
Chlorobenzene	ug/L	5	<11.0	<31	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<4.00
Chloroethane	ug/L	5	<18.0	<43	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<4.80
Chloroform	ug/L	7	<11.0	<30	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.40
Chloromethane	ug/L	5	<14.0	<39	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.50
cis-1,2-Dichloroethene	ug/L	5	<15.0	<42	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.80
cis-1,3-Dichloropropene	ug/L	0.4	<12.5	<33	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.60
Cyclohexane	ug/L	NC	<19.0	<65	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<4.60
Dibromochloromethane	ug/L	50	<12.0	<40	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.60
Dichlorodifluoromethane	ug/L	5	<14.5	<110	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<4.20
Ethylbenzene	ug/L	5	<11.0	<20	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.40
Isopropylbenzene	ug/L	5	<10.5	<23	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.90
Methyl acetate	ug/L	NC	<11.0	<40	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.50
Methyl tert-butyl ether (MTBE)	ug/L	NC	<12.0	<50	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.80
Methylcyclohexane	ug/L	NC	<18.0	<26	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<4.60
Methylene chloride	ug/L	5	<99.0	<32	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<1.98
Styrene	ug/L	5	<12.5.0	<25	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.30
Tetrachloroethene	ug/L	5	**6140**	**5500**	**332**	**317**	**2000**	**1750**	**54**	**63**	**29**	**25**	**2490**	**840**	**1300**	**1300**	**1410**
Toluene	ug/L	5	<13.5	<33	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.90
trans-1,2-Dichloroethene	ug/L	5	<17.5	<29	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<5.50
trans-1,3-Dichloropropene	ug/L	0.4	<11.0	<40	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<3.20
Trichloroethene	ug/L	5	<13.5	<58	0.28 J	0.30 J	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<5.50
Trichlorofluoromethane	ug/L	5	<22.5	<57	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<6.60
Vinyl Chloride	ug/L	2	<14.5	<48	<1	<1	<20	<20	<1	<1	<1	<1	<50	<10	<100	<100	<4.60
Xylenes (Total)	ug/L	5	<34.5	<120	<3	<3	<60	<60	<3	<3	<3	<3	<200	<30	<300	<300	<6.30
Total VOCs	ug/L	NA	6,140	5,500	337.34 J	322.69 J	2,012 J	1,750	54.35 J	63.19 J	30.97 J	27.30 J	2510 J	842.9 J	1,300	1,300	1,410

Notes:

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units = ug/L or parts per billion

NA = Not Available

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Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter	Units	6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-4S	MW-4S	MW-4S	MW-4S	DUP (MW-4S)	MW-4S	MW-4S	MW-4S	MW-4S	MW-4S	MW-5	MW-5	MW-5	MW-5	MW-5
			Screen Interval (ft above msl):	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7
			Date Sampled:	5/1/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/21/2011	5/2/2012	6/10/2013	11/15/2013 (Post ISCO)	1/14/2014 (Post ISCO)
VOLATILE ORGANIC COMPOUNDS (VOCs)																		
1,1,1-Trichloroethane	ug/L	5		<3.30	<14	<1	<1	<1	<10	<1	<20	<10	<10	<0.350	<0.330	<0.27	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5		<3.20	<13	<1	<1	<1	<10	<1	<20	<10	<10	<0.310	<0.320	<0.27	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<4.20	<23	<1	<1	<1	<10	<1	<20	<10	<10	<0.440	<0.420	<0.46	<1	<1
1,1,2-Trichloroethane	ug/L	1		<2.20	<17	<1	<1	<1	<10	<1	<20	<10	<10	<0.360	<0.220	<0.34	<1	<1
1,1-Dichloroethane	ug/L	5		<2.60	**7.3**	<1	<1	<1	<10	<1	<20	<10	<10	<0.430	<0.260	<0.15	<1	<1
1,1-Dichloroethene	ug/L	5		<4.10	<13	<1	<1	<1	<10	<1	<20	<10	<10	<0.710	<0.410	<0.27	<1	<1
1,2,3-Trichlorobenzene	ug/L	5		<2.10	<12	<1	<1	<1	<10	<1	<20	<10	<10	<0.420	<0.210	<0.25	<1	<1
1,2,4-Trichlorobenzene	ug/L	5		<2.00	<12	<1	<1	<1	<10	<1	<20	<10	<10	<0.390	<0.200	<0.24	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.00855	<0.00855	<0.0080	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006		<0.00855	<6.1	<1	<1	<1	<10	<1	<20	<10	<10	<0.00855	<0.00855	<0.12	<1	<1
1,2-Dichlorobenzene	ug/L	3		<2.30	<6.7	<1	<1	<1	<10	<1	<20	<10	<10	<0.360	<0.230	<0.13	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6		<2.00	<8.6	<1	<1	<1	<10	<1	<20	<10	<10	<0.420	<0.200	<0.17	<1	<1
1,2-Dichloropropane	ug/L	1		<2.50	<9.1	<1	<1	<1	<10	<1	<20	<10	<10	<0.520	<0.250	<0.18	<1	<1
1,3-Dichlorobenzene	ug/L	3		<2.30	<10	<1	<1	<1	<10	<1	<20	<10	<10	<0.420	<0.230	<0.20	<1	<1
1,4-Dichlorobenzene	ug/L	3		<2.30	<9.0	<1	<1	<1	<10	<1	<20	<10	<10	<0.330	<0.230	<0.18	<1	<1
1,4-Dioxane	ug/L	NC		<0.301	<0.97	<5	<5	<5	<5	<5	<5	<3	<1	<22.5 R	<0.301	<0.97	<5	<5
2-Butanone (MEK)	ug/L	50		<5.50	<160	<10	0.71 J	1.00 J	<100	<10	<200	3.0 J	<100	<0.630	<0.550	8.0 J	<10	0.42 J
2-Hexanone	ug/L	50		<3.70	<9.4	<10	<10	<10	<100	<10	<200	<100	<100	<0.260	<0.370	<0.19	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<3.50	<18	<10	<10	<10	<100	<10	<200	<100	<100	<0.510	<0.350	<0.35	<10	<10
Acetone	ug/L	50		<2.80	<200	3.71 J	2.65 J	3.06 J	9.3 J	4.6 J	<200	<100	<100	<0.870	<0.280	<4.0	1.25 J	1.99 J
Benzene	ug/L	1		<2.50	<5.6	<1	<1	<1	<10	<1	<20	<10	<10	<0.430	<0.250	<0.11	<1	<1
Bromochloromethane	ug/L	5		<3.00	<18	<1	<1	<1	<10	<1	<20	<10	<10	<0.470	<0.300	<0.36	<1	<1
Bromodichloromethane	ug/L	50		<2.60	<9.6	<1	<1	<1	<10	<1	<20	<10	<10	<0.350	<0.260	<0.19	<1	<1
Bromoform	ug/L	50		<4.60	<18	<1	<1	<1	<10	<1	<20	<10	<10	<0.260	<0.460	<0.35	<1	<1
Bromomethane	ug/L	5		<2.50	<9.2	<1	<1	<1	<10	<1	<20	<10	<10	<0.670	<0.250	<0.18	<1	<1
Carbon disulfide	ug/L	NC		<3.00	<6.3	<1	<1	<1	<10	<1	<20	<10	<10	<0.500	<0.300	<0.13	<1	<1
Carbon tetrachloride	ug/L	5		<3.60	<9.4	<1	<1	<1	<10	<1	<20	<10	<10	<0.400	<0.360	<0.19	<1	<1
Chlorobenzene	ug/L	5		<2.20	<7.8	<1	<1	<1	<10	<1	<20	<10	<10	<0.480	<0.220	<0.16	<1	<1
Chloroethane	ug/L	5		<3.60	<11	<1	<1	<1	<10	<1	<20	<10	<10	<0.780	<0.360	<0.21	<1	<1
Chloroform	ug/L	7		<2.20	<7.5	<1	<1	<1	<10	<1	<20	<10	<10	<0.340	<0.220	<0.15	<1	<1
Chloromethane	ug/L	5		<2.80	<9.8	<1	<1	<1	<10	<1	<20	<10	<10	<0.350	<0.280	<0.20	<1	<1
cis-1,2-Dichloroethene	ug/L	5		<3.00	<11	<1	<1	<1	<10	<1	<20	<10	<10	<0.380	<0.300	<0.21	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4		<2.50	<8.4	<1	<1	<1	<10	<1	<20	<10	<10	<0.360	<0.250	<0.17	<1	<1
Cyclohexane	ug/L	NC		<3.80	<16	<1	<1	<1	<10	<1	<20	<10	<10	<0.460	<0.380	<0.32	<1	<1
Dibromochloromethane	ug/L	50		<2.40	<10.0	<1	<1	<1	<10	<1	<20	<10	<10	<0.360	<0.240	<0.20	<1	<1
Dichlorodifluoromethane	ug/L	5		<2.90	<29	<1	<1	<1	<10	<1	<20	<10	<10	<0.420	<0.290	<0.57	<1	<1
Ethylbenzene	ug/L	5		<2.20	<5.1	<1	<1	<1	<10	<1	<20	<10	<10	<0.340	<0.220	<0.10	<1	<1
Isopropylbenzene	ug/L	5		<2.10	<5.8	<1	<1	<1	<10	<1	<20	<10	<10	<0.390	<0.210	<0.12	<1	<1
Methyl acetate	ug/L	NC		<2.20	<10	<1	<1	<1	<10	<1	<20	<10	<10	<0.350	<0.220	<0.20	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC		<2.40	<12	<1	<1	<1	<10	<1	<20	<10	<10	<0.380	<0.240	<0.25	<1	<1
Methylcyclohexane	ug/L	NC		<3.60	<6.4	<1	<1	<1	<10	<1	<20	<10	<10	<0.460	<0.360	<0.13	<1	<1
Methylene chloride	ug/L	5		<19.8	<8.1	<1	<1	<1	<10	<1	<20	<10	<10	<1.98	<1.98	<0.16	<1	<1
Styrene	ug/L	5		<2.50	<6.4	<1	<1	<1	<10	<1	<20	<10	<10	<0.330	<0.250	<0.13	<1	<1
Tetrachloroethene	ug/L	5		**1020**	**1040**	**10**	**21**	**21**	**890**	**327**	**460**	**730**	**400**	**9.19**	3.14	**165**	**5**	**67**
Toluene	ug/L	5		<2.70	<8.3	<1	<1	<1	<10	<1	<20	<10	<10	<0.390	<0.270	<0.17	<1	<1
trans-1,2-Dichloroethene	ug/L	5		<3.50	<7.2	<1	<1	<1	<10	<1	<20	<10	<10	<0.550	<0.350	<0.14	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4		<2.20	<10	<1	<1	<1	<10	<1	<20	<10	<10	<0.320	<0.220	<0.20	<1	<1
Trichloroethene	ug/L	5		<2.70	<15	<1	<1	<1	<10	<1	<20	<10	<10	<0.550	<0.270	<0.29	<1	<1
Trichlorofluoromethane	ug/L	5		<4.50	<14	<1	<1	<1	<10	<1	<20	<10	<10	<0.660	<0.450	<0.28	<1	<1
Vinyl Chloride	ug/L	2		<2.90	<12	<1	<1	<1	<10	<1	<20	<10	<10	<0.460	<0.290	<0.24	<1	<1
Xylenes (Total)	ug/L	5		<6.90	<29	<3	<3	<3	<30	<3	<60	<30	<30	<0.630	<0.690	<0.58	<3	<3
Total VOCs	ug/L	NA		1,020	1047.3	13.71 J	24.36 J	25.06 J	899.3 J	331.6 J	460	733 J	400	9.19	3.14	173 J	6.25 J	69.41 J

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

* = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5DB	MW-5DB	MW-5DB	MW-5DB	MW-5DB	DUP (MW-5DB)	MW-5DB	MW-5DB	MW-5DB	MW-5DB
			Screen Interval (ft above msl):	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3
			Date Sampled:	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	5/5/2011	10/21/2011	5/2/2012	6/10/2013	11/15/2013 (Post ISCO)	11/15/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																	
1,1,1-Trichloroethane	ug/L	5		<1	<1	<1	<1	<1	<0.420	<0.350	<0.330	<0.27	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5		<1	<1	<1	<1	<1	<0.280	<0.310	<0.320	<0.27	<1	<1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<1	<1	<1	<1	<1	<0.320	<0.440	<0.420	<0.46	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1		<1	<1	<1	<1	<1	<0.570	<0.360	<0.220	<0.34	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5		<1	<1	<1	<1	<1	<0.440	<0.430	<0.260	<0.15	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5		<1	<1	<1	<1	<1	<0.410	<0.710	<0.410	<0.27	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5		<1	<1	<1	<1	<1	<0.550	<0.420	<0.210	<0.25	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5		<1	<1	<1	<1	<1	<0.340	<0.390	<0.200	<0.24	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.05	<0.05	<0.05	<0.05	<0.02	<0.660	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006		<1	<1	<1	<1	<1	<0.400	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3		<1	<1	<1	<1	<1	<0.340	<0.360	<0.230	<0.13	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6		<1	<1	<1	<1	<1	<0.460	<0.420	<0.200	<0.17	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1		<1	<1	<1	<1	<1	<0.460	<0.520	<0.250	<0.18	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3		<1	<1	<1	<1	<1	<0.410	<0.420	<0.230	<0.20	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3		<1	<1	<1	<1	<1	<0.430	<0.330	<0.230	<0.18	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC		<5	<5	<5	<3	<1	<20.2	<22.5 R	<0.301	<0.97	<5	<5	<5	<5	<5	<5
2-Butanone (MEK)	ug/L	50		0.84 J	<10	<10	<10	0.39 J	<0.510	<0.630	<0.550	4.8 J	<10	<10	0.47 J	0.79 J	<10	<10
2-Hexanone	ug/L	50		<10	<10	<10	<10	<10	<0.370	<0.260	<0.370	<0.19	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<10	<10	<10	<10	<10	<0.410	<0.510	<0.350	<0.35	<10	<10	<10	<10	0.38 J	<10
Acetone	ug/L	50		6.02 J	<10	0.69 J	<10	2.40 J	<0.610	<0.870	<0.280	<4.0	<10	0.89 J	3.42 J	4.48 J	<10	1.63 J
Benzene	ug/L	1		<1	<1	<1	<1	<1	<0.250	<0.430	<0.250	<0.11	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	5		<1	<1	<1	<1	<1	<0.560	<0.470	<0.300	<0.36	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	50		<1	<1	<1	<1	<1	<0.350	<0.350	<0.260	<0.19	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	50		<1	<1	<1	<1	<1	<0.520	<0.260	<0.460	<0.35	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	5		<1	<1	<1	<1	<1	<0.680	<0.670	<0.250	<0.18	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	NC		<1	<1	<1	<1	<1	<0.330	<0.500	<0.300	<0.13	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5		<1	<1	<1	<1	<1	<0.290	<0.400	<0.360	<0.19	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	5		<1	<1	<1	<1	<1	<0.420	<0.480	<0.220	<0.16	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	5		<1	<1	<1	<1	<1	<0.480	<0.780	<0.360	<0.21	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	7		<1	<1	<1	<1	<1	1.54	0.425 J	<0.220	0.26 J	0.27 J	0.26 J	0.29 J	0.23 J	0.25 J	0.30 J
Chloromethane	ug/L	5		<1	<1	<1	<1	<1	<0.430	<0.350	<0.280	<0.20	<1	<1	<1	0.44 J	0.52 J	0.46 J
cis-1,2-Dichloroethene	ug/L	5		<1	<1	<1	<1	<1	<0.560	<0.380	<0.300	<0.21	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4		<1	<1	<1	<1	<1	<0.360	<0.360	<0.250	<0.17	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	NC		<1	<1	<1	<1	<1	<0.230	<0.460	<0.380	<0.32	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	50		<1	<1	<1	<1	<1	<0.430	<0.360	<0.240	<0.20	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5		<1	<1	<1	<1	<1	<0.420	<0.420	<0.290	<0.57	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	5		<1	<1	<1	<1	<1	<0.340	<0.340	<0.220	<0.10	<1	<1	<1	<1	<1	<1
Isopropylbenzene	ug/L	5		<1	<1	<1	<1	<1	<0.300	<0.390	<0.210	<0.12	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	NC		<1	<1	<1	<1	<1	<0.600	<0.350	<0.220	<0.20	<1	<1	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC		<1	<1	<1	<1	<1	<0.450	<0.380	<0.240	<0.25	<1	<1	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC		<1	<1	<1	<1	<1	<0.290	<0.460	<0.360	<0.13	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5		<1	<1	<1	<1	<1	<1.98	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	<1
Styrene	ug/L	5		<1	<1	<1	<1	<1	<0.380	<0.330	<0.250	<0.13	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5		**5**	4	4	2	2	2.53	2.37	4.08	1	0.81 J	0.75 J	0.95 J	0.41 J	0.48 J	0.55 J
Toluene	ug/L	5		<1	<1	<1	<1	<1	0.504 J	<0.390	<0.270	<0.17	<1	<1	<1	0.30 J	0.25 J	<1
trans-1,2-Dichloroethene	ug/L	5		<1	<1	<1	<1	<1	<0.500	<0.550	<0.350	<0.14	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4		<1	<1	<1	<1	<1	<0.450	<0.320	<0.220	<0.20	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5		<1	<1	<1	<1	<1	<0.440	<0.550	<0.270	<0.29	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	5		<1	<1	<1	<1	<1	<0.220	<0.660	<0.450	<0.28	<1	<1	<1	<1	<1	<1
Vinyl Chloride	ug/L	2		<1	<1	<1	<1	<1	<0.300	<0.460	<0.290	<0.24	<1	<1	<1	<1	<1	0.49 J
Xylenes (Total)	ug/L	5		<3	<3	<3	<3	<3	<0.660	<0.630	<0.690	<0.58	<3	<3	<3	<3	<3	<3
Total VOCs	ug/L	NA		11.86 J	4	4.69 J	2	4.79 J	4.57 J	2.80 J	4.08	6.06 J	1.08 J	1.9 J	5.13 J	6.65 J	1.88 J	3.43

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

* = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-5DB	MW-5DB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-6	MW-6
			Screen Interval (ft above msl):	105.3 - 115.3	105.3 - 115.3	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	179.6 - 189.6	179.6 - 189.6
			Date Sampled:	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	5/5/2011	10/25/2011	5/2/2012	6/10/2013	11/15/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	8/3/2011	10/18/2011
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																Off-Site Upgradient Locations	
1,1,1-Trichloroethane	ug/L	5		<1	<1	<0.420	<0.350	<0.330	<0.27	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.350
1,1,2,2-Tetrachloroethane	ug/L	5		<1	<1	<0.280	<0.310	<0.320	<0.27	<1	<1	<1	<1	<1	<1	<1	<0.280	<0.310
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<1	<1	<0.320	<0.440	<0.420	<0.46	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.440
1,1,2-Trichloroethane	ug/L	1		<1	<1	<0.570	<0.360	<0.220	<0.34	<1	<1	<1	<1	<1	<1	<1	<0.570	<0.360
1,1-Dichloroethane	ug/L	5		<1	<1	<0.440	<0.430	<0.260	<0.15	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.430
1,1-Dichloroethene	ug/L	5		<1	<1	<0.410	<0.710	<0.410	<0.27	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.710
1,2,3-Trichlorobenzene	ug/L	5		<1	<1	<0.550	<0.420	<0.210	<0.25	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.420
1,2,4-Trichlorobenzene	ug/L	5		<1	<1	<0.340	<0.390	<0.200	<0.24	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.390
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.05	<0.02	<0.660	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.660	<0.00855
1,2-Dibromoethane (EDB)	ug/L	0.0006		<1	<1	<0.400	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.00855
1,2-Dichlorobenzene	ug/L	3		<1	<1	<0.340	<0.360	<0.230	<0.13	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.360
1,2-Dichloroethane (EDC)	ug/L	0.6		<1	<1	<0.460	<0.420	<0.200	<0.17	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.420
1,2-Dichloropropane	ug/L	1		<1	<1	<0.460	<0.520	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.520
1,3-Dichlorobenzene	ug/L	3		<1	<1	<0.410	<0.420	<0.230	<0.20	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.420
1,4-Dichlorobenzene	ug/L	3		<1	<1	<0.430	<0.330	<0.230	<0.18	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.330
1,4-Dioxane	ug/L	NC		<3	<1	<20.2	<22.5 R	<0.301	<0.97	<5	<5	<5	<5	<5	<3	<1	<20.2	<22.5 R
2-Butanone (MEK)	ug/L	50		<10	<10	<0.510	<0.630	<0.550	<3.3	<10	0.70 J	0.64 J	<10	<10	<10	<10	2.33	<0.630
2-Hexanone	ug/L	50		<10	<10	<0.370	<0.260	<0.370	<0.19	<10	<10	<10	<10	<10	<10	<10	<0.370	<0.260
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<10	<10	<0.410	<0.510	<0.350	<0.35	<10	<10	<10	<10	<10	<10	<10	<0.410	<0.510
Acetone	ug/L	50		<10	2.01 J	10.2	<0.870	<0.280	<4.0	0.86 J	3.86 J	4.27 J	<10	1.45 J	<10	1.23 J	17.7	<0.870
Benzene	ug/L	1		<1	<1	<0.250	<0.430	<0.250	<0.11	<1	<1	<1	<1	<1	<1	<1	<0.250	<0.430
Bromochloromethane	ug/L	5		<1	<1	<0.560	<0.470	<0.300	<0.36	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.470
Bromodichloromethane	ug/L	50		<1	<1	<0.350	<0.350	<0.260	<0.19	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.550
Bromoform	ug/L	50		<1	<1	<0.520	<0.260	<0.460	<0.35	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.260
Bromomethane	ug/L	5		<1	<1	<0.680	<0.670	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<0.680	<0.670
Carbon disulfide	ug/L	NC		<1	<1	<0.330	<0.500	<0.300	<0.13	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.500
Carbon tetrachloride	ug/L	5		<1	<1	<0.290	<0.400	<0.360	<0.19	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.400
Chlorobenzene	ug/L	5		<1	<1	<0.420	<0.480	<0.220	<0.16	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.480
Chloroethane	ug/L	5		<1	<1	<0.480	<0.780	<0.360	<0.21	<1	<1	<1	<1	0.35 J	<1	0.43 J	<0.480	<0.780
Chloroform	ug/L	7		0.25 J	0.26 J	4.22	3.12	0.533 J	0.56 J	0.50 J	0.55 J	0.40 J	0.36 J	0.38 J	0.32 J	0.26 J	**11.1**	<0.340
Chloromethane	ug/L	5		<1	<1	<0.430	<0.350	<0.280	<0.20	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.350
cis-1,2-Dichloroethene	ug/L	5		<1	<1	<0.560	<0.380	<0.300	<0.21	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.380
cis-1,3-Dichloropropene	ug/L	0.4		<1	<1	<0.360	<0.360	<0.250	<0.17	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.360
Cyclohexane	ug/L	NC		<1	<1	<0.230	<0.460	<0.380	<0.32	<1	<1	<1	<1	<1	<1	<1	<0.230	<0.460
Dibromochloromethane	ug/L	50		<1	<1	<0.430	<0.360	<0.240	<0.20	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.360
Dichlorodifluoromethane	ug/L	5		<1	<1	<0.420	<0.420	<0.290	<0.57	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.420
Ethylbenzene	ug/L	5		<1	<1	<0.340	<0.340	<0.220	<0.10	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.340
Isopropylbenzene	ug/L	5		<1	<1	<0.300	<0.390	<0.210	<0.12	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.390
Methyl acetate	ug/L	NC		<1	<1	<0.600	<0.350	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<0.600	<0.350
Methyl tert-butyl ether (MTBE)	ug/L	NC		<1	0.24 J	<0.450	<0.380	<0.240	<0.25	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.380
Methylcyclohexane	ug/L	NC		<1	<1	<0.290	<0.460	<0.360	<0.13	<1	<1	<1	<1	<1	<1	0.22 J	<0.290	<0.460
Methylene chloride	ug/L	5		<1	<1	<1.98	<1.98	<1.98	<0.16	<1	<1	<1	<1	0.30 J	<1	<1	<1.98	<1.98
Styrene	ug/L	5		<1	<1	<0.380	<0.330	<0.250	<0.13	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.330
Tetrachloroethene	ug/L	5		0.39 J	0.31 J	**37.6**	**5.67**	**24.1**	4	3	3	3	2	2	2	1	<0.380	<0.470
Toluene	ug/L	5		<1	<1	<0.230	<0.390	<0.270	<0.17	<1	<1	<1	<1	0.33 J	0.26 J	<1	<1	<0.230	<0.350
trans-1,2-Dichloroethene	ug/L	5		<1	<3	<0.500	<0.550	<0.350	<0.14	<1	<1	<1	<1	<1	<1	<1	<0.500	<0.550
trans-1,3-Dichloropropene	ug/L	0.4		<1	<1	<0.450	<0.320	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.320
Trichloroethene	ug/L	5		<1	<1	<0.440	<0.550	<0.270	<0.29	<1	<1	<1	<1	<1	<1	0.35 J	<0.440	<0.350
Trichlorofluoromethane	ug/L	5		<1	<1	<0.220	<0.660	<0.450	<0.28	<1	<1	<1	<1	<1	<1	<1	<0.220	<0.660
Vinyl Chloride	ug/L	2		0.45 J	<1	<0.300	<0.460	<0.290	<0.24	<1	<1	<1	<1	0.39 J	0.44 J	0.45 J	<0.300	<0.460
Xylenes (Total)	ug/L	5		<3	0.47 J	<0.660	<0.630	<0.690	<0.58	<3	<3	<3	<3	<3	<3	<3	<0.660	<0.630
Total VOCs	ug/L	NA		1.09 J	3.29 J	52.02	8.79	24.6 J	4.56 J	4.36 J	8.11	8.31	2.69 J	5.13 J	2.76 J	3.94 J	31.1	---

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		Well ID:	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6SB*	MW-6SB	DUP (MW-6SB)	MW-6SB	MW-6SB	MW-6SB	MW-6SB	MW-6SB
		Screen Interval (ft above msl):	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9
		Date Sampled:	4/30/2012	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	8/3/2011	10/18/2011	10/18/2011	4/30/2012	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards															
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																
1,1,1-Trichloroethane	ug/L	5	<0.330	<0.27	<1	<1	<1	<1	<1	<0.420	<0.350	<0.350	<0.330	<0.27	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<0.320	<0.27	<1	<1	<1	<1	<1	<0.280	<0.310	<0.310	<0.320	<0.27	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<0.420	<0.46	<1	<1	<1	<1	<1	<0.320	<0.440	<0.440	<0.420	<0.46	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1	<0.220	<0.34	<1	<1	<1	<1	<1	<0.570	<0.360	<0.360	<0.220	<0.34	<1	<1	<1
1,1-Dichloroethane	ug/L	5	<0.260	<0.15	<1	<1	<1	<1	<1	<0.440	<0.430	<0.430	<0.260	<0.15	<1	<1	<1
1,1-Dichloroethene	ug/L	5	<0.410	<0.27	<1	<1	<1	<1	<1	<0.410	<0.710	<0.710	<0.410	<0.27	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5	<0.210	<0.25	<1	<1	<1	<1	<1	<0.550	<0.420	<0.420	<0.210	<0.25	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5	<0.200	<0.24	<1	<1	<1	<1	<1	<0.340	<0.390	<0.390	<0.200	<0.24	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02	<0.660	<0.00855	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<0.00855	<0.12	<1	<1	<1	<1	<1	<0.400	<0.00855	<0.00855	<0.00855	<0.12	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3	<0.230	<0.13	<1	<1	<1	<1	<1	<0.340	<0.360	<0.360	<0.230	<0.13	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<0.200	<0.17	<1	<1	<1	<1	<1	<0.460	<0.420	<0.420	<0.200	<0.17	<1	<1	<1
1,2-Dichloropropane	ug/L	1	<0.250	<0.18	<1	<1	<1	<1	<1	<0.460	<0.520	<0.520	<0.250	<0.18	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3	<0.230	<0.20	<1	<1	<1	<1	<1	<0.410	<0.420	<0.420	<0.230	<0.20	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3	<0.230	<0.18	<1	<1	<1	<1	<1	<0.430	<0.330	<0.330	<0.230	<0.18	<1	<1	<1
1,4-Dioxane	ug/L	NC	<0.301	<0.97	<5	<5	<5	<3	<1	<20.2	<22.5 R	<22.5 R	<0.301	<0.97	<5	<5	<5
2-Butanone (MEK)	ug/L	50	<0.550	6.2 J	0.83 J	<10	<10	<10	<10	<0.510	<0.630	<0.630	<0.550	6.4 J	0.88 J	<10	<10
2-Hexanone	ug/L	50	<0.370	<0.19	<10	<10	<10	<10	<10	<0.370	<0.260	<0.260	<0.370	<0.19	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<0.350	<0.35	<10	<10	<10	<10	<10	<0.410	<0.510	<0.510	<0.350	<0.35	<10	<10	<10
Acetone	ug/L	50	<0.280	<4.0	4.96 J	<10	1.31 J	<10	0.99 J	1.37	<0.870	<0.870	<0.280	<4.0	5.39 J	<10	1.50 J
Benzene	ug/L	1	<0.250	<0.11	<1	<1	<1	<1	<1	<0.250	<0.430	<0.430	<0.250	<0.11	<1	<1	<1
Bromochloromethane	ug/L	5	<0.300	<0.36	<1	<1	<1	<1	<1	<0.560	<0.470	<0.470	<0.300	<0.36	<1	<1	<1
Bromodichloromethane	ug/L	50	<0.260	<0.19	<1	<1	<1	<1	<1	0.767 J	<0.350	<0.350	<0.260	<0.19	<1	<1	<1
Bromoform	ug/L	50	<0.460	<0.35	<1	<1	<1	<1	<1	<0.520	<0.260	<0.260	<0.460	<0.35	<1	<1	<1
Bromomethane	ug/L	5	<0.250	<0.18	<1	<1	<1	<1	<1	<0.680	<0.670	<0.670	<0.250	<0.18	<1	<1	<1
Carbon disulfide	ug/L	NC	<0.300	<0.13	<1	<1	<1	<1	<1	<0.330	<0.500	<0.500	<0.300	<0.13	<1	<1	<1
Carbon tetrachloride	ug/L	5	<0.360	<0.19	<1	<1	<1	<1	<1	<0.290	<0.400	<0.400	<0.360	<0.19	<1	<1	<1
Chlorobenzene	ug/L	5	<0.220	<0.16	<1	<1	<1	<1	<1	<0.420	<0.480	<0.480	<0.220	<0.16	<1	<1	<1
Chloroethane	ug/L	5	<0.360	<0.21	<1	<1	<1	<1	<1	<0.480	<0.780	<0.780	<0.360	<0.21	<1	<1	<1
Chloroform	ug/L	7	<0.220	<0.15	<1	<1	<1	<1	<1	**7.28**	<0.340	<0.340	<0.220	<0.15	<1	<1	<1
Chloromethane	ug/L	5	<0.280	<0.20	<1	<1	<1	<1	<1	<0.430	<0.350	<0.350	<0.280	<0.20	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5	<0.300	<0.21	<1	<1	<1	<1	<1	<0.560	<0.380	<0.380	<0.300	<0.21	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4	<0.250	<0.17	<1	<1	<1	<1	<1	<0.360	<0.360	<0.360	<0.250	<0.17	<1	<1	<1
Cyclohexane	ug/L	NC	<0.380	<0.32	<1	<1	<1	<1	<1	<0.230	<0.460	<0.460	<0.380	<0.32	<1	<1	<1
Dibromochloromethane	ug/L	50	<0.240	<0.20	<1	<1	<1	<1	<1	<0.430	<0.360	<0.360	<0.240	<0.20	<1	<1	<1
Dichlorodifluoromethane	ug/L	5	<0.290	<0.57	<1	<1	<1	<1	<1	<0.420	<0.420	<0.420	<0.290	<0.57	<1	<1	<1
Ethylbenzene	ug/L	5	<0.220	<0.10	<1	<1	<1	<1	<1	<0.340	<0.340	<0.340	<0.220	<0.10	<1	<1	<1
Isopropylbenzene	ug/L	5	<0.210	<0.12	<1	<1	<1	<1	<1	<0.300	<0.390	<0.390	<0.210	<0.12	<1	<1	<1
Methyl acetate	ug/L	NC	<0.220	<0.20	<1	<1	<1	<1	<1	<0.600	<0.350	<0.350	<0.220	<0.20	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<0.240	<0.25	<1	<1	<1	<1	<1	<0.450	<0.380	<0.380	<0.240	<0.25	<1	<1	<1
Methylcyclohexane	ug/L	NC	<0.360	<0.13	<1	<1	<1	<1	<1	<0.290	<0.460	<0.460	<0.360	<0.13	<1	<1	<1
Methylene chloride	ug/L	5	<1.98	<0.16	<1	<1	<1	<1	<1	<1.98	<1.98	<1.98	<1.98	<0.16	<1	<1	<1
Styrene	ug/L	5	<0.250	<0.13	<1	<1	<1	<1	<1	<0.380	<0.330	<0.330	<0.250	<0.13	<1	<1	<1
Tetrachloroethene	ug/L	5	<0.330	0.15 J	<1	<1	<1	<1	<1	<0.380	<0.470	<0.470	<0.330	0.16 J	<1	<1	<1
Toluene	ug/L	5	<0.270	<0.17	<1	<1	<1	<1	<1	<0.230	<0.390	<0.390	<0.270	<0.17	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	5	<0.350	<0.14	<1	<1	<1	<1	<1	<0.500	<0.550	<0.550	<0.350	<0.14	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4	<0.220	<0.20	<1	<1	<1	<1	<1	<0.450	<0.320	<0.320	<0.220	<0.20	<1	<1	<1
Trichloroethene	ug/L	5	<0.270	<0.29	<1	<1	<1	<1	<1	<0.440	<0.550	<0.550	<0.270	<0.29	<1	<1	<1
Trichlorofluoromethane	ug/L	5	<0.450	<0.28	<1	<1	<1	<1	<1	<0.220	<0.660	<0.660	<0.450	<0.28	<1	<1	<1
Vinyl Chloride	ug/L	2	<0.290	<0.24	<1	<1	<1	<1	<1	<0.300	<0.460	<0.460	<0.290	<0.24	<1	<1	<1
Xylenes (Total)	ug/L	5	<0.690	<0.58	<3	<3	<3	<3	<3	<0.660	<0.630	<0.630	<0.690	<0.58	<3	<3	<3
Total VOCs	ug/L	NA	---	6.35 J	5.79 J	---	1.31 J	---	0.99 J	9.42 J	---	---	---	---	6.27 J	---	1.50 J

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		Well ID:	MW-6SB	MW-6SB	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7SB	MW-7SB	MW-7SB	MW-7SB	MW-7SB
		Screen Interval (ft above msl):	151.9 - 161.9	151.9 - 161.9	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8
		Date Sampled:	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/18/2011	5/1/2012	6/11/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/19/2011	5/2/2012	6/11/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Off-Site Downgradient Locations														
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																
1,1,1-Trichloroethane	ug/L	5	<1	<1	<0.350	<0.330	<0.10	<1	<1	<1	<1	<1	<0.350	<0.330	<0.10	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<1	<1	<0.310	<0.320	<0.067	<1	<1	<1	<1	<1	<0.310	<0.320	<0.067	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<1	<1	<0.440	<0.420	<0.15	<1	<1	<1	<1	<1	<0.440	<0.420	<0.15	<1	<1
1,1,2-Trichloroethane	ug/L	1	<1	<1	<0.360	<0.220	<0.039	<1	<1	<1	<1	<1	<0.360	<0.220	<0.039	<1	<1
1,1-Dichloroethane	ug/L	5	<1	<1	<0.430	<0.260	<0.041	<1	<1	<1	<1	<1	<0.430	<0.260	<0.041	<1	<1
1,1-Dichloroethene	ug/L	5	<1	<1	<0.710	<0.410	<0.055	<1	<1	<1	<1	<1	<0.710	<0.410	<0.055	<1	<1
1,2,3-Trichlorobenzene	ug/L	5	<1	<1	<0.420	<0.210	<0.030	<1	<1	<1	<1	<1	<0.420	<0.210	0.040 JB	<1	<1
1,2,4-Trichlorobenzene	ug/L	5	<1	<1	<0.390	<0.200	0.020 JB	<1	<1	<1	<1	<1	<0.390	<0.200	0.040 JB	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.05	<0.02	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02	<0.00855	<0.00855	<0.0080	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<1	<1	<0.00855	<0.00855	<0.045	<1	<1	<1	<1	<1	<0.00855	<0.00855	<0.045	<1	<1
1,2-Dichlorobenzene	ug/L	3	<1	<1	<0.360	<0.230	<0.053	<1	<1	<1	<1	<1	<0.360	<0.230	<0.053	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<1	<1	<0.420	<0.200	<0.039	<1	<1	<1	<1	<1	<0.420	<0.200	<0.039	<1	<1
1,2-Dichloropropane	ug/L	1	<1	<1	<0.520	<0.250	<0.045	<1	<1	<1	<1	<1	<0.520	<0.250	<0.045	<1	<1
1,3-Dichlorobenzene	ug/L	3	<1	<1	<0.420	<0.230	<0.027	<1	<1	<1	<1	<1	<0.420	<0.230	<0.027	<1	<1
1,4-Dichlorobenzene	ug/L	3	<1	<1	<0.330	<0.230	<0.036	<1	<1	<1	<1	<1	<0.330	<0.230	<0.036	<1	<1
1,4-Dioxane	ug/L	NC	<3	<1	<22.5 R	<0.301	<0.97	<5	<5	<5	<3	<1	<22.5 R	<0.301	<0.97	<5	<5
2-Butanone (MEK)	ug/L	50	<10	<10	<0.630	<0.550	4.3 J	0.79 J	<10	<10	<10	<10	<0.630	<0.550	4.6 J	0.65 J	<10
2-Hexanone	ug/L	50	<10	<10	<0.260	<0.370	<0.30	<10	<10	<10	<10	<10	<0.260	<0.370	<0.30	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<10	<10	<0.510	<0.350	<0.14	<10	<10	<10	<10	<10	<0.510	<0.350	<0.14	<10	<10
Acetone	ug/L	50	<10	1.68 J	<0.870	<0.280	<3.0	5.40 J	<10	1.57 J	<10	1.79 J	<0.870	<0.280	<3.0	5.50 J	<10
Benzene	ug/L	1	<1	<1	<0.430	<0.250	<0.014	<1	<1	<1	<1	<1	<0.430	<0.250	0.030 J	<1	<1
Bromochloromethane	ug/L	5	<1	<1	<0.470	<0.300	<0.13	<1	<1	<1	<1	<1	<0.470	<0.300	<0.13	<1	<1
Bromodichloromethane	ug/L	50	<1	<1	<0.350	<0.260	<0.025	<1	<1	<1	<1	<1	<0.350	<0.260	<0.025	<1	<1
Bromoform	ug/L	50	<1	<1	<0.260	<0.460	<0.035	<1	<1	<1	<1	<1	<0.260	<0.460	<0.035	<1	<1
Bromomethane	ug/L	5	<1	<1	<0.670	<0.250	<0.13	<1	<1	<1	<1	<1	<0.510	<0.250	<0.13	<1	<1
Carbon disulfide	ug/L	NC	<1	0.32 J	<0.500	<0.300	<0.028	<1	<1	<1	<1	<1	<0.670	<0.300	<0.028	<1	<1
Carbon tetrachloride	ug/L	5	<1	<1	<0.400	<0.360	<0.025	<1	<1	<1	<1	<1	<0.500	<0.360	<0.025	<1	<1
Chlorobenzene	ug/L	5	<1	<1	<0.480	<0.220	<0.032	<1	<1	<1	<1	<1	<0.400	<0.220	<0.032	<1	<1
Chloroethane	ug/L	5	<1	<1	<0.780	<0.360	<0.11	<1	<1	<1	<1	<1	<0.480	<0.360	<0.11	<1	<1
Chloroform	ug/L	7	<1	<1	<0.340	<0.220	0.080 J	<1	<1	<1	<1	<1	0.635 J	0.868 J	0.810 J	0.92 J	0.72 J
Chloromethane	ug/L	5	<1	<1	<0.350	<0.280	<0.072	<1	<1	<1	<1	<1	<0.350	<0.280	<0.072	<1	<1
cis-1,2-Dichloroethene	ug/L	5	<1	<1	<0.380	<0.300	<0.045	<1	0.22 J	<1	<1	<1	1.03	<0.300	<0.045	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4	<1	<1	<0.360	<0.250	<0.019	<1	<1	<1	<1	<1	<0.360	<0.250	<0.019	<1	<1
Cyclohexane	ug/L	NC	<1	<1	<0.460	<0.380	<0.11	<1	<1	<1	<1	<1	<0.460	<0.380	<0.11	<1	<1
Dibromochloromethane	ug/L	50	<1	<1	<0.360	<0.240	<0.031	<1	<1	<1	<1	<1	<0.360	<0.240	<0.031	<1	<1
Dichlorodifluoromethane	ug/L	5	<1	<1	<0.420	<0.290	<0.058	<1	<1	<1	<1	<1	<0.420	<0.290	<0.058	<1	<1
Ethylbenzene	ug/L	5	<1	<1	<0.340	<0.220	<0.011	<1	<1	<1	<1	<1	<0.340	<0.220	<0.011	<1	<1
Isopropylbenzene	ug/L	5	<1	<1	<0.390	<0.210	<0.014	<1	<1	<1	<1	<1	<0.390	<0.210	<0.014	<1	<1
Methyl acetate	ug/L	NC	<1	<1	<0.350	<0.220	<0.15	<1	<1	<1	<1	<1	<0.350	<0.220	<0.15	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<1	<1	<0.380	<0.240	<0.039	<1	<1	<1	<1	<1	<0.380	<0.240	<0.039	<1	<1
Methylcyclohexane	ug/L	NC	<1	<1	<0.460	<0.360	<0.070	<1	<1	<1	<1	<1	<0.460	<0.360	<0.070	<1	<1
Methylene chloride	ug/L	5	<1	<1	<1.98	<1.98	<0.10	<1	<1	<1	<1	<1	<1.98	<1.98	<0.10	<1	<1
Styrene	ug/L	5	<1	<1	<0.330	<0.250	<0.016	<1	<1	<1	<1	<1	<0.330	<0.250	<0.016	<1	<1
Tetrachloroethene	ug/L	5	<1	<1	**26.2**	**9.53**	**14**	**57**	**71**	**47**	**32**	**34**	**24.7**	**16**	**6**	**7**	3
Toluene	ug/L	5	<1	<1	<0.390	<0.270	<0.17	<1	<1	<1	<1	<1	<0.390	<0.270	<0.17	<1	0.22 J
trans-1,2-Dichloroethene	ug/L	5	<1	<1	<0.550	<0.350	<0.072	<1	<1	<1	<1	<1	<0.550	<0.350	<0.072	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4	<1	<1	<0.320	<0.220	<0.027	<1	<1	<1	<1	<1	<0.320	<0.220	<0.027	<1	<1
Trichloroethene	ug/L	5	<1	<1	<0.550	<0.270	<0.10	<1	<1	0.28 J	<1	<1	**6.71**	2.81	3	4	3
Trichlorofluoromethane	ug/L	5	<1	<1	<0.660	<0.450	<0.13	<1	<1	<1	<1	<1	<0.660	<0.450	<0.13	<1	<1
Vinyl Chloride	ug/L	2	<1	<1	<0.460	<0.290	<0.066	<1	<1	<1	<1	<1	<0.460	<0.290	<0.066	<1	<1
Xylenes (Total)	ug/L	5	<3	<3	<0.630	<0.690	<0.041	<3	<3	<3	<3	<3	<0.630	<0.690	<0.041	<3	<3
Total VOCs	ug/L	NA	---	2 J	26.2	9.53	14	63.19 J	71.22 J	48.85 J	32	35.79 J	33.1 J	19.7 J	6	18.07 J	6.94 J

Notes:

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ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

* = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-7SB	MW-7SB	MW-7SB	MW-8	MW-8	MW-8	DUP (MW-8)	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8SB	MW-8SB	MW-8SB
			Screen Interval (ft above msl):	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7
			Date Sampled:	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/20/2011	4/30/2012	6/10/2013	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/20/2011	4/30/2012	6/10/2013
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																	
1,1,1-Trichloroethane	ug/L	5		<1	<1	<1	<0.350	<0.330	<0.27	<1.4	<1	<1	<1	<1	<1	<0.700	<0.330	<1.4
1,1,2,2-Tetrachloroethane	ug/L	5		<1	<1	<1	<0.310	<0.320	<0.27	<1.3	<1	<1	<1	<1	<1	<0.620	<0.320	<1.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<1	<1	<1	<0.440	<0.420	<0.46	<2.3	<1	<1	<1	<1	<1	<0.880	<0.420	<2.3
1,1,2-Trichloroethane	ug/L	1		<1	<1	<1	<0.360	<0.220	<0.34	**7**	<1	<1	<1	<1	<1	<0.720	<0.220	<1.7
1,1-Dichloroethane	ug/L	5		<1	<1	<1	<0.430	<0.260	<0.15	<0.73	<1	<1	<1	<1	<1	<0.860	<0.260	<0.73
1,1-Dichloroethene	ug/L	5		<1	<1	<1	<0.710	<0.410	<0.27	<1.3	<1	<1	<1	<1	<1	<1.42	<0.410	<1.3
1,2,3-Trichlorobenzene	ug/L	5		<1	<1	<1	<0.420	<0.210	<0.25	<1.2	<1	<1	<1	<1	<1	<0.840	<0.210	<1.2
1,2,4-Trichlorobenzene	ug/L	5		<1	<1	<1	<0.390	<0.200	<0.24	<1.2	<1	<1	<1	<1	<1	<0.780	<0.200	<1.2
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.05	<0.05	<0.02	<0.00855	<0.00855	<0.0080	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02	<0.00855	<0.00855	<0.0080
1,2-Dibromoethane (EDB)	ug/L	0.0006		<1	<1	<1	<0.00855	<0.00855	<0.12	<0.61	<1	<1	<1	<1	<1	<0.00855	<0.00855	<0.61
1,2-Dichlorobenzene	ug/L	3		<1	<1	<1	<0.360	<0.230	<0.13	<0.67	<1	<1	<1	<1	<1	<0.720	<0.230	<0.67
1,2-Dichloroethane (EDC)	ug/L	0.6		<1	<1	<1	<0.420	<0.200	<0.17	<0.86	<1	<1	<1	<1	<1	<0.840	<0.200	<0.86
1,2-Dichloropropane	ug/L	1		<1	<1	<1	<0.520	<0.250	<0.18	<0.91	<1	<1	<1	<1	<1	<1.04	<0.250	<0.91
1,3-Dichlorobenzene	ug/L	3		<1	<1	<1	<0.420	<0.230	<0.20	<1.0	<1	<1	<1	<1	<1	<0.840	<0.230	<1.0
1,4-Dichlorobenzene	ug/L	3		<1	<1	<1	<0.330	<0.230	<0.18	<0.90	<1	<1	<1	<1	<1	<0.660	<0.230	<0.90
1,4-Dioxane	ug/L	NC		<5	<3	<1	<22.5 R	<0.301	<0.97	<0.97	<5	<5	<5	<3	<1	<45.1 R	<0.301	<0.97
2-Butanone (MEK)	ug/L	50		<10	<10	0.56 J	<0.630	<0.550	6.3 J	<16	0.75 J	<10	<10	<10	<10	<1.26	<0.550	<16
2-Hexanone	ug/L	50		<10	<10	<10	<0.260	<0.370	<0.19	<0.94	<10	<10	<10	<10	<10	<0.520	<0.370	<0.94
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<10	<10	<10	<0.510	<0.350	<0.35	<1.8	<10	<10	<10	<10	<10	<1.02	<0.350	<1.8
Acetone	ug/L	50		1.43 J	<10	3.06 J	<0.870	<0.280	<4.0	<20	5.26 J	<10	1.53 J	<10	1.2 J	<1.74	<0.280	<20
Benzene	ug/L	1		<1	<1	<1	<0.430	<0.250	<0.11	<0.56	<1	<1	<1	<1	<1	<0.860	<0.250	<0.56
Bromochloromethane	ug/L	5		<1	<1	<1	<0.470	<0.300	<0.36	<1.8	<1	<1	<1	<1	<1	<0.940	<0.300	<1.8
Bromodichloromethane	ug/L	50		<1	<1	<1	<0.350	<0.260	<0.19	<0.96	<1	<1	<1	<1	<1	<0.700	<0.260	<0.96
Bromoform	ug/L	50		<1	<1	<1	<0.260	<0.460	<0.35	<1.8	<1	<1	<1	<1	<1	<0.520	<0.460	<1.8
Bromomethane	ug/L	5		<1	<1	<1	<0.510	<0.250	<0.18	<0.92	<1	<1	<1	<1	<1	<1.34	<0.250	<0.92
Carbon disulfide	ug/L	NC		<1	<1	<1	<0.670	<0.300	<0.13	<0.63	<1	<1	<1	<1	<1	<1.00	<0.300	<0.63
Carbon tetrachloride	ug/L	5		<1	<1	<1	<0.500	<0.360	<0.19	<0.94	<1	<1	<1	<1	<1	<0.800	<0.360	<0.94
Chlorobenzene	ug/L	5		<1	<1	<1	<0.400	<0.220	<0.16	<0.78	<1	<1	<1	<1	<1	<0.960	<0.220	<0.78
Chloroethane	ug/L	5		<1	<1	<1	<0.480	<0.360	<0.21	<1.1	<1	<1	<1	<1	<1	<1.56	<0.360	<1.1
Chloroform	ug/L	7		0.22 J	<1	<1	<0.340	<0.220	<0.15	<0.75	<1	<1	<1	<1	<1	2.23	<0.220	<0.75
Chloromethane	ug/L	5		<1	<1	<1	<0.350	<0.280	<0.20	<0.98	<1	<1	<1	<1	<1	<0.700	<0.280	<0.98
cis-1,2-Dichloroethene	ug/L	5		<1	0.29 J	<1	2.21	**8.56**	**5**	4.8 J	2	**5**	2	**5**	2	**7.32**	**3.98**	4.4 J
cis-1,3-Dichloropropene	ug/L	0.4		<1	<1	<1	<0.360	<0.250	<0.17	<0.84	<1	<1	<1	<1	<1	<0.720	<0.250	<0.84
Cyclohexane	ug/L	NC		<1	<1	<1	<0.460	<0.380	<0.32	<1.6	<1	<1	<1	<1	<1	<0.920	<0.380	<1.6
Dibromochloromethane	ug/L	50		<1	<1	<1	<0.360	<0.240	<0.20	<1.00	<1	<1	<1	<1	<1	<0.720	<0.240	<1.00
Dichlorodifluoromethane	ug/L	5		<1	<1	<1	<0.420	<0.290	<0.57	<2.9	<1	<1	<1	<1	<1	<0.840	<0.290	<2.9
Ethylbenzene	ug/L	5		<1	<1	<1	<0.340	<0.220	<0.10	<0.51	<1	<1	<1	<1	<1	<0.680	<0.220	<0.51
Isopropylbenzene	ug/L	5		<1	<1	<1	<0.390	<0.210	<0.12	<0.58	<1	<1	<1	<1	<1	<0.780	<0.210	<0.58
Methyl acetate	ug/L	NC		<1	<1	<1	<0.350	<0.220	<0.20	<1.0	<1	<1	<1	<1	<1	<0.700	<0.220	<1.0
Methyl tert-butyl ether (MTBE)	ug/L	NC		<1	<1	<1	<0.380	<0.240	<0.25	<1.2	<1	<1	<1	<1	<1	<0.760	<0.240	<1.2
Methylcyclohexane	ug/L	NC		<1	<1	<1	<0.460	<0.360	<0.13	<0.64	<1	<1	<1	<1	<1	<0.920	<0.360	<0.64
Methylene chloride	ug/L	5		<1	<1	<1	<1.98	<1.98	<0.16	<0.81	<1	<1	0.36 J	<1	<1	<3.96	<1.98	<0.81
Styrene	ug/L	5		<1	<1	<1	<0.330	<0.250	<0.13	<0.64	<1	<1	<1	<1	<1	<0.660	<0.250	<0.64
Tetrachloroethene	ug/L	5		1	0.97 J	0.86 J	**21.3**	**26.3**	1	<0.67	4	1	2	1	1	**250**	**217 D**	**265**
Toluene	ug/L	5		<1	<1	<1	<0.390	<0.270	<0.17	<0.83	<1	<1	<1	<1	<1	<0.780	<0.270	<0.83
trans-1,2-Dichloroethene	ug/L	5		<1	<1	<1	<0.550	<0.350	0.26 J	<0.72	0.22 J	0.31 J	0.26 J	0.30 J	0.20 J	<1.10	<0.350	<0.72
trans-1,3-Dichloropropene	ug/L	0.4		<1	<1	<1	<0.320	<0.220	<0.20	<1.0	<1	<1	<1	<1	<1	<0.640	<0.220	<1.0
Trichloroethene	ug/L	5		2	2	0.62 J	0.598 J	<0.270	0.38 J	**9**	0.42 J	0.35 J	0.26 J	0.49 J	0.24 J	**8.99**	**9.22**	**10**
Trichlorofluoromethane	ug/L	5		<1	<1	<1	<0.660	<0.450	<0.28	<1.4	<1	<1	<1	<1	<1	<1.32	<0.450	<1.4
Vinyl Chloride	ug/L	2		<1	<1	<1	**2.67**	**3.34**	<0.24	<1.2	**16**	**14**	**17**	**12**	**20**	<0.920	<0.290	<1.2
Xylenes (Total)	ug/L	5		<3	<3	<3	<0.630	<0.690	<0.58	<2.9	<3	<3	<3	<3	<3	<1.26	<0.690	<2.9
Total VOCs	ug/L	NA		4.65 J	3.26 J	5.1 J	26.8 J	39.5	5	20.8 J	28.65 J	20.66 J	23.41 J	18.79 J	24.64 J	269	230	275

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		Well ID:	MW-8SB	MW-8SB	MW-8SB	MW-8SB	MW-8SB	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9SB	MW-9SB
		Screen Interval (ft above msl):	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	144.8 - 155.8	144.8 - 155.8
		Date Sampled:	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/20/2011	5/1/2012	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/20/2011	5/2/2012
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards															
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																
1,1,1-Trichloroethane	ug/L	5	<5	<1	<10	<5	<10	<0.350	<0.330	<0.27	<1	<1	<1	<1	<1	<0.350	<0.330
1,1,2,2-Tetrachloroethane	ug/L	5	<5	<1	<10	<5	<10	<0.310	<0.320	<0.27	<1	<1	<1	<1	<1	<0.310	<0.320
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<5	<1	<10	<5	<10	<0.440	<0.420	<0.46	<1	<1	<1	<1	<1	<0.440	<0.420
1,1,2-Trichloroethane	ug/L	1	<5	<1	<10	<5	<10	<0.360	<0.220	<0.34	<1	<1	<1	<1	<1	<0.360	<0.220
1,1-Dichloroethane	ug/L	5	<5	<1	<10	<5	<10	<0.430	<0.260	<0.15	<1	<1	<1	<1	<1	<0.430	<0.260
1,1-Dichloroethene	ug/L	5	<5	<1	<10	<5	<10	<0.710	<0.410	<0.27	<1	<1	<1	<1	<1	<0.710	<0.410
1,2,3-Trichlorobenzene	ug/L	5	<5	<1	<10	<5	<10	<0.420	<0.210	<0.25	<1	<1	<1	<1	<1	<0.420	<0.210
1,2,4-Trichlorobenzene	ug/L	5	<5	<1	<10	<5	<10	<0.390	<0.200	<0.24	<1	<1	<1	<1	<1	<0.390	<0.200
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.05	<0.05	<0.05	<0.05	<0.02	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02	<0.00855	<0.00855
1,2-Dibromoethane (EDB)	ug/L	0.0006	<5	<1	<10	<5	<10	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<0.00855	<0.00855
1,2-Dichlorobenzene	ug/L	3	<5	<1	<10	<5	<10	<0.360	<0.230	<0.13	<1	<1	<1	<1	<1	<0.360	<0.230
1,2-Dichloroethane (EDC)	ug/L	0.6	<5	<1	<10	<5	<10	<0.420	<0.200	<0.17	<1	<1	<1	<1	<1	<0.420	<0.200
1,2-Dichloropropane	ug/L	1	<5	<1	<10	<5	<10	<0.520	<0.250	<0.18	<1	<1	<1	<1	<1	<0.520	<0.250
1,3-Dichlorobenzene	ug/L	3	<5	<1	<10	<5	<10	<0.420	<0.230	<0.20	<1	<1	<1	<1	<1	<0.420	<0.230
1,4-Dichlorobenzene	ug/L	3	<5	<1	<10	<5	<10	<0.330	<0.230	<0.18	<1	<1	<1	<1	<1	<0.330	<0.230
1,4-Dioxane	ug/L	NC	<5	<5	<5	<3	<1	<22.5 R	<0.301	<0.97	<5	<5	<5	<3	<1	<22.5 R	<0.301
2-Butanone (MEK)	ug/L	50	<50	<10	<100	1.7 J	<100	<0.630	<0.550	3.7 J	1.09 J	<10	<10	<10	<10	<0.630	<0.550
2-Hexanone	ug/L	50	<50	<10	<100	<50	<100	<0.260	<0.370	<0.19	<10	<10	<10	<10	<10	<0.260	<0.370
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<50	<10	<100	<50	<100	<0.510	<0.350	<0.35	<10	<10	<10	<10	<10	<0.510	<0.350
Acetone	ug/L	50	6.9 J	<10	<100	<50	<100	<0.870	<0.280	<4.0	5.10 J	<10	1.60 J	<10	2.63 J	<0.870	<0.280
Benzene	ug/L	1	<5	<1	<10	<5	<10	<0.430	<0.250	<0.11	<1	<1	<1	<1	<1	**2**	<0.250
Bromochloromethane	ug/L	5	<5	<1	<10	<5	<10	<0.470	<0.300	<0.36	<1	<1	<1	<1	<1	<0.470	<0.300
Bromodichloromethane	ug/L	50	<5	<1	<10	<5	<10	<0.350	<0.260	<0.19	<1	<1	<1	<1	<1	<0.350	<0.260
Bromoform	ug/L	50	<5	<1	<10	<5	<10	<0.260	<0.460	<0.35	<1	<1	<1	<1	<1	<0.260	<0.460
Bromomethane	ug/L	5	<5	<1	<10	<5	<10	<0.670	<0.250	<0.18	<1	<1	<1	<1	<1	<0.670	<0.250
Carbon disulfide	ug/L	NC	<5	<1	<10	<5	<10	<0.500	<0.300	<0.13	<1	<1	<1	<1	<1	<0.500	<0.300
Carbon tetrachloride	ug/L	5	<5	<1	<10	<5	<10	<0.400	<0.360	<0.19	<1	<1	<1	<1	<1	<0.400	<0.360
Chlorobenzene	ug/L	5	<5	<1	<10	<5	<10	<0.480	<0.220	<0.16	<1	<1	<1	<1	<1	<0.480	<0.220
Chloroethane	ug/L	5	<5	<1	<10	<5	<10	<0.780	<0.360	<0.21	<1	<1	<1	<1	<1	<0.780	<0.360
Chloroform	ug/L	7	<5	5	<10	<5	<10	**9.28**	<0.220	<0.15	<1	<1	<1	<1	<1	3.81	0.563 J
Chloromethane	ug/L	5	<5	<1	<10	<5	<10	<0.350	<0.280	<0.20	<1	<1	<1	<1	<1	<0.350	<0.280
cis-1,2-Dichloroethene	ug/L	5	**9**	<1	**10**	**10**	**8.3 J**	<0.380	<0.300	<0.21	<1	<1	<1	<1	<1	1.55	1.14
cis-1,3-Dichloropropene	ug/L	0.4	<5	<1	<10	<5	<10	<0.360	<0.250	<0.17	<1	<1	<1	<1	<1	<0.360	<0.250
Cyclohexane	ug/L	NC	<5	<1	<10	<5	<10	<0.460	<0.380	<0.32	<1	<1	<1	<1	<1	<0.460	<0.380
Dibromochloromethane	ug/L	50	<5	<1	<10	<5	<10	<0.360	<0.240	<0.20	<1	<1	<1	<1	<1	<0.360	<0.240
Dichlorodifluoromethane	ug/L	5	<5	<1	<10	<5	<10	<0.420	<0.290	<0.57	<1	<1	<1	<1	<1	<0.420	<0.290
Ethylbenzene	ug/L	5	<5	<1	<10	<5	<10	<0.340	<0.220	<0.10	<1	<1	<1	<1	<1	<0.340	<0.220
Isopropylbenzene	ug/L	5	<5	<1	<10	<5	<10	<0.390	<0.210	<0.12	<1	<1	<1	<1	<1	<0.390	<0.210
Methyl acetate	ug/L	NC	<5	<1	<10	<5	<10	<0.350	<0.220	<0.20	<1	<1	<1	<1	<1	<0.350	<0.220
Methyl tert-butyl ether (MTBE)	ug/L	NC	<5	<1	<10	<5	<10	<0.380	<0.240	<0.25	<1	<1	<1	<1	<1	<0.380	<0.240
Methylcyclohexane	ug/L	NC	<5	<1	<10	<5	<10	<0.460	<0.360	<0.13	<1	<1	<1	<1	<1	<0.460	<0.360
Methylene chloride	ug/L	5	<5	<1	<10	<5	<10	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	<1.98	<1.98
Styrene	ug/L	5	<5	<1	<10	<5	<10	<0.330	<0.250	<0.13	<1	<1	<1	<1	<1	<0.330	<0.250
Tetrachloroethene	ug/L	5	**292**	3	**280**	**359**	**240**	<0.470	<0.330	0.18 J	<1	0.38 J	<1	0.25 J	<1	1.23	1.09
Toluene	ug/L	5	<5	<1	<10	<5	<10	<0.390	<0.270	<0.17	<1	<1	<1	<1	<1	<0.390	<0.270
trans-1,2-Dichloroethene	ug/L	5	<5	<1	<10	<5	<10	<0.550	<0.350	<0.14	<1	<1	<1	<1	<1	<0.550	<0.350
trans-1,3-Dichloropropene	ug/L	0.4	<5	<1	<10	<5	<10	<0.320	<0.220	<0.20	<1	<1	<1	<1	<1	<0.320	<0.220
Trichloroethene	ug/L	5	**12**	<1	10	**14**	**10**	<0.550	<0.270	<0.29	<1	<1	<1	<1	<1	<0.550	<0.270
Trichlorofluoromethane	ug/L	5	<5	<1	<10	<5	<10	<0.660	<0.450	<0.28	<1	<1	<1	<1	<1	<0.660	<0.450
Vinyl Chloride	ug/L	2	<5	<1	<10	<5	<10	<0.460	<0.290	<0.24	<1	<1	<1	<1	<1	<0.460	<0.290
Xylenes (Total)	ug/L	5	<20	<3	<30	<20	<30	<0.630	<0.690	<0.58	<3	<3	<3	<3	<3	<0.630	<0.690
Total VOCs	ug/L	NA	319.9 J	8	300	384.7 J	258.3 J	9.28	---	---	6.19 J	0.38 J	1.60 J	0.25 J	2.63 J	8.59	2.79 J

Notes:

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ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB
			Screen Interval (ft above msl):	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8
			Date Sampled:	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**								
1,1,1-Trichloroethane	ug/L	5		<0.27	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5		<0.27	<1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<0.46	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1		<0.34	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5		<0.15	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5		<0.27	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5		<0.25	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5		<0.24	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02
1,2-Dibromoethane (EDB)	ug/L	0.0006		<0.12	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3		<0.13	<1	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6		<0.17	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1		<0.18	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3		<0.20	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3		<0.18	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC		<0.97	<5	<5	<5	<3	<1
2-Butanone (MEK)	ug/L	50		<3.3	0.69 J	<10	<10	<10	<10
2-Hexanone	ug/L	50		<0.19	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<0.35	<10	<10	<10	<10	<10
Acetone	ug/L	50		<4.0	4.63 J	<10	1.70 J	<10	1.29 J
Benzene	ug/L	1		<0.11	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	5		<0.36	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	50		<0.19	<1	<1	<1	<1	<1
Bromoform	ug/L	50		<0.35	<1	<1	<1	<1	<1
Bromomethane	ug/L	5		<0.18	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	NC		<0.13	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5		<0.19	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	5		<0.16	<1	<1	<1	<1	<1
Chloroethane	ug/L	5		<0.21	<1	<1	<1	<1	<1
Chloroform	ug/L	7		<0.94 J	0.88 J	0.88 J	0.86 J	0.83 J	0.61 J
Chloromethane	ug/L	5		<0.20	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5		0.36 J	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4		<0.17	<1	<1	<1	<1	<1
Cyclohexane	ug/L	NC		<0.32	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	50		<0.20	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5		<0.57	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	5		<0.10	<1	<1	<1	<1	<1
Isopropylbenzene	ug/L	5		<0.12	<1	<1	<1	<1	<1
Methyl acetate	ug/L	NC		<0.20	<1	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC		<0.25	<1	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC		<0.13	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5		<0.16	<1	<1	<1	<1	<1
Styrene	ug/L	5		<0.13	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5		0.30 J	0.34 J	0.26 J	0.21 J	<1	<1
Toluene	ug/L	5		<0.17	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	5		<0.14	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4		<0.20	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5		<0.29	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	5		<0.28	<1	<1	<1	<1	<1
Vinyl Chloride	ug/L	2		<0.24	<1	<1	<1	<1	<1
Xylenes (Total)	ug/L	5		<0.58	<3	<3	<3	<3	<3
Total VOCs	ug/L	NA		0.66	6.54 J	1.14 J	2.77 J	0.83 J	1.9 J

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

* = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Figures

FIGURE 1

LEGEND

- OVERBURDEN MONITORING WELL
- SHALLOW BEDROCK MONITORING WELL
- DEEP BEDROCK MONITORING WELL
- PROPERTY BOUNDARY

SITE MANAGEMENT PLAN
BROWNFIELD CLEANUP
PROGRAM NO. C360115
1-5 HOLLAND AVENUE
WHITE PLAINS, NY

GROUNDWATER MONITORING WELL LOCATIONS

0 60 120 240
Feet

JUNE 2015
14206.60464

O'BRIEN & GERE

This document was developed in color. Reproduction in B/W may not represent the data as intended.

Appendices

Groundwater Sampling Logs

Location ID	Ground Elevation (ft amsl)	Well Casing Elevation (ft amsl)	Well Screen Interval		Well Screen Interval (ft bgs)	Hydrogeologic Screen Interval	Date Deployment	Depth to GW (PVC)	Date Retrieval/Sample Collection	Depth to GW (PVC)	Field Parameters					
			Top	Bottom							pH	Temp. (°C)	Spec. Conductance (mS/cm)	ORP (mV)	TDS (ppm)	Dis. Ox. (mg/L)
MW-1	198.9	198.61	192.7	182.7	5.9-15.9	Overburden	4/7/2016	11.34	5/4/2016	11.61	6.65	12.84	1.66	-95.4	1112	6.53
MW-2	204.7	204.39	191.4	181.4	13-23	Overburden	4/7/2016	17.36	5/4/2016	17.66	6.99	12.77	1.08	-110.7	725	8.15
MW-2DB	204.3	204.04	136.3	126.3	68-78	Deep Bedrock	4/7/2016	16.73	5/4/2016	16.98	7.48	13.43	0.33	-115.6	222	0.44
MW-2SB	203.9	203.55	158.9	148.9	45-55	Shallow Bedrock	4/7/2016	16.32	5/4/2016	16.57	6.8	13.76	0.37	-111.4	247	2.74
MW-4S	202.5	202.27	188.5	178.4	14-24	Overburden	4/7/2016	14.69	5/4/2016	15.00	10.93	14.49	1.22	-116.5	817	4.15
MW-4D	202.5	202.07	168.0	158.0	34.5-44.5	Shallow Bedrock	4/7/2016	14.5	5/4/2016	14.85	10.16	14.37	0.79	-97.6	530	18.73
MW-5	203.7	203.39	189.7	179.7	14-24	Overburden	4/7/2016	16.42	5/4/2016	16.71	7.41	11.69	0.23	-89.9	155	9.1
MW-5DB	203.4	203.07	115.4	105.4	88-98	Deep Bedrock	4/7/2016	15.78	5/4/2016	16.06	7.89	12.59	0.34	-119.3	227	0.48
MW-5SB	203.1	202.80	155.1	145.1	48-58	Shallow Bedrock	4/7/2016	15.98	5/4/2016	15.94	6.91	12.79	0.53	-100.76	358	1.26
MW-6	204.0	203.63	190.0	180.0	14-24	Overburden	4/7/2016	16.16	5/4/2016	16.09	6.47	13.48	2.98	-110	1994	6.91
MW-6SB	204.2	203.83	162.4	152.4	41.9-51.9	Shallow Bedrock	4/7/2016	16.12	5/4/2016	16.48	6.92	14.32	0.48	-97.8	318	8.72
MW-7	200.2	199.73	185.2	175.2	15-25	Overburden	4/7/2016	14.3	5/4/2016	14.5	6.03	12.75	1.38	-103.9	926	7.16
MW-7SB	200.2	199.79	156.2	146.2	44-54	Shallow Bedrock	4/7/2016	14.25	5/4/2016	14.56	6.86	12.69	2.91	-94.9	1950	2.03

Location ID	Ground Elevation (ft amsl)	Well Casing Elevation (ft amsl)	Well Screen Interval		Well Screen Interval (ft bgs)	Hydrogeologic Screen Interval	Date Deployment	Depth to GW (PVC)	Date Retrieval/Sample Collection	Depth to GW (PVC)	Field Parameters					
			Top	Bottom							pH	Temp. (°C)	Spec. Conductance (mS/cm)	ORP (mV)	TDS (ppm)	Dis. Ox. (mg/L)
MW-8	197.6	197.34	182.6	172.6	15-25	Overburden	4/7/2016	11.34	5/4/2016	11.61	6.17	12.22	4.42	-124.4	2958	2.57
MW-8SB	197.3	196.68	152.3	142.3	45-55	Shallow Bedrock	4/7/2016	10.7	5/4/2016	10.94	6.53	13.09	2.17	-130	1454	0.73
MW-9	201.3	200.80	186.3	176.3	15-25	Overburden	4/7/2016	15.35	5/4/2016	15.6	6.63	11.49	1.37	-76.1	921	4.34
MW-9SB	201.3	200.76	155.3	145.3	46-56	Shallow Bedrock	4/7/2016	16.02	5/4/2016	15.61	6.84	12.33	0.93	-96.5	624	1.53

Field Notes: Blind Duplicate Installed: MW-4D
MS/MSD Installed: MW-2SB
TDS calculation = (TDS) ppm = Conductivity mS/cm x 0.67 x 1,000

Sampler Deployment: Mark Randazzo
Sampler Retrieval: Mark Randazzo

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-1

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OLTAD

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 15.9 ft. bmp*
Depth to Water: 11.61 ft. bmp*
Length of Water Column (LWC): 4.29 ft.
PDB Midpoint: 13.75 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-2

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OLTAD

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 23 ft. bmp*
Depth to Water: 17.66 ft. bmp*
Length of Water Column (LWC): 5.34 ft.
PDB Midpoint: 20.35 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE | PDB Groundwater Sampling Log | Well ID: MW-2DB

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OHAD

Field Personnel: MAR
Date: 5/4/16
Weather: cloudy

Well Information:

Depth of Well: 78 ft. bmp*
Depth to Water: 16.98 ft. bmp*
Length of Water Column (LWC): 61.02 ft.
PDB Midpoint: 73 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE | PDB Groundwater Sampling Log | Well ID: MW-2SB

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OHAD

Field Personnel: MAR
Date: 5/4/16
Weather: cloudy

Well Information:

Depth of Well: 55 ft. bmp*
Depth to Water: 16.57 ft. bmp*
Length of Water Column (LWC): 38.4 ft.
PDB Midpoint: 50 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-4S

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OHAD

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 24 ft. bmp*
Depth to Water: 15.00 ft. bmp*
Length of Water Column (LWC): 9 ft.
PDB Midpoint: 19.5 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-4D

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OHAD

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 44.5 ft. bmp*
Depth to Water: 14.85 ft. bmp*
Length of Water Column (LWC): 29.6 ft.
PDB Midpoint: 39.5 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes: BD-1 – Blind Duplicate collected.

O'BRIEN & GERE | PDB Groundwater Sampling Log | Well ID: MW-5

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OHAD

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 24 ft. bmp*
Depth to Water: 16.71 ft. bmp*
Length of Water Column (LWC): 7.29 ft.
PDB Midpoint: 20.3 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE | PDB Groundwater Sampling Log | Well ID: _____

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: _____

Field Personnel: _____
Date: _____
Weather: _____

Well Information:

Depth of Well: _____ ft. bmp*
Depth to Water: _____ ft. bmp*
Length of Water Column (LWC): _____ ft.
PDB Midpoint: _____ ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: _____
PDB Removal Date: _____

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-5SB

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OHAD

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 58 ft. bmp* ~~1325~~
Depth to Water: 15.94 ft. bmp*
Length of Water Column (LWC): 42.1 ft.
PDB Midpoint: 53 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-5DB

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OHAD

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 98 ft. bmp* 1340
Depth to Water: 16.06 ft. bmp*
Length of Water Column (LWC): 81.9 ft.
PDB Midpoint: 93 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-6

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: 7-11 Holland Ave

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 24 ft. bmp*
Depth to Water: 16.09 ft. bmp*
Length of Water Column (LWC): 7.91 ft.
PDB Midpoint: 20 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-6SB

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: 7-11 Holland Ave

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 51.9 ft. bmp*
Depth to Water: 16.48 ft. bmp*
Length of Water Column (LWC): 35.42 ft.
PDB Midpoint: 46.9 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-7SB

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OHAD

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 54 ft. bmp*
Depth to Water: 14.56 ft. bmp*
Length of Water Column (LWC): 39.4 ft.
PDB Midpoint: 49 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-7

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OHAD

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 25 ft. bmp*
Depth to Water: 14.50 ft. bmp*
Length of Water Column (LWC): 10.5 ft.
PDB Midpoint: 20 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-8

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OHAD

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 25 ft. bmp*
Depth to Water: 11.61 ft. bmp*
Length of Water Column (LWC): 13.4 ft.
PDB Midpoint: 20 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-8SB

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OHAD

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 55 ft. bmp*
Depth to Water: 10.94 ft. bmp*
Length of Water Column (LWC): 44.1 ft.
PDB Midpoint: 50 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-9SB

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OHAD

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 56 ft. bmp*
Depth to Water: 15.61 ft. bmp*
Length of Water Column (LWC): 40.4 ft.
PDB Midpoint: 51 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-9

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: OHAD

Field Personnel: MAR
Date: 5/4/16
Weather: Cloudy

Well Information:

Depth of Well: 25 ft. bmp*
Depth to Water: 15.60 ft. bmp*
Length of Water Column (LWC): 9.4 ft.
PDB Midpoint: 20.3 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 4/7/16
PDB Removal Date: 5/4/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

Merit's Laboratory Analytical Report

Analytical Laboratory Report

Report ID: S73188.01(01)
Generated on 05/19/2016

Report to

Attention: Mark Randazzo
O'Brien & Gere Engineers
22 Sawmill River Rd
Hawthorne, NY

Phone: 781-883-6432 FAX:
Email: mark.randazzo@obg.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S73188.01-S73188.21
Project: OHAD
Collected Date: 05/04/2016
Submitted Date/Time: 05/05/2016 09:42
Sampled by: Unknown
P.O. #: 11600289

Table of Contents

Maya Murshak
Technical Director

General Report Notes

Results relate only to items tested as received by laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.
QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.
Full accreditation certificates are available upon request.
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report Narrative

There is no additional narrative for this analytical report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods

Method Summary

Method	Version
N/A	Not Applicable
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs
SW8260C	SW 846 Method 8260C Revision 3 August 2006

Sample Summary (21 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S73188.01	MW-1	Groundwater	05/04/16 15:00
S73188.02	MW-2	Groundwater	05/04/16 14:15
S73188.03	MW-2SB	Groundwater	05/04/16 14:39
S73188.04	MW-2SB MS	Groundwater	05/04/16 14:39
S73188.05	MW-2SB MSD	Groundwater	05/04/16 14:39
S73188.06	MW-2DB	Groundwater	05/04/16 14:05
S73188.07	MW-4S	Groundwater	05/04/16 15:45
S73188.08	MW-4D	Groundwater	05/04/16 15:30
S73188.09	MW-5	Groundwater	05/04/16 12:50
S73188.10	MW-5SB	Groundwater	05/04/16 12:25
S73188.11	MW-5DB	Groundwater	05/04/16 12:40
S73188.12	MW-6	Groundwater	05/04/16 10:10
S73188.13	MW-6SB	Groundwater	05/04/16 10:30
S73188.14	MW-7	Groundwater	05/04/16 12:00
S73188.15	MW-7SB	Groundwater	05/04/16 11:40
S73188.16	MW-8	Groundwater	05/04/16 12:20
S73188.17	MW-8SB	Groundwater	05/04/16 12:10
S73188.18	MW-9	Groundwater	05/04/16 11:30
S73188.19	MW-9SB	Groundwater	05/04/16 11:10
S73188.20	BD-1	Groundwater	05/04/16 00:01
S73188.21	TB-5/4/16	Liquid	05/04/16 00:01

Analytical Laboratory Report

Lab Sample ID: S73188.01
Sample Tag: MW-1
Collected Date/Time: 05/04/2016 15:00
Matrix: Groundwater
COC Reference: 097602

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 14:25	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 14:25	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.18	
Acetone	2.89	ug/L	10	SW8260C	05/17/16 14:26	JGH	0.56	J
Carbon disulfide	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.24	
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.19	
2-Butanone (MEK)	0.43	ug/L	10	SW8260C	05/17/16 14:26	JGH	0.26	J
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.31	
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.32	
Chloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.26	
Chloroform	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.21	
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 14:26	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 14:26	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.28	
Tetrachloroethene	1	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S73188.01 (continued)
Sample Tag: MW-1

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.24	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 14:26	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:26	JGH	0.20	

Analytical Laboratory Report

Lab Sample ID: S73188.02
Sample Tag: MW-2
Collected Date/Time: 05/04/2016 14:15
Matrix: Groundwater
COC Reference: 097602

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 14:43	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 14:43	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.18	
Acetone	2.04	ug/L	10	SW8260C	05/17/16 18:49	JGH	0.56	J
Carbon disulfide	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.24	
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.19	
2-Butanone (MEK)	0.34	ug/L	10	SW8260C	05/17/16 18:49	JGH	0.26	J
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.31	
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.32	
Chloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.26	
Chloroform	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.21	
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 18:49	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 18:49	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.28	
Tetrachloroethene	55	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S73188.02 (continued)
Sample Tag: MW-2

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.24	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 18:49	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:49	JGH	0.20	

Analytical Laboratory Report

Lab Sample ID: S73188.03
Sample Tag: MW-2SB
Collected Date/Time: 05/04/2016 14:39
Matrix: Groundwater
COC Reference: 097602

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 14:07	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 14:07	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.18	
Acetone	2.07	ug/L	10	SW8260C	05/17/16 13:41	JGH	0.56	J
Carbon disulfide	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.24	
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	05/17/16 13:41	JGH	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.31	
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.32	
Chloroethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.26	
Chloroform	0.36	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.21	J
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 13:41	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 13:41	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.23	
Methyl cyclohexane	0.24	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.21	J
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.28	
Tetrachloroethene	0.36	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.20	J

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S73188.03 (continued)
Sample Tag: MW-2SB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.24	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 13:41	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 13:41	JGH	0.20	

Analytical Laboratory Report

Lab Sample ID: S73188.04
Sample Tag: MW-2SB MS
Collected Date/Time: 05/04/2016 14:39
Matrix: Groundwater
COC Reference: 097602

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	0.09	ug/L	0.02	SW8260B - SIM	05/14/16 12:54	JGH		1
1,4-Dioxane	54	ug/L	1	SW8260B - SIM	05/14/16 12:54	JGH		2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	48	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.18	2
Acetone	44	ug/L	10	SW8260C	05/17/16 11:29	JGH	0.56	2
Carbon disulfide	50	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.24	2
Methyl Acetate	54	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.25	2
tert-Methyl butyl ether (MTBE)	52	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.19	2
2-Butanone (MEK)	48	ug/L	10	SW8260C	05/17/16 11:29	JGH	0.26	2
Dichlorodifluoromethane	48	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.50	2
Chloromethane	47	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.26	2
Vinyl chloride	47	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.31	2
Bromomethane	47	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.32	2
Chloroethane	47	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.34	2
Trichlorofluoromethane	47	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.33	2
1,1-Dichloroethene	46	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.27	2
Methylene chloride	48	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.29	2
trans-1,2-Dichloroethene	48	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.20	2
1,1-Dichloroethane	49	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.20	2
cis-1,2-Dichloroethene	49	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.26	2
Chloroform	49	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.21	2
Bromochloromethane	50	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.38	2
1,1,1-Trichloroethane	52	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.28	2
Cyclohexane	41	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.29	2
4-Methyl-2-pentanone (MIBK)	56	ug/L	10	SW8260C	05/17/16 11:29	JGH	0.14	2
2-Hexanone	50	ug/L	10	SW8260C	05/17/16 11:29	JGH	0.29	2
Carbon tetrachloride	48	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.20	2
Benzene	47	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.20	2
1,2-Dichloroethane	48	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.16	2
Trichloroethene	46	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.23	2
1,2-Dichloropropane	48	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.20	2
Bromodichloromethane	50	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.23	2
Methyl cyclohexane	47	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.21	2
cis-1,3-Dichloropropene	49	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.19	2
Toluene	48	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.25	2
trans-1,3-Dichloropropene	50	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.25	2
1,1,2-Trichloroethane	49	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.28	2

1-Spiked at 0.1ug/l
2-Spiked at 50ug/l

Lab Sample ID: S73188.04 (continued)
Sample Tag: MW-2SB MS

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Tetrachloroethene	41	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.20	1
Dibromochloromethane	50	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.24	1
1,2-Dibromoethane	53	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.30	1
Chlorobenzene	48	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.17	1
Ethylbenzene	49	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.26	1
Total Xylenes	149	ug/L	3	SW8260C	05/17/16 11:29	JGH	0.66	1
Styrene	51	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.18	1
Isopropylbenzene	49	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.25	1
Bromoform	52	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.22	1
1,1,2,2-Tetrachloroethane	55	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.18	1
1,3-Dichlorobenzene	50	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.24	1
1,4-Dichlorobenzene	49	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.23	1
1,2-Dichlorobenzene	49	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.28	1
1,2,4-Trichlorobenzene	51	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.19	1
1,2,3-Trichlorobenzene	50	ug/L	1	SW8260C	05/17/16 11:29	JGH	0.20	1

1-Spiked at 50ug/l

Analytical Laboratory Report

Lab Sample ID: S73188.05
Sample Tag: MW-2SB MSD
Collected Date/Time: 05/04/2016 14:39
Matrix: Groundwater
COC Reference: 097602

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	0.10	ug/L	0.02	SW8260B - SIM	05/14/16 13:12	JGH		1
1,4-Dioxane	57	ug/L	1	SW8260B - SIM	05/14/16 13:12	JGH		2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	46	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.18	2
Acetone	48	ug/L	10	SW8260C	05/17/16 11:51	JGH	0.56	2
Carbon disulfide	47	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.24	2
Methyl Acetate	54	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.25	2
tert-Methyl butyl ether (MTBE)	52	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.19	2
2-Butanone (MEK)	49	ug/L	10	SW8260C	05/17/16 11:51	JGH	0.26	2
Dichlorodifluoromethane	45	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.50	2
Chloromethane	42	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.26	2
Vinyl chloride	44	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.31	2
Bromomethane	44	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.32	2
Chloroethane	44	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.34	2
Trichlorofluoromethane	44	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.33	2
1,1-Dichloroethene	43	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.27	2
Methylene chloride	46	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.29	2
trans-1,2-Dichloroethene	46	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.20	2
1,1-Dichloroethane	47	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.20	2
cis-1,2-Dichloroethene	47	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.26	2
Chloroform	47	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.21	2
Bromochloromethane	48	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.38	2
1,1,1-Trichloroethane	49	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.28	2
Cyclohexane	38	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.29	2
4-Methyl-2-pentanone (MIBK)	57	ug/L	10	SW8260C	05/17/16 11:51	JGH	0.14	2
2-Hexanone	51	ug/L	10	SW8260C	05/17/16 11:51	JGH	0.29	2
Carbon tetrachloride	46	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.20	2
Benzene	45	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.20	2
1,2-Dichloroethane	47	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.16	2
Trichloroethene	44	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.23	2
1,2-Dichloropropane	47	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.20	2
Bromodichloromethane	48	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.23	2
Methyl cyclohexane	44	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.21	2
cis-1,3-Dichloropropene	47	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.19	2
Toluene	46	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.25	2
trans-1,3-Dichloropropene	49	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.25	2
1,1,2-Trichloroethane	48	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.28	2

1-Spiked at 0.1ug/l
2-Spiked at 50ug/l

Lab Sample ID: S73188.05 (continued)
Sample Tag: MW-2SB MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Tetrachloroethene	38	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.20	1
Dibromochloromethane	50	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.24	1
1,2-Dibromoethane	53	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.30	1
Chlorobenzene	47	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.17	1
Ethylbenzene	48	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.26	1
Total Xylenes	145	ug/L	3	SW8260C	05/17/16 11:51	JGH	0.66	1
Styrene	50	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.18	1
Isopropylbenzene	48	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.25	1
Bromoform	52	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.22	1
1,1,2,2-Tetrachloroethane	56	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.18	1
1,3-Dichlorobenzene	47	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.24	1
1,4-Dichlorobenzene	47	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.23	1
1,2-Dichlorobenzene	48	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.28	1
1,2,4-Trichlorobenzene	50	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.19	1
1,2,3-Trichlorobenzene	50	ug/L	1	SW8260C	05/17/16 11:51	JGH	0.20	1

1-Spiked at 50ug/l

Lab Sample ID: S73188.06
Sample Tag: MW-2DB
Collected Date/Time: 05/04/2016 14:05
Matrix: Groundwater
COC Reference: 097602

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 15:01	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 15:01	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.18	
Acetone	Not detected	ug/L	10	SW8260C	05/17/16 14:48	JGH	0.56	
Carbon disulfide	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.24	
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	05/17/16 14:48	JGH	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.31	
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.32	
Chloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.26	
Chloroform	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.21	
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 14:48	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 14:48	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.28	
Tetrachloroethene	3	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.20	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.24	

Lab Sample ID: S73188.06 (continued)
Sample Tag: MW-2DB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 14:48	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:48	JGH	0.20	

Lab Sample ID: S73188.07
Sample Tag: MW-4S
Collected Date/Time: 05/04/2016 15:45
Matrix: Groundwater
COC Reference: 097602

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 15:20	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 15:20	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	1.8	Y
Acetone	Not detected	ug/L	100	SW8260C	05/17/16 19:11	JGH	5.6	Y
Carbon disulfide	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.4	Y
Methyl Acetate	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.5	Y
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	1.9	Y
2-Butanone (MEK)	Not detected	ug/L	100	SW8260C	05/17/16 19:11	JGH	2.6	Y
Dichlorodifluoromethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	5.0	Y
Chloromethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.6	Y
Vinyl chloride	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	3.1	Y
Bromomethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	3.2	Y
Chloroethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	3.4	Y
Trichlorofluoromethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	3.3	Y
1,1-Dichloroethene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.7	Y
Methylene chloride	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.9	Y
trans-1,2-Dichloroethene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.0	Y
1,1-Dichloroethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.0	Y
cis-1,2-Dichloroethene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.6	Y
Chloroform	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.1	Y
Bromochloromethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	3.8	Y
1,1,1-Trichloroethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.8	Y
Cyclohexane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.9	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	100	SW8260C	05/17/16 19:11	JGH	1.4	Y
2-Hexanone	Not detected	ug/L	100	SW8260C	05/17/16 19:11	JGH	2.9	Y
Carbon tetrachloride	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.0	Y
Benzene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.0	Y
1,2-Dichloroethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	1.6	Y
Trichloroethene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.3	Y
1,2-Dichloropropane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.0	Y
Bromodichloromethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.3	Y
Methyl cyclohexane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.1	Y
cis-1,3-Dichloropropene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	1.9	Y
Toluene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.5	Y
trans-1,3-Dichloropropene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.5	Y
1,1,2-Trichloroethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.8	Y
Tetrachloroethene	400	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.0	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S73188.07 (continued)
Sample Tag: MW-4S

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.4	Y
1,2-Dibromoethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	3.0	Y
Chlorobenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	1.7	Y
Ethylbenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.6	Y
Total Xylenes	Not detected	ug/L	30	SW8260C	05/17/16 19:11	JGH	6.6	Y
Styrene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	1.8	Y
Isopropylbenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.5	Y
Bromoform	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.2	Y
1,1,2,2-Tetrachloroethane	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	1.8	Y
1,3-Dichlorobenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.4	Y
1,4-Dichlorobenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.3	Y
1,2-Dichlorobenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.8	Y
1,2,4-Trichlorobenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	1.9	Y
1,2,3-Trichlorobenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:11	JGH	2.0	Y

Y-Elevated reporting limit due to high target concentration

Analytical Laboratory Report

Lab Sample ID: S73188.08
Sample Tag: MW-4D
Collected Date/Time: 05/04/2016 15:30
Matrix: Groundwater
COC Reference: 097602

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 15:38	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 15:38	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	18	Y
Acetone	Not detected	ug/L	1,000	SW8260C	05/17/16 19:56	JGH	56	Y
Carbon disulfide	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	24	Y
Methyl Acetate	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	25	Y
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	19	Y
2-Butanone (MEK)	Not detected	ug/L	1,000	SW8260C	05/17/16 19:56	JGH	26	Y
Dichlorodifluoromethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	50	Y
Chloromethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	26	Y
Vinyl chloride	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	31	Y
Bromomethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	32	Y
Chloroethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	34	Y
Trichlorofluoromethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	33	Y
1,1-Dichloroethene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	27	Y
Methylene chloride	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	29	Y
trans-1,2-Dichloroethene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	20	Y
1,1-Dichloroethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	20	Y
cis-1,2-Dichloroethene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	26	Y
Chloroform	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	21	Y
Bromochloromethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	38	Y
1,1,1-Trichloroethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	28	Y
Cyclohexane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	29	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	1,000	SW8260C	05/17/16 19:56	JGH	14	Y
2-Hexanone	Not detected	ug/L	1,000	SW8260C	05/17/16 19:56	JGH	29	Y
Carbon tetrachloride	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	20	Y
Benzene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	20	Y
1,2-Dichloroethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	16	Y
Trichloroethene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	23	Y
1,2-Dichloropropane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	20	Y
Bromodichloromethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	23	Y
Methyl cyclohexane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	21	Y
cis-1,3-Dichloropropene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	19	Y
Toluene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	25	Y
trans-1,3-Dichloropropene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	25	Y
1,1,2-Trichloroethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	28	Y
Tetrachloroethene	1,300	ug/L	100	SW8260C	05/17/16 19:56	JGH	20	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S73188.08 (continued)
Sample Tag: MW-4D

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	24	Y
1,2-Dibromoethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	30	Y
Chlorobenzene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	17	Y
Ethylbenzene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	26	Y
Total Xylenes	Not detected	ug/L	300	SW8260C	05/17/16 19:56	JGH	66	Y
Styrene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	18	Y
Isopropylbenzene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	25	Y
Bromoform	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	22	Y
1,1,2,2-Tetrachloroethane	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	18	Y
1,3-Dichlorobenzene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	24	Y
1,4-Dichlorobenzene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	23	Y
1,2-Dichlorobenzene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	28	Y
1,2,4-Trichlorobenzene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	19	Y
1,2,3-Trichlorobenzene	Not detected	ug/L	100	SW8260C	05/17/16 19:56	JGH	20	Y

Y-Elevated reporting limit due to high target concentration

Analytical Laboratory Report

Lab Sample ID: S73188.09
Sample Tag: MW-5
Collected Date/Time: 05/04/2016 12:50
Matrix: Groundwater
COC Reference: 097602

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 15:57	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 15:57	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.18	
Acetone	2.40	ug/L	10	SW8260C	05/17/16 15:10	JGH	0.56	J
Carbon disulfide	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.24	
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.19	
2-Butanone (MEK)	0.39	ug/L	10	SW8260C	05/17/16 15:10	JGH	0.26	J
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.31	
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.32	
Chloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.26	
Chloroform	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.21	
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 15:10	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 15:10	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.28	
Tetrachloroethene	2	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S73188.09 (continued)
Sample Tag: MW-5

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.24	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 15:10	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:10	JGH	0.20	

Analytical Laboratory Report

Lab Sample ID: S73188.10
Sample Tag: MW-5SB
Collected Date/Time: 05/04/2016 12:25
Matrix: Groundwater
COC Reference: 097602

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 16:15	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 16:15	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.18	
Acetone	1.23	ug/L	10	SW8260C	05/17/16 15:31	JGH	0.56	J
Carbon disulfide	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.24	
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	05/17/16 15:31	JGH	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.26	
Vinyl chloride	0.45	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.31	J
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.32	
Chloroethane	0.43	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.34	J
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.26	
Chloroform	0.26	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.21	J
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 15:31	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 15:31	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.16	
Trichloroethene	0.35	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.23	J
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.23	
Methyl cyclohexane	0.22	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.21	J
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.28	
Tetrachloroethene	1	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S73188.10 (continued)
Sample Tag: MW-5SB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.24	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 15:31	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:31	JGH	0.20	

Lab Sample ID: S73188.11
Sample Tag: MW-5DB
Collected Date/Time: 05/04/2016 12:40
Matrix: Groundwater
COC Reference: 097602

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 16:33	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 16:33	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.18	
Acetone	2.01	ug/L	10	SW8260C	05/17/16 15:53	JGH	0.56	J
Carbon disulfide	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.24	
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	05/17/16 15:53	JGH	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.26	
Vinyl chloride	0.47	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.31	J
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.32	
Chloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.26	
Chloroform	0.26	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.21	J
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 15:53	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 15:53	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.23	
Methyl cyclohexane	0.24	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.21	J
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.28	
Tetrachloroethene	0.31	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.20	J

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S73188.11 (continued)
Sample Tag: MW-5DB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.24	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 15:53	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 15:53	JGH	0.20	

Analytical Laboratory Report

Lab Sample ID: S73188.12
Sample Tag: MW-6
Collected Date/Time: 05/04/2016 10:10
Matrix: Groundwater
COC Reference: 097602

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 16:51	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 16:51	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.18	
Acetone	0.99	ug/L	10	SW8260C	05/17/16 16:15	JGH	0.56	J
Carbon disulfide	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.24	
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	05/17/16 16:15	JGH	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.31	
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.32	
Chloroethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.26	
Chloroform	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.21	
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 16:15	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 16:15	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.28	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S73188.12 (continued)
Sample Tag: MW-6

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.24	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 16:15	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:15	JGH	0.20	

Analytical Laboratory Report

Lab Sample ID: S73188.13
Sample Tag: MW-6SB
Collected Date/Time: 05/04/2016 10:30
Matrix: Groundwater
COC Reference: 097602

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 17:09	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 17:09	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.18	
Acetone	1.68	ug/L	10	SW8260C	05/17/16 16:38	JGH	0.56	J
Carbon disulfide	0.32	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.24	J
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	05/17/16 16:38	JGH	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.31	
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.32	
Chloroethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.26	
Chloroform	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.21	
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 16:38	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 16:38	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.28	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S73188.13 (continued)
Sample Tag: MW-6SB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.24	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 16:38	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 16:38	JGH	0.20	

Analytical Laboratory Report

Lab Sample ID: S73188.14
Sample Tag: MW-7
Collected Date/Time: 05/04/2016 12:00
Matrix: Groundwater
COC Reference: 097602

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 17:27	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 17:27	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.18	
Acetone	1.79	ug/L	10	SW8260C	05/17/16 18:27	JGH	0.56	J
Carbon disulfide	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.24	
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	05/17/16 18:27	JGH	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.31	
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.32	
Chloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.26	
Chloroform	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.21	
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 18:27	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 18:27	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.28	
Tetrachloroethene	34	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S73188.14 (continued)
Sample Tag: MW-7

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.24	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 18:27	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:27	JGH	0.20	

Analytical Laboratory Report

Lab Sample ID: S73188.15
Sample Tag: MW-7SB
Collected Date/Time: 05/04/2016 11:40
Matrix: Groundwater
COC Reference: 097601

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 17:45	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 17:45	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.18	
Acetone	3.06	ug/L	10	SW8260C	05/17/16 17:00	JGH	0.56	J
Carbon disulfide	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.24	
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.19	
2-Butanone (MEK)	0.56	ug/L	10	SW8260C	05/17/16 17:00	JGH	0.26	J
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.31	
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.32	
Chloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.26	
Chloroform	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.21	
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 17:00	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 17:00	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.16	
Trichloroethene	0.62	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.23	J
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.28	
Tetrachloroethene	0.86	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.20	J

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S73188.15 (continued)
Sample Tag: MW-7SB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.24	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 17:00	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:00	JGH	0.20	

Analytical Laboratory Report

Lab Sample ID: S73188.16
Sample Tag: MW-8
Collected Date/Time: 05/04/2016 12:20
Matrix: Groundwater
COC Reference: 097601

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 18:03	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 18:03	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.18	
Acetone	1.20	ug/L	10	SW8260C	05/17/16 17:22	JGH	0.56	J
Carbon disulfide	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.24	
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	05/17/16 17:22	JGH	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.26	
Vinyl chloride	20	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.31	
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.32	
Chloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.29	
trans-1,2-Dichloroethene	0.20	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.20	J
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.20	
cis-1,2-Dichloroethene	2	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.26	
Chloroform	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.21	
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 17:22	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 17:22	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.16	
Trichloroethene	0.24	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.23	J
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.28	
Tetrachloroethene	1	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S73188.16 (continued)
Sample Tag: MW-8

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.24	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 17:22	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:22	JGH	0.20	

Analytical Laboratory Report

Lab Sample ID: S73188.17
Sample Tag: MW-8SB
Collected Date/Time: 05/04/2016 12:10
Matrix: Groundwater
COC Reference: 097601

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 18:22	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 18:22	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	1.8	Y
Acetone	Not detected	ug/L	100	SW8260C	05/17/16 19:34	JGH	5.6	Y
Carbon disulfide	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.4	Y
Methyl Acetate	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.5	Y
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	1.9	Y
2-Butanone (MEK)	Not detected	ug/L	100	SW8260C	05/17/16 19:34	JGH	2.6	Y
Dichlorodifluoromethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	5.0	Y
Chloromethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.6	Y
Vinyl chloride	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	3.1	Y
Bromomethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	3.2	Y
Chloroethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	3.4	Y
Trichlorofluoromethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	3.3	Y
1,1-Dichloroethene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.7	Y
Methylene chloride	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.9	Y
trans-1,2-Dichloroethene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.0	Y
1,1-Dichloroethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.0	Y
cis-1,2-Dichloroethene	8.3	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.6	JY
Chloroform	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.1	Y
Bromochloromethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	3.8	Y
1,1,1-Trichloroethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.8	Y
Cyclohexane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.9	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	100	SW8260C	05/17/16 19:34	JGH	1.4	Y
2-Hexanone	Not detected	ug/L	100	SW8260C	05/17/16 19:34	JGH	2.9	Y
Carbon tetrachloride	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.0	Y
Benzene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.0	Y
1,2-Dichloroethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	1.6	Y
Trichloroethene	10	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.3	Y
1,2-Dichloropropane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.0	Y
Bromodichloromethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.3	Y
Methyl cyclohexane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.1	Y
cis-1,3-Dichloropropene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	1.9	Y
Toluene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.5	Y
trans-1,3-Dichloropropene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.5	Y
1,1,2-Trichloroethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.8	Y

Y-Elevated reporting limit due to high target concentration
J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S73188.17 (continued)
Sample Tag: MW-8SB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Tetrachloroethene	240	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.0	Y
Dibromochloromethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.4	Y
1,2-Dibromoethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	3.0	Y
Chlorobenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	1.7	Y
Ethylbenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.6	Y
Total Xylenes	Not detected	ug/L	30	SW8260C	05/17/16 19:34	JGH	6.6	Y
Styrene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	1.8	Y
Isopropylbenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.5	Y
Bromoform	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.2	Y
1,1,2,2-Tetrachloroethane	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	1.8	Y
1,3-Dichlorobenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.4	Y
1,4-Dichlorobenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.3	Y
1,2-Dichlorobenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.8	Y
1,2,4-Trichlorobenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	1.9	Y
1,2,3-Trichlorobenzene	Not detected	ug/L	10	SW8260C	05/17/16 19:34	JGH	2.0	Y

Y-Elevated reporting limit due to high target concentration

Analytical Laboratory Report

Lab Sample ID: S73188.18
Sample Tag: MW-9
Collected Date/Time: 05/04/2016 11:30
Matrix: Groundwater
COC Reference: 097601

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 18:40	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 18:40	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.18	
Acetone	2.63	ug/L	10	SW8260C	05/17/16 17:43	JGH	0.56	J
Carbon disulfide	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.24	
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	05/17/16 17:43	JGH	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.31	
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.32	
Chloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.26	
Chloroform	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.21	
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 17:43	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 17:43	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.28	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S73188.18 (continued)
Sample Tag: MW-9

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.24	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 17:43	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 17:43	JGH	0.20	

Analytical Laboratory Report

Lab Sample ID: S73188.19
Sample Tag: MW-9SB
Collected Date/Time: 05/04/2016 11:10
Matrix: Groundwater
COC Reference: 097601

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 18:58	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 18:58	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.18	
Acetone	1.29	ug/L	10	SW8260C	05/17/16 18:05	JGH	0.56	J
Carbon disulfide	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.24	
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	05/17/16 18:05	JGH	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.31	
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.32	
Chloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.26	
Chloroform	0.61	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.21	J
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 18:05	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 18:05	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.28	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S73188.19 (continued)
Sample Tag: MW-9SB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.24	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 18:05	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 18:05	JGH	0.20	

Analytical Laboratory Report

Lab Sample ID: S73188.20
Sample Tag: BD-1
Collected Date/Time: 05/04/2016 00:01
Matrix: Groundwater
COC Reference: 097601

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 19:16	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 19:16	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	18	Y
Acetone	Not detected	ug/L	1,000	SW8260C	05/17/16 20:18	JGH	56	Y
Carbon disulfide	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	24	Y
Methyl Acetate	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	25	Y
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	19	Y
2-Butanone (MEK)	Not detected	ug/L	1,000	SW8260C	05/17/16 20:18	JGH	26	Y
Dichlorodifluoromethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	50	Y
Chloromethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	26	Y
Vinyl chloride	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	31	Y
Bromomethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	32	Y
Chloroethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	34	Y
Trichlorofluoromethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	33	Y
1,1-Dichloroethene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	27	Y
Methylene chloride	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	29	Y
trans-1,2-Dichloroethene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	20	Y
1,1-Dichloroethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	20	Y
cis-1,2-Dichloroethene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	26	Y
Chloroform	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	21	Y
Bromochloromethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	38	Y
1,1,1-Trichloroethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	28	Y
Cyclohexane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	29	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	1,000	SW8260C	05/17/16 20:18	JGH	14	Y
2-Hexanone	Not detected	ug/L	1,000	SW8260C	05/17/16 20:18	JGH	29	Y
Carbon tetrachloride	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	20	Y
Benzene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	20	Y
1,2-Dichloroethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	16	Y
Trichloroethene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	23	Y
1,2-Dichloropropane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	20	Y
Bromodichloromethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	23	Y
Methyl cyclohexane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	21	Y
cis-1,3-Dichloropropene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	19	Y
Toluene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	25	Y
trans-1,3-Dichloropropene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	25	Y
1,1,2-Trichloroethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	28	Y
Tetrachloroethene	1,300	ug/L	100	SW8260C	05/17/16 20:18	JGH	20	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S73188.20 (continued)
Sample Tag: BD-1

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	24	Y
1,2-Dibromoethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	30	Y
Chlorobenzene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	17	Y
Ethylbenzene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	26	Y
Total Xylenes	Not detected	ug/L	300	SW8260C	05/17/16 20:18	JGH	66	Y
Styrene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	18	Y
Isopropylbenzene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	25	Y
Bromoform	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	22	Y
1,1,2,2-Tetrachloroethane	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	18	Y
1,3-Dichlorobenzene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	24	Y
1,4-Dichlorobenzene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	23	Y
1,2-Dichlorobenzene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	28	Y
1,2,4-Trichlorobenzene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	19	Y
1,2,3-Trichlorobenzene	Not detected	ug/L	100	SW8260C	05/17/16 20:18	JGH	20	Y

Y-Elevated reporting limit due to high target concentration

Analytical Laboratory Report

Lab Sample ID: S73188.21
Sample Tag: TB-5/4/16
Collected Date/Time: 05/04/2016 00:01
Matrix: Liquid
COC Reference: 097601

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs	<2	STD Units		N/A	05/16/16 11:30	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane	Not detected	ug/L	0.02	SW8260B - SIM	05/14/16 19:34	JGH		
1,4-Dioxane	Not detected	ug/L	1	SW8260B - SIM	05/14/16 19:34	JGH		
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.18	
Acetone	Not detected	ug/L	10	SW8260C	05/17/16 14:03	JGH	0.56	
Carbon disulfide	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.24	
Methyl Acetate	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.25	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.19	
2-Butanone (MEK)	Not detected	ug/L	10	SW8260C	05/17/16 14:03	JGH	0.26	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.50	
Chloromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.26	
Vinyl chloride	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.31	
Bromomethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.32	
Chloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.34	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.33	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.27	
Methylene chloride	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.29	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.20	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.20	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.26	
Chloroform	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.21	
Bromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.38	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.28	
Cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.29	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	05/17/16 14:03	JGH	0.14	
2-Hexanone	Not detected	ug/L	10	SW8260C	05/17/16 14:03	JGH	0.29	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.20	
Benzene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.20	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.16	
Trichloroethene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.23	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.20	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.23	
Methyl cyclohexane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.21	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.19	
Toluene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.25	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.25	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.28	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.20	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.24	

Lab Sample ID: S73188.21 (continued)
Sample Tag: TB-5/4/16

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.30	
Chlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.17	
Ethylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.26	
Total Xylenes	Not detected	ug/L	3	SW8260C	05/17/16 14:03	JGH	0.66	
Styrene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.18	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.25	
Bromoform	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.22	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.18	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.24	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.23	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.28	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.19	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW8260C	05/17/16 14:03	JGH	0.20	

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 2

097602

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Mark A. Randazzo
COMPANY: O'Brien & Gere Engineers
ADDRESS: 22 Saw Mill River Rd
CITY: Hawthorne STATE: NY ZIP CODE: 10532
PHONE NO.: 781-883-6432 FAX NO.: P.O. NO.:
E-MAIL ADDRESS: Mark.Randazzo@OBG.com QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: OHAD
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☒ EDD ☐ OTHER QAPP

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES
Project Locations
☐ Detroit ☒ New York
☐ Other
Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	8260	MS/MSD
73188.01	5/4/16		MW-1	GW	3		X						X	
.02	5/4/16	1415	MW-2	GW	3		X						X	
.03/.04/.05	5/4/16	1439/1445	MW-2SB	GW	9		X						X	MS/MSD
.06	5/4/16	1405	MW-2DB	GW	3		X						X	
.07	5/4/16	1545	MW-4S	GW	3		X						X	
.08	5/4/16	1530	MW-4D	GW	3		X						X	
.09	5/4/16	1250	MW-5	GW	3		X						X	
.10	5/4/16	1225	MW-5SB	GW	3		X						X	
.11	5/4/16	1240	MW-5DB	GW	3		X						X	
.12	5/4/16	1010	MW-6	GW	3		X						X	
.13	5/4/16	1030	MW-6SB	GW	3		X						X	
.14	5/4/16	1200	MW-7	GW	3		X						X	

RELINQUISHED BY: SIGNATURE/ORGANIZATION: [signature] X Sampler DATE: 5/4/16 TIME: 1640
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: FedEx DATE: 5/5/16 TIME: 942
RECEIVED BY: SIGNATURE/ORGANIZATION: Kevin Glaze DATE: 5/6/16 TIME: 942

RELINQUISHED BY: SIGNATURE/ORGANIZATION: DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.2
F.E. No. 7829 9057 2987

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Merit Laboratories, Inc.

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C.O.C. PAGE # 2 OF 2

097601

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Mark A. Randazzo
COMPANY: O'Brien & Gere Engineers
ADDRESS: 22 Saw Mill River Rd
CITY: Hawthorne STATE: NY ZIP CODE: 10532
PHONE NO.: 781-883-6432 FAX NO.:
P.O. NO.:
E-MAIL ADDRESS: Mark.Randazzo@OBG.com
QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: OHAD
SAMPLER(S) - PLEASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☒ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☒ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	8260
73188.15	5/4/16	1140	MW-75B	GW	3		X						X
.16	5/4/16	1220	MW-8	GW	3		X						X
.17	5/4/16	1210	MW-85B	GW	3		X						X
.18	5/4/16	1130	MW-9	GW	3		X						X
.19	5/4/16	1110	MW-95B	GW	3		X						X
.20	5/4/16	—	BD-1	GW	3		X						X
.21	—	—	TB-5/4/16	L	1		X						X

RELINQUISHED BY: SIGNATURE/ORGANIZATION [signature] ☒ Sampler DATE 5/4/16 TIME 1640
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION FedEx DATE 5/5/16 TIME 942
RECEIVED BY: SIGNATURE/ORGANIZATION [signature] DATE 5/5/16 TIME 942

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL 5.2

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Data Usability Summary Report

MEMORANDUM

TO:	Mark Randazzo	cc:	GA Swenson
FROM:	KA Storne		
RE:	Data Usability Summary Report for 1-5 Holland Avenue Site Sampling Performed May 2016		
FILE:	14206/63124		
DATE:	August 2, 2016		

This Data Usability Summary Report (DUSR) presents the results of data validation performed for groundwater samples collected by O'Brien & Gere Engineers, Inc. (OBG) in May 20106 in accordance with the *Site Management Plan*, *BCP No. C360115, 1-5 Holland Avenue, White Plains, New York* (SMP; OBG December 2014).

Merit Laboratories, Inc. (Merit) of East Lansing, Michigan performed the laboratory analyses for the sampling event. The laboratory packages contain summary forms for quality control analysis and supportive raw data.

The analysis performed for this sampling event is summarized in Table 1.

Table 1. ***Analytical Methods and References***

Parameter	Method	Reference
Volatile Organic Compounds (VOCs)	USEPA Method 8260B/8260C/SIM	1

Note:

1. United States Environmental Protection Agency (USEPA). 2006. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846,* 3rd Edition. Washington D.C.

SIM indicates selected ion monitoring.

The samples submitted for data validation are summarized in attached Table 2. Table 3 presents the specific data validation approach applied to data generated for this investigation. Table 4 presents the Laboratory QA/QC analysis definitions.

Full validation was performed on the samples collected for this sampling event.

The analytical data generated for this investigation were evaluated by O'Brien & Gere using the quality assurance/quality control (QA/QC) information presented in the following document:

- OBG. 2010. *Quality Control Document (QCD), 1 – 5 Holland Avenue Site White Plains, New York*. Syracuse, New York

Data affected by excursions from the previously mentioned QA/QC criteria were qualified using the following USEPA data validation guidance and professional judgment:

- USEPA. 2014. *USEPA Region II Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C*, SOP HW-24 Revision 4.

USEPA data validation guidelines have been modified to reflect the requirements of the methods used in the analysis of samples collected for this sampling event. Qualifiers were applied to data that failed to meet the quality control criteria presented in the USEPA methods and the QCD.

The validation included checking the following parameters:

- QCD compliance
- Chain-of-custody record
- Sample collection
- Holding times

- Calibrations
- Blank analysis
- Surrogate results
- Matrix spike/ matrix spike duplicate (MS/MSD) analysis
- Laboratory control sample (LCS) analysis
- Internal standards performance
- Field duplicate analysis
- Gas chromatography/mass spectrometry (GC/MS) instrument performance check
- Target analyte quantitation, identification, and quantitation limits (QLs); and
- Documentation completeness.

The following sections of this report present the results of the comparison of the analytical data to the QA/QC criteria specified above. Based on the QA/QC information review, an overall evaluation of data usability is also presented in the final section.

VOLATILE ORGANIC COMPOUND DATA EVALUATION SUMMARY

The following QA/QC parameters were found to meet method and validation criteria or did not result in additional qualification of sample results:

- QCD compliance
- Chain-of-custody record
- Sample collection
- Holding times
- Surrogate results
- MS/MSD analysis
- Internal standards performance
- Field duplicate analysis
- GC/MS instrument performance check
- Target analyte identification

Excursions from method or validation criteria and additional observations are described below.

I. DOCUMENTATION COMPLETENESS

Supplemental laboratory documentation was required during the validation process to complete the validation task.

II. CALIBRATIONS

The following results were qualified as approximate (UJ) due to minor calibration accuracy excursions:

- Results for cyclohexane and 4-methyl-2-pentanone in samples MW-1, MW-2, MW-2SB, MW-2DB, MW-4S, MW-4D, MW-5, MW-5SB, MW-5DB, MW-6, MW-6SB, MW-7, MW-7SB, MW-8, MW-8SB, MW-9, MW-9SB, BD-1 [MW-4D] and TB-5/4/16.

III. BLANK ANALYSIS

The following results were qualified as non-detected (U) due to minor blank excursions:

- Results for acetone in samples MW-1, MW-2, MW-2SB, MW-5, MW-5SB, MW-5DB, MW-6, MW-6SB, MW-7, MW-7SB, MW-8, MW-9 and MW-9SB.

IV. LCS ANALYSIS

The following results were qualified as approximate (J) due to minor LCS accuracy and precision excursions:

- Results for acetone in samples MW-1, MW-2, MW-2SB, MW-5, MW-5SB, MW-5DB, MW-6, MW-6SB, MW-7, MW-7SB, MW-8, MW-9 and MW-9SB.

The following results were qualified as approximate (J) due to a minor LCS accuracy excursion:

- Results for 2-butanone in samples MW-1, MW-2, MW-5 and MW-7SB.

V. TARGET ANALYTE QUANTITATION AND QLS.

Samples MW-4S, MW-4D, MW-8SB and BD-1 [MW-4D] were analyzed using dilution analyses since target analyte concentrations were detected above the analytical calibration range.

Sample results detected at concentrations greater than laboratory method detection limits (MDLs) but less than laboratory QLs were qualified as approximate (J).

DATA USABILITY

The groundwater samples collected as part of the 1-5 Holland Avenue Site SMP in White Plains, New York were evaluated based on QA/QC criteria established by methods as listed in Table 1 and the data validation approach as described in Table 3.

Major deficiencies in the data generation process would have resulted in results being rejected, indicating that the rejected data are considered unusable for either quantitative or qualitative purposes. Major excursions were not identified during the validation process. Minor deficiencies in the data generation process resulted in sample data being characterized as approximate.

A discussion of the data quality with regard to the data usability parameters follows:

Precision: Data were not rejected for precision excursions.

Sensitivity: Sensitivity is established by QLs, which represent measurable concentrations of analytes which can be determined with a designated level of confidence, that meet project requirements. Dilutions were performed for analyses due to elevated concentrations of target analytes in the samples and matrix interferences.

Accuracy: Results were not rejected due to major accuracy excursions.

Representativeness: Results were not rejected due to major representativeness excursions.

Comparability: Data usability with respect to comparability is 100 percent, as standardized analytical methods, QLs, reference materials, and data deliverables were used throughout the data generation process for this project.

Completeness: Overall data usability with respect to completeness is 100 percent for the complete data set. Therefore, the data were identified as usable for qualitative and quantitative purposes.

Sample collected and submitted for data validation

Laboratory Name	Date Collected	Laboratory Identification	Client Identification	Matrix	Analysis Required
Merit	5/4/2016	S73188.01	MW-1	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.02	MW-2	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.03	MW-2SB	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.04	MW-2SB MS	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.05	MW-2SB MSD	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.06	MW-2DB	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.07	MW-4S	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.08	MW-4D	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.09	MW-5	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.10	MW-5SB	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.11	MW-5DB	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.12	MW-6	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.13	MW-6SB	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.14	MW-7	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.15	MW-7SB	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.16	MW-8	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.17	MW-8SB	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.18	MW-9	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.19	MW-9SB	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.20	BD-1 [MW-4D]	Groundwater	VOCs 8260C and 8260B SIM Analysis
Merit	5/4/2016	S73188.21	TB-5/4/16	Aqueous	VOCs 8260C and 8260B SIM Analysis

Note:

Merit indicates Merit Laboratories, Inc. of East Lansing, Michigan.
VOCs indicates volatile organic compounds.
TB indicates trip blank.
MS/MSD indicates matrix spike/matrix spike duplicate.
BD indicates field duplicate.
The location in brackets indicates the field duplicate sampling location.

O'Brien & Gere Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), SVOCs (8270C/8270D), Pesticides (8081B), PCBs (8082A), Metals (6010B), Cyanide and Inorganics by various methods	
General Validation Approach	The validation approach taken by O'Brien & Gere is a conservative one; qualifiers are applied to sample data to indicate both major and minor excursions so that data associated with any type of excursion are identified to the data user. Major excursions result in data being rejected (R), indicating that the data are considered unusable for either quantitative or qualitative purposes. Minor excursions result in sample data being qualified as approximate (J, UJ, JN) or non-detected (U) that is otherwise usable for quantitative or qualitative purposes.
	Excursions are subdivided into excursions that are within the laboratory's control and those that are out of the laboratory's control. Excursions involving laboratory control sample recovery, calibration response, method blank excursions, low or high spike recovery due to inaccurate spiking solutions or poor instrument response, holding times, interpretation errors, and quantitation errors are within the control of the laboratory. Excursions resulting from matrix spike recovery, serial dilution recovery, surrogate, and internal standard performance due to interference from the matrix of the samples are examples of those excursions that are not within the laboratory's control if the laboratory has followed proper method procedures, including performing appropriate cleanup techniques.
Applying professional judgment	USEPA data validation directs professional judgment to be used when applying qualifiers in some cases. When utilizing professional judgment, provide justification for actions taken in the associated validation notes.
Validation Parameter	O'Brien & Gere Data Validation Approach based on Region II guidelines for SW-846 methods, current as of November 2011. Since Region II guidelines available for metals apply only to the CLP method, only the general approach to applying qualifiers was utilized for metals and inorganics.
Validation Qualifiers - Organics	U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the quantitation limit (QL). J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the QL). NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. UJ - The analyte was not detected at a level greater than or equal to the QL. However, the QL is approximate and may be inaccurate or imprecise. R - The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample. EMPC- Estimated maximum possible concentration is characterized by a response with a signal to noise of at least 2.5 for both the quantitation ions but does not meet all the identification criteria specified in the method.
Cooler Temperature	Results for samples submitted for organic and inorganic analyses that are impacted by coolers that did not contain ice, or if the ice melted upon receipt and the cooler temperatures are greater than 10°C, are qualified as approximate (UJ, J). If samples are delivered to the laboratory the same day as sample collection and samples did not have sufficient time to reach 10°C, samples are not qualified, unless proper preservation was not provided for samples between sample collection and sample receipt at the laboratory. Results for samples received at ambient temperature involved in extended shipment-day issues may be rejected, applying professional judgment.
Percent Solids	Results for samples submitted for organic and inorganic analyses that are impacted by percent solids of 50 percent or less are qualified as approximate (UJ, J).

O'Brien & Gere Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), SVOCs (8270C/8270D), Pesticides (8081B), PCBs (8082A), Metals (6010B), Cyanide and Inorganics by various methods	
Holding Time	Results for samples analyzed less than two times the holding time window established in the method or the QAPP for preparation and/or analysis are qualified as approximate (UJ, J). Non-detected results for samples analyzed greater than two times the holding time window for preparation and/or analysis are rejected (R). Detected results for samples analyzed greater than two times the holding time window for preparation and/or analysis are qualified as approximate (J). The entire sample target list for a VOC sample impacted by a holding time excursion is qualified.
General Calibration Actions	Due to relative standard deviation (RSD) calibration excursions, detected results for analytes in samples associated with the calibration are qualified as approximate (J). Non-detected results associated with RSD excursions may be qualified as approximate (UJ) based on professional judgment. If the RSD calibration excursion is greater than 90, detected results for analytes in samples associated with the calibration are qualified as approximate (J) and non-detected results may be rejected (R), applying professional judgment. Due to %D calibration verification excursions, detected and non-detected results for analytes in samples associated with the calibration are qualified as approximate (J, UJ). The response direction and detection of target analytes in associated sample may be considered in applying qualifiers. For response factor excursions, detected results are qualified as approximate (J) and non-detected results are rejected (R). For initial calibration verifications (ICV) excursions, detected and non-detected results for analytes in samples associated with the calibration are qualified as approximate (J, UJ). The response direction and detection of target analytes in associated sample may be considered in applying qualifiers.
VOCs Calibration Evaluation	VOC target analytes are evaluated using the criteria of 20 percent relative standard deviation (%RSD) or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20 percent difference (%D) for target analytes. Initial calibrations and calibration verifications are also evaluated using the response factor (RF) criteria described in the method Table 4. If not listed on the Table, RF ≥0.05, RF ≥0.01 for other poor responding analytes. ICV recoveries are evaluated using laboratory control limits if available or 70 to 130%.
SVOCs Calibration Evaluation	SVOC target analytes are evaluated using the criteria of 15 %RSD (<20 %RSD Method 8270D) or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20 %D for the target analytes. Initial calibrations and calibration verifications are also evaluated using the criterion of a RF value of greater than or equal to a value of 0.05 for the target analytes using Method 8270C or Table 4 of 8270D. ICV recoveries are evaluated using laboratory control limits if available or 70 to 130%.
PCBs Calibration Evaluation	PCB target analytes are evaluated using the criteria of 20 %RSD or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 15 %D for target analytes. ICV recoveries are evaluated using laboratory control limits if available or 70 to 130%.
Pesticides Calibration Evaluation	Pesticide target analytes are evaluated using the criteria of 25% RSD for alpha BHC/delta BHC, 30%RSD for toxaphene. 30% RSD for surrogates and 20 %RSD for the remaining target analytes or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20 %D for the target analytes. ICV recoveries are evaluated using laboratory control limits if available or 70 to 130%.

O'Brien & Gere Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), SVOCs (8270C/8270D), Pesticides (8081B), PCBs (8082A), Metals (6010B), Cyanide and Inorganics by various methods	
Associating samples with Field and Laboratory QC Samples	Trip blanks are associated with samples in the same sample cooler.
	Equipment blanks (Rinsate blanks) are associated with samples collected in the same day (or sampling event) using the same sample collection equipment and decontamination solutions. When sampling equipment or decontamination solutions are changed, a new equipment blank should be collected. Each sample should be associated with one equipment blank, which is collected as close to the sample collection date/time as possible. Use professional judgment.
	Field blanks are associated with the sample containers used to collect samples. When sampling container lots are changed, a new field blank should be collected.
	Method blanks are associated with samples prepared at the same time (if preparation is required) or analyzed in the same analytical batch as the samples. Method blanks should reflect the sample matrix type (aqueous, low level solid, medium level solid).
	LCSs are associated with samples prepared at the same time (if preparation is required) or analyzed in the same analytical batch as the samples.
	MS/MSD and laboratory duplicate samples are collected in the field. The laboratory must prepare using project samples. MS/MSDs and laboratory duplicates are associated with samples prepared at the same time or close to the same time (if preparation is required) with the same matrix type.
	Field duplicates are collected in the field and are associated with samples of the same matrix type.
	In the case that insufficient QC samples are provided due to field or laboratory problems, use professional judgment to associate each sample with a QC sample that reflects the sample matrix and analysis conditions. If insufficient QC samples are available to properly associate samples, record the impact in the DV notes.
Evaluation and Action for MS/MSD, LCS, Surrogate and Laboratory Duplicate Data for VOCs and SVOCs	The laboratory control limit (CL) is used to assess MS/MSD, LCS, surrogate and laboratory duplicate data. Refer to Region II guidelines if laboratory control limits are not available.
	In the case that excursions are identified in more than one quality control sample of the same matrix within one sample delivery group, samples are batched according to sample preparation or analysis date and qualified accordingly (see batching description above).
	If percent recoveries are less than laboratory CLs but greater than 10%, non-detected and detected results are qualified as approximate (UJ, J).
	If percent recoveries are greater than laboratory CLs, detected results are qualified as approximate (J).
	If percent recoveries are less than 10%, detected results are qualified as approximate (J) and non-detected results are qualified as rejected (R).
	If RPDs for MSDs or laboratory duplicates are outside of laboratory CLs, detected results are qualified as approximate (J). Non-detected results may not be qualified, applying professional judgment.
Evaluation of MS/MSD, Surrogate, and Field Duplicate Data for VOCs and SVOCS	Qualification is performed only when both MS and MSD recoveries are outside of laboratory CLs.
	Organic data are rejected (R) in the case that both MS/MSD recoveries are less than 10%.
	Qualification is not performed if MS/MSD or surrogate recoveries are outside of laboratory CLs with an analysis that applied a dilution factor of 10 times or more, applying professional judgment.
	Qualification of data associated with MS/MSD or field duplicate excursions is limited to the un-spiked sample or the field duplicate pair, respectively.
	Field duplicate data are evaluated against relative percent difference (RPD) criteria of less than 50 percent for aqueous samples and less than 100 percent for soils when results are greater than or equal to five times the QL. When a field duplicate result is less than five times the QL, a control limit of plus or minus two times the QL (difference criterion) is applied. If RPDs or differences are outside of criterion, detected and non-detected results are qualified as approximate (UJ, J) to indicate minor excursions.

O'Brien & Gere Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), SVOCs (8270C/8270D), Pesticides (8081B), PCBs (8082A), Metals (6010B), Cyanide and Inorganics by various methods	
Evaluation and Actions for Blank Results for VOC, SVOC, Pesticides, Herbicides and PCB Data	Blanks are not qualified due to contamination of another blank. Sample results qualified as non-detected (U) are treated as hits when qualifying for surrogate or calibration excursions. The following approach is utilized for applying qualifiers, using twice the quantitation limit (QL) for methylene chloride, 2-butanone and acetone: 1. For blank results less than the QL, samples with concentrations less than the QL are reported at the QL and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL are not qualified or may apply the Blank Rule Option. 2. For blank results greater than the QL, samples with concentrations less than the QL are reported at the QL and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL and less than the blank contamination level are reported and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL and greater than or equal to the blank contamination level are not qualified or may apply the Blank Rule Option. 3. For blank results equal to the QL, sample concentrations less than the QL are reported at the QL value and qualified as non-detected (U). Samples greater than or equal to the QL are not qualified or may apply the Blank Rule Option. 4. For gross contamination in blanks (saturated peaks, interference peaks, poor baselines), all associated sample detected results are rejected (R) or qualified as non-detected (U) using professional judgment. Blank Rule Option: If methylene chloride, acetone or 2-butanone is detected in the sample at a concentration that is less than ten times the concentration in the associated blank, the sample result is qualified as "U". If other target analytes are detected in the sample at a concentration that is less than five times the concentration detected in the associated blank, the sample result is qualified as "U".
Evaluation and Actions for Surrogate Data for PCB, Pesticides and Herbicides	The following approach is utilized for applying qualifiers when both surrogate recoveries from the primary column are outside of laboratory CLs (also considering confirmation column results): 1. Detected result associated with recovery of greater than upper laboratory CLs is qualified as approximate (J). Non-detected result is not qualified. 2. Detected result associated with recovery of greater than or equal to 10% but less than the lower laboratory CL is qualified as approximate (J). Non-detected result is qualified as approximate (UJ). 3. Detected result associated with recoveries of less than 10% is qualified as approximate (J). Non-detected result is rejected (R). 4. If the sample was diluted using a dilution factor of 10 times or more, detected and non-detected results are not qualified since the surrogate concentration is diluted, using professional judgment. 5. If the retention times of the surrogates are outside of the laboratory retention time window, associated sample results are qualified as approximate (UJ, J) or rejected (R), using professional judgment.
Evaluation of LCS Data for PCB, Pesticides and Herbicides	The following approach is utilized for applying qualifiers when one LCS result (including all primary and confirmation column results) is outside of laboratory CLs for recovery: 1. Detected result associated with recovery of greater than upper laboratory CL is qualified as approximate (J). Non-detected result is not qualified. 2. Detected result associated with recovery of less than lower laboratory CL is qualified as approximate (J). 3. Non-detected result associated with a recovery of less than 10% is rejected (R).

O'Brien & Gere Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), SVOCs (8270C/8270D), Pesticides (8081B), PCBs (8082A), Metals (6010B), Cyanide and Inorganics by various methods	
Evaluation of MS/MSD Data for PCB, Pesticides and Herbicides	The following approach is utilized for applying qualifiers when both MS and MSD results are outside of laboratory CLs for recovery or RPD criteria: 1. Detected result associated with recoveries of greater than or equal to 10% is qualified as approximate (J). Non-detected result is qualified as approximate (UJ). 2. Detected result associated with recoveries of greater than the upper laboratory CL and outside of RPD criterion is qualified as approximate (J). Non-detected result is not qualified. 3. Detected result associated with recoveries of less than 10% is qualified as approximate (J). Non-detected result is rejected (R).
Evaluation of Dual Column Results for Pesticide, Herbicides and PCB Data	%D value, calculated for the positive results from the primary and confirmation chromatographic columns, is defined as the difference between the columns divided by the primary column, times 100. The following approach is utilized for applying qualifiers: 1. For detected result greater than the method detection limit (MDL) and less than the QL, with a %D greater than 50, replace result with the QL and qualify as non-detected (U). 2. For detected result greater than the QL with a %D greater than 25: a. With a %D of 26 to 70, result is qualified as approximate (J). b. With a %D of 71 to 100, result is qualified as approximate and tentative (JN). c. With a %D greater than 100 without evidence of interference, result is rejected (R) or qualified as non-detected (U), applying professional judgment. d. d. With a %D greater than 100 with evidence of interference, result is qualified as approximate (JN).
Evaluation of MS/MSD, Surrogate, and Field Duplicate Data for VOCs and SVOCS	Qualification is performed only when both MS and MSD recoveries are outside of laboratory CLs.
	Organic data are rejected (R) in the case that both MS/MSD recoveries are less than 10%.
	Qualification is not performed if MS/MSD or surrogate recoveries are outside of laboratory CLs with an analysis that applied a dilution factor of 10 times or more, applying professional judgment.
	Qualification of data associated with MS/MSD or field duplicate excursions is limited to the un-spiked sample or the field duplicate pair, respectively.
	Field duplicate data are evaluated against relative percent difference (RPD) criteria of less than 50 percent for aqueous samples and less than 100 percent for soils when results are greater than or equal to five times the QL. When a field duplicate result is less than five times the QL, a control limit of plus or minus two times the QL (difference criterion) is applied. If RPDs or differences are outside of criterion, detected and non-detected results are qualified as approximate (UJ, J) to indicate minor excursions.
Evaluation of Internal Standards for VOCs and SVOCs	Internal standard recoveries are evaluated using control limits of from 50% of the lower standard area to 100% of the upper standard area of the associated calibration verification standard. The results associated with internal standard area recoveries 25% or greater but less than 50% are qualified as approximate (J, UJ). Non-detected results associated with internal standard area recoveries less than 25% are rejected (R), using professional judgment.
Metals, Mercury, and Inorganic MS/MSD, Laboratory/Field Duplicate, Serial Dilution	Qualification of sample results associated with MS/MSD, laboratory duplicate and field duplicate excursions is performed on samples for the same matrix, within the same preparation batch, within the same SDG group. [Region II only qualifies the Field Duplicate and associated sample.]

O'Brien & Gere Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), SVOCs (8270C/8270D), Pesticides (8081B), PCBs (8082A), Metals (6010B), Cyanide and Inorganics by various methods	
Evaluation of LCS Data for Metals, Mercury, and Inorganics	To apply qualifiers if LCS result is outside of laboratory CLs or 80 to 120%: Aqueous sample: 1. Detected and non-detected result associated with a recovery of less than 50% is rejected (R). 2. Detected result associated with recovery between 50 and 79%, is qualified as approximate (J). Non-detected result is qualified as approximate (UJ). 3. Detected result associated with recoveries of between 121 and 150% is qualified as approximate (J). 4. Detected result associated with recoveries of greater than 150% is rejected (R), applying professional judgment. Soil sample: 1. Detected result associated with recovery greater than the upper CL is qualified as approximate (J). 2. Detected result associated with recovery less than the lower CL is qualified as approximate (J) and non-detected result is qualified as approximate (UJ). 3. Detected and non-detected result associated with a recovery of less than 10% is rejected (R).
Evaluation of MS/MSD Data for Metals, Mercury, and Inorganics	To apply qualifiers if either MS or MSD result is outside of laboratory CL or 75 to 125%: Aqueous sample: 1. Detected and non-detected result associated with a recovery of less than 30% is rejected (R). 2. Detected result associated with recoveries between 30 and 74%, is qualified as approximate (J). Non-detected result is qualified as approximate (UJ). 3. Detected result associated with recoveries of between 126 and 150% is qualified as approximate (J). 4. Detected result associated with recoveries of greater than 150% is rejected (R) or qualified as approximate (J) applying professional judgment. Soil sample: 1. Detected and non-detected result associated with a recovery of less than 10% is rejected (R). 2. Detected result associated with recovery of between 10 and 74%, is qualified as approximate (J). Non-detected result is qualified as approximate (UJ). 3. Detected result associated with recoveries of between 126 and 200% is qualified as approximate (J). 4. Detected result associated with recoveries of greater than 200% is rejected (R) or qualified as approximate (J) applying professional judgment.
Evaluation of Laboratory Duplicate and Field Duplicate for Metals, Mercury, and Inorganics	To apply qualifiers if laboratory duplicate results are outside of RPD or difference criteria: Aqueous sample with sample and duplicate values <u>both</u> greater than or equal to 5 times the QL: 1. Detected result greater than or equal to the QL, associated with an RPD of greater than 20 is qualified as approximate (J). Aqueous sample when <u>either</u> <u>detected</u> sample or duplicate value is less than 5 times the QL: 1. Detected results with absolute difference greater than the QL are qualified as approximate (J). Non-detected results are qualified as approximate (UJ). Soil sample for sample and duplicate values <u>both</u> greater than or equal to 5 times the QL: 1. Detected result greater than or equal to the QL, associated with an RPD of greater than or equal to 35 is qualified as approximate (J). Soil sample when <u>either detected</u> sample or duplicate value is less than 5 times the QL: 1. Sample results with absolute difference greater than 2 times the QL are qualified as approximate (J). Non-detected results are qualified as approximate (UJ).

O'Brien & Gere Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), SVOCs (8270C/8270D), Pesticides (8081B), PCBs (8082A), Metals (6010B), Cyanide and Inorganics by various methods	
Evaluation of Metals, Mercury, and Inorganic Blank Data	For calibration blanks and preparation blanks at concentrations greater than laboratory MDLs but less than or equal to QLs: 1. Concentration in the associated samples of greater than or equal to the MDLs but less than or equal to QLs are revised to the QL level and qualified as non-detected (U).
	For calibration blanks, preparation blanks and field blanks at concentrations greater than laboratory QLs: 1. Concentration in the associated samples of greater than the blank concentration and less than ten times the blank concentration are qualified as approximate (J). 2. Concentrations in the associated samples of greater than or equal to the MDLs but less than or equal to QLs are revised to the QL level and are qualified as non-detected (U). 3. Concentration in the associated samples of greater than the QLs and less than the blank concentration are rejected (R) or qualified as non-detected (U), applying professional judgment.
Evaluation of Metals, Mercury, and Inorganic Blank Data	For calibration blanks and preparation blanks at concentrations less than the negative value of the QLs: 1. Concentration in the associated samples of less than ten times the QLs are qualified as approximate (J). 2. Non-detected concentrations in the associated samples are qualified as approximate (UJ).
Evaluation of Serial Dilution Data	Serial dilution results are evaluated for data with initial sample concentrations that are greater than 50 times the MDL. If the percent difference is greater than 10%, associated sample results greater than or equal to the MDL are qualified as approximate (J). If the percent difference is greater than or equal to 100%, associated sample results greater than or equal to the MDL are rejected (R).
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Table 4. Laboratory QA/QC analyses definitions

QA/QC Term	Definition
Accuracy	The closeness or agreement of the observed value or test response to the true or acceptable reference value or the test response from a reference method. It is influenced by both random error (precision) and systematic error (bias). The terms "bias" and "precision" are often used in lieu of "accuracy".
Precision	A measure of mutual agreement between two or more individual measurements of the same property, obtained under similar conditions.
Representativeness	A measure of the degree to which data accurately and precisely characterize a population; the correspondence between the analytical result and the actual quality or condition experienced by a contaminant receptor.
Sensitivity	The capability of a method or instrument to discriminate between measurement responses representing different levels of a variable of interest.
Completeness	A measure of the amount of valid data obtained from a measurement system as compared to the planned amount, usually expressed as a percentage; also a measure of the degree to which the sampling scheme represents the available range in something, regardless of what was planned.
Detection limit	The lowest concentration or amount of the target analyte that can be determined to be different from zero by a single measurement at a stated level of probability.
Quantitation limit	The level above which numerical results may be obtained with a specified degree of confidence; the minimum concentration of an analyte in a specific matrix that can be identified and quantified above the method detection limit and within specified limits of precision and bias during routine analytical operating conditions.
Method detection limit	The minimum concentration of an analyte that undergoes preparation similar to the environmental samples and can be reported with a stated level of confidence that the analyte concentration is greater than zero.
Instrument detection limit	The lowest concentration of a metal target analyte that, when directly inputted and processed on a specific analytical instrument, produces a signal/response that is statistically distinct from the signal/response arising from equipment "noise" alone.
Gas chromatography/ mass spectrometry (GC/MS) instrument performance check	Performed to verify mass resolution, identification, and to some degree, instrument sensitivity. These criteria are not sample specific; conformance is determined using standard materials.
Control limits	The variation in a process data set expressed as plus/minus standard deviations from the mean, generally placed on a chart to indicate the upper and lower acceptable ranges of process data and to judge whether the process is in or out of statistical limitations.
Calibration	Compliance requirements for satisfactory instrument calibration are established to verify that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of analysis and calibration verifications document satisfactory maintenance and adjustment of the instrument on a day-to-day basis.

QA/QC Term	Definition
Relative Response Factor	A measure of the relative mass spectral response of an analyte compared to its internal standard. Relative Response Factors are determined by analysis of standards and are used in the calculation of concentrations of analytes in samples.
Relative standard deviation	The standard deviation divided by the mean; a unit-free measure of variability.
Correlation coefficient	A measure of the strength of the relationship between two variables.
Relative Percent Difference	Used to compare two values; the relative percent difference is based on the mean of the two values, and is reported as an absolute value, i.e., always expressed as a positive number or zero.
Percent Difference	Used to compare two values; the percent difference indicates both the direction and the magnitude of the comparison, i.e., the percent difference may be either negative, positive, or zero.
Drift	The deviation in instrument response from its set or reference value over a period of time.
Percent Recovery	The act of determining whether or not the methodology measures all of the target analytes contained in a sample.
Blanks	Several types of blanks are analyzed by the laboratory. Corrective action procedures are implemented for blank analyses if target compounds are detected at concentrations greater than the method criteria. The criteria for evaluation of blanks apply to any blank associated with a group of samples. If problems with a blank exist, data associated with the project are evaluated to determine whether or not there is an inherent variability in the data for the project or if the problem is an isolated occurrence not affecting other data.
Reagent blank	Consists of laboratory target analyte-free water and any reagents added to a sample during analysis. This type of blank is analyzed to evaluate whether contamination occurred during the analysis of the sample due to reagent contamination. A reagent blank is usually analyzed following highly contaminated samples to assess the potential for cross-contamination during analysis.
Instrument blank	Consists of clean solvent spiked with the surrogates and analyzed on each GC column and instrument used for sample analysis by GC. This type of blank is analyzed to evaluate whether contamination occurred during the analysis of the sample due to instrument contamination.
Calibration blank	Consists of acids and reagent water used to prepare metal samples for analysis. This type of blank is analyzed to evaluate whether contamination is occurring during the preparation and analysis of the sample.
Method blank	A water or soil blank that undergoes the preparation procedures applied to a sample (i.e., extraction, digestion, clean-up). These samples are analyzed to examine whether sample preparation, clean-up, and analysis techniques result in sample contamination.

QA/QC Term	Definition
Field/equipment	Collected and submitted for laboratory analysis, where appropriate. Field/equipment blanks are handled in the same manner as environmental samples. Equipment/field blanks are analyzed to assess contamination introduced during field sampling procedures.
Trip blank	Consist of samples of analyte-free water that have undergone shipment from the sampling site to the laboratory in coolers with the environmental samples submitted for volatile organic compound (VOC) analysis. Trip blanks will be analyzed for VOCs to determine if contamination has taken place during sample handling and/or shipment. Trip blanks will be utilized at a frequency of one each per cooler sent to the laboratory for VOC analysis.
Storage blank	Consists of sample vials filled with laboratory analyte-free water. The vials are stored at the laboratory with the samples collected for VOC analysis, under the same conditions as the samples. The storage blank is analyzed with the VOC samples to evaluate for contamination due to sample storage.
Internal standards performance	Compounds not found in environmental samples which are spiked into samples and quality control samples at the time of sample preparation for organic analyses. Internal standards must meet retention time and recovery criteria specified in the analytical method. Internal standards are used as the basis for quantitation of the target analytes.
Surrogate recovery	Compounds similar in nature to the target analytes but not expected to be detected in the environmental media which are spiked into environmental samples, blanks, and quality control samples prior to sample preparation for organic analyses. Surrogates are used to evaluate analytical efficiency by measuring recovery.
Laboratory control sample Matrix spike blank analyses	Standard solutions that consist of known concentrations of the target analytes spiked into laboratory analyte-free water or sand. They are prepared or purchased from a certified manufacturer from a source independent from the calibration standards to provide an independent verification of the calibration procedure. They are prepared and analyzed following the same procedures employed for environmental sample analysis to assess method accuracy independently of sample matrix effects.
Laboratory duplicate	Two or more representative portions taken from one homogeneous sample by the analyst and analyzed in the same laboratory.
Matrix	The material of which the sample is composed or the substrate containing the analyte of interest, such as drinking water, waste water, air, soil/sediment, biological material.
Matrix Spike (MS)	An aliquot of a matrix (water or soil) fortified (spiked) with known quantities of specific target analytes and subjected to the entire analytical procedure in order to indicate the appropriateness of the method for the matrix by measuring recovery.
Matrix spike duplicate (MSD)	A second aliquot of the same matrix as the matrix spike that is spiked in order to determine the precision of the method.

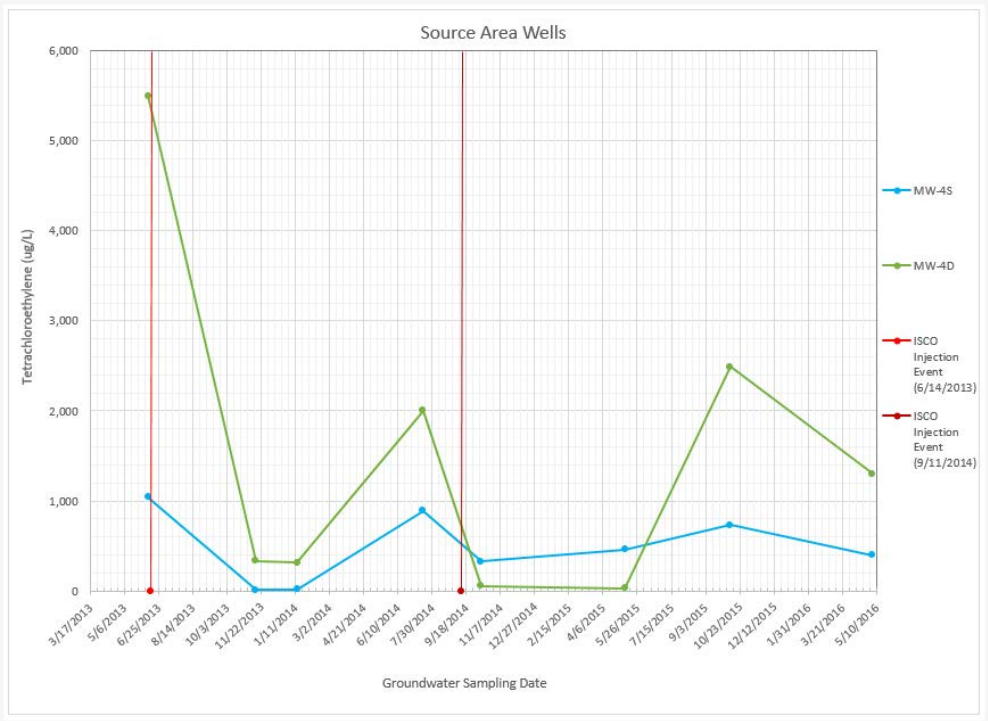
QA/QC Term	Definition
Retention time	The time a target analyte is retained on a GC column before elution. The identification of a target analyte is dependent on a target compound's retention time falling within the specified retention time window established for that compound.
Relative retention time	The ratio of the retention time of a compound to that of a standard.
Resolution	The separation between peaks on a chromatogram.
Interference	An element, compound, or other matrix effect present in a sample which disturbs the detection of a target analyte leading to inaccurate concentration results for the target analyte.
Percent Moisture	An approximation of the amount of water in a soil/sediment sample made by drying an aliquot of the sample.
Raw data	The documentation generated during sampling and analysis which includes, but is not limited to, field notes, hardcopies of electronic data, disks, un-tabulated sample results, QC sample results, printouts of chromatograms, instrument outputs, and handwritten notes.

Source O'Brien & Gere

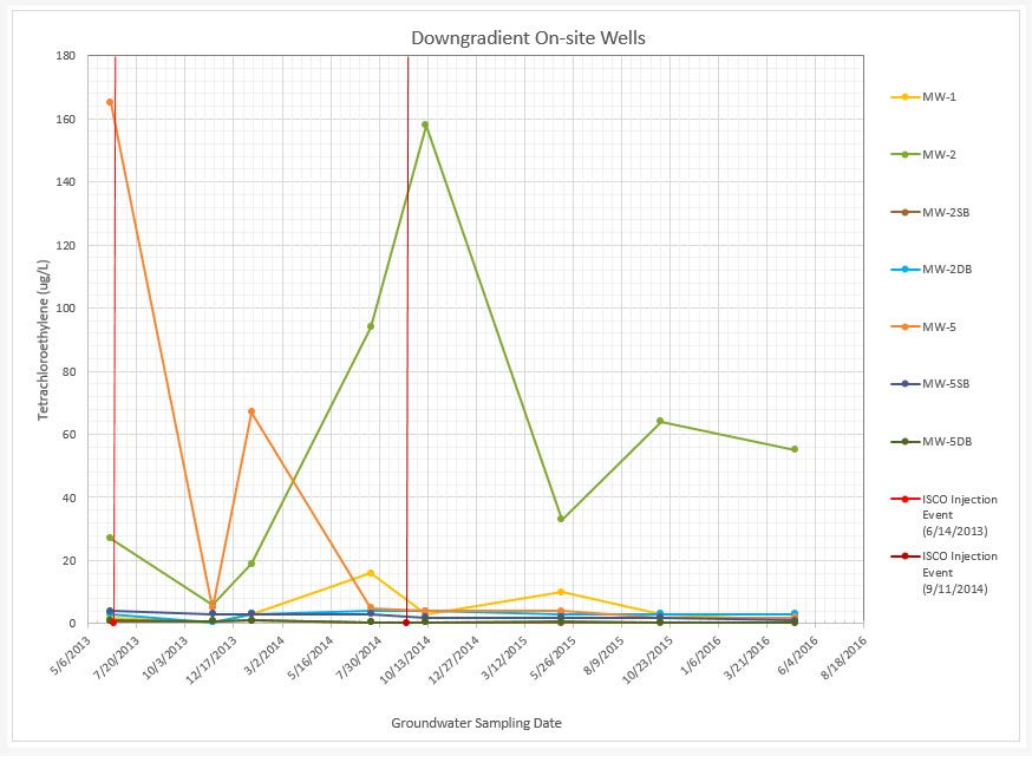
Graphical Presentation of PCE Groundwater Data

GRAPHICAL PRESENTATION OF PCE GROUNDWATER CONCENTRATIONS
BCP C360115
1-5 HOLLAND AVENUE
WHITE PLAINS, NEW YORK

SOURCE AREA WELLS

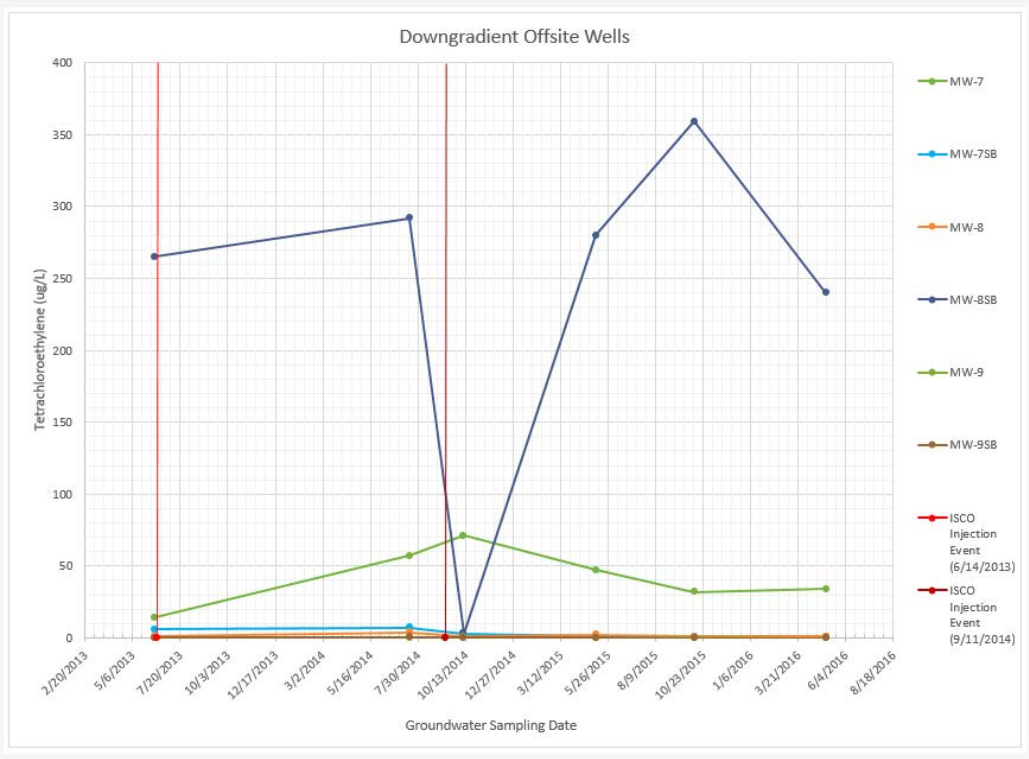


ON-SITE DOWNGRADIENT WELLS



GRAPHICAL PRESENTATION OF PCE GROUNDWATER CONCENTRATIONS
BCP C360115
1-5 HOLLAND AVENUE
WHITE PLAINS, NEW YORK

OFF-SITE DOWNGRADIENT WELLS



December 30, 2016

Kiera Thompson
Engineering Geologist
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, NY 12233-7014

RE: NYSDEC BCP No. C360115 - GW Monitoring Report, 1-5 Holland Avenue, White Plains
FILE: 14206/63124

Dear **Ms. Thompson**:

In accordance with the *Site Management Plan*, *BCP No. C360115, 1-5 Holland Avenue, White Plains, New York* (SMP; OBG December 2014), the following is the Groundwater Monitoring Report for the above referenced Brownfield site.

This report has been organized into the following sections:

- Section 1 - Background
- Section 2 - Field Activities
- Section 3 - Sample Results
- Section 4 - Remedial Action Objectives Assessment

1. BACKGROUND

As detailed in the *Remedial Investigation Report, BCP No. C360115, 1-5 Holland Avenue, White Plains, New York* (SMP; OBG, April 2014), results of groundwater sampling indicated the presence of tetrachloroethylene (PCE) in on-site monitoring wells in the source area, in on-site monitoring wells at the downgradient/sidegradient property boundary, and in off-site downgradient monitoring wells, at concentrations above the NYS Class GA groundwater standard of 5 ug/L.

The site cleanup goal for groundwater is, to the extent practicable, to meet NYS Class GA standards. The Class GA standards for the Site's Constituents of Concern (COC) are as follows:

- Tetrachloroethylene – 5 ug/L
- cis-1,2-Dichloroethylene – 5 ug/L
- Trichloroethylene – 5 ug/L
- Vinyl chloride – 2 ug/L

As detailed in the *Interim Remedial Measure Construction Completion Report*, *BCP No. C360115, 1-5 Holland Avenue, White Plains, New York* (IRM CCR; OBG, October 2014), groundwater treatment by In-situ Chemical Oxidation (ISCO) was selected to meet this goal. Two ISCO groundwater treatment injection events were conducted as part of the IRM in June 2013 and September 2014.

As detailed in the SMP, a minimum of two complete (17 wells) rounds of groundwater samples are to be conducted per year for three years prior to requesting modification to the scope and frequency of sampling. This report presents groundwater data for the second of two rounds scheduled in 2016. The purpose of the groundwater monitoring is to evaluate concentrations of the Site's COC that exceed Class GA standards, primarily PCE and associated degradation products; to assess the extent of concentration rebound following ISCO treatment; and to monitor their continued attenuation thereafter.

2. FIELD ACTIVITIES

On October 7, 2016, OBG set passive diffusion bags (PDBs) in on-site (MW-1, -2, -2S, -2D, -4S, -4D, -5, -5S, -5D) and off-site (MW-6, -6S, -7, -7S, -8, -8S, -9, -9S) groundwater monitoring wells, as depicted on **Figure 1**. PDBs were retrieved on October 26, 2016. Sampling activities were conducted in accordance with the SMP Field Activities Plan. Groundwater sampling logs and a summary of field water quality parameters are presented in **Appendix A**. Groundwater samples were submitted under chain-of-custody to Merit Laboratories, Inc. (Merit), a NYSDOH ELAP certified laboratory, for analysis of volatile organic compounds (VOCs) by USEPA Test Method 8260.

3. SAMPLE RESULTS

Groundwater analytical results for this sampling event and historical sampling events are summarized on **Table 1**. Merit's laboratory analytical report and OBG's *Data Usability Summary Report* (DUSR) for this sampling event are presented in **Appendices B and C**, respectively. These data have been entered into the NYSDEC Environmental Information Management System. A summary of groundwater analytical results are as follows:

- Upgradient Off-site Groundwater Characterization

  Consistent with prior sampling events, PCE and its degradation compounds were not detected in the upgradient overburden (MW-6) and shallow bedrock (MW-6SB) wells.

- On-site Groundwater Characterization – Source Area

  A summary table of PCE concentrations in source area groundwater for the prior three years is presented below.

Monitoring Well No.	06/10/13	1st ISCO Event	11/14/13	01/14/14	07/17/14	2nd ISCO Event	10/10/14	5/8/15	10/09/15	5/04/16	10/25/16
MW-4S	**1,040**		**10**	**21** (Blind Duplicate **21**)	**890**		**327**	**460**	**730**	**400**	**107**
MW-4D	**5,500**		**332**	**317**	**2,000** (Blind Duplicate **1,750**)		**54** (Blind Duplicate **63**)	**29** (Blind Duplicate **25**)	**2490** (Blind Duplicate **840**)	**1,300** (Blind Duplicate **1,300**)	**990** (Blind Duplicate 860)

Notes: ISCO injection events occurred June 11-14, 2013 and September 9-11, 2014.
Bold values exceed Class GA standards.
Units = ug/L, ppb

Compared to the prior sampling event, the PCE concentrations in MW-4S and 4D are within the same order of magnitude with a decrease in PCE concentration of approximately 73% and 24%, respectively. PCE degradation compounds were not detected in source area wells. The blind duplicate sample collected at MW-4D indicates a decrease in concentration of approximately 34% compared to the blind duplicate from the prior sampling event. A review of the current and historical data indicates that the concentrations of PCE have not stabilized and groundwater sampling should continue to assess trends.

- On-site Groundwater Characterization – Downgradient/Sidegradient Property Boundary

  A summary table of PCE concentrations in groundwater along the downgradient/sidegradient property boundary for the prior three years is presented below.

Monitoring Well No.	06/10/13	1st ISCO Event	11/15/13	01/14/14	07/17/14	2nd ISCO Event	10/10/14	5/8/15	10/9/15	5/4/16	10/25/16
MW-1 (Sidegradient)	2		0.39	3	**16**		3	**10**	3	1	2
MW-2 (Downgradient)	**27**		**6**	**19**	**94**		**158**	**33**	**64**	**55**	**15**
MW-2SB (Downgradient)	0.78		0.71	1	0.52		0.48	0.34	0.24	0.36	0.22
MW-2DB (Downgradient)	3		0.42	3	4		4	3	3	3	2
MW-5 (Downgradient)	**165**		**5**	**67**	**5**		4	4	2	2	**32**
MW-5SB (Downgradient)	4		3	3	3		2	2	2	1	2
MW-5DB (Downgradient)	1		0.81	0.95	0.41		0.48	0.55	0.39	0.31	0.25

Notes: ISCO injection events occurred June 11-14, 2013 and September 9-11, 2014.
Bold values exceed Class GA standards.
Units = ug/L, ppb

The most recent round of groundwater data indicates that two out of the seven property boundary wells exceeded the GA groundwater standard for PCE. Consistent with the last round of groundwater sampling, no PCE degradation compounds were detected in these wells above the GA groundwater standard.

- Downgradient Off-site Groundwater Characterization

  A summary table of PCE concentrations in downgradient groundwater for the prior three years is presented below.

Monitoring Well No.	06/10/13	1st ISCO Event	07/17/14	2nd ISCO Event	10/10/14	5/7/15	10/9/15	5/4/2016	10/25/2016
MW-7	**14**		**57**		**71**	**47**	**32**	**34**	**15**
MW-7SB	**6**		**7**		3	1	0.97	0.86	0.59
MW-8	1 (Blind Duplicate <0.67)		4		1	2	1	1	1
MW-8SB	**265**		**292**		3	**280**	**359**	**240**	**190**
MW-9	0.18		<1.0		0.38	<1.0	0.25	<1.0	0.31
MW-9SB	0.3		0.34		0.26	0.21	<1.0	<1.0	<1.0

Notes: ISCO injection events occurred June 11-14, 2013 and September 9-11, 2014.
Bold values exceed Class GA standards.
Units = ug/L, ppb

Consistent with the previous groundwater sampling event two out of the six downgradient off-site wells exceeded the GA standard for PCE in the October 2016 sampling event. PCE degradation compounds detected were primarily limited to cis-1,2-dichloroethene between non-detected to 9.6 ug/L in MW-8SB; trichloroethylene ranging between non-detected to 14.2 ug/L in MW-8SB; and vinyl chloride ranging between

non-detected and 8 ug/L in MW-8. The GA groundwater standards for cis-1,2-dichloroethene, trichloroethylene, and vinyl chloride are 5 ug/L, 5 ug/L and 2 ug/L, respectively.

4. REMEDIAL ACTION OBJECTIVES ASSESSMENT

As detailed in the *Final Engineering Report, NYSDEC Site Number: C360115, 1-5 Holland Avenue, White Plains, New York* (OBG, December 2014), the Remedial Action Objectives (RAOs) for groundwater are as follows:

- RAOs for Public Health Protection
  - Prevent ingestion of groundwater with COC concentrations exceeding drinking water standards.
  - Prevent contact with, or inhalation of volatiles, from contaminated groundwater.
- RAOs for Environmental Protection
  - Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable.
  - Prevent the discharge of COCs to surface water.
  - Remove the source of ground or surface water COCs.

Based on the groundwater analytical results collected as part of this sampling event and the institutional and engineering controls currently in-place at the site, the remedy is effective for protection of human health and the environment.

Should you have any questions or concerns regarding this matter, please feel free to contact me at (781) 883-6432.

Very truly yours,
O'BRIEN & GERE ENGINEERS, INC.

Mark A. Randazzo, CHMM, CPG, CSP
Project Manager

Attachments: Table 1 – Historical Summary of Groundwater Monitoring Data
Figure 1 – Groundwater Monitoring Well Location Map
Appendix A – Groundwater Sampling Logs
Appendix B – Merit's Laboratory Analytical Report
Appendix C – Data Usability Summary Report

cc: David Crosby – NYSDEC
Stephanie Selmer – NYSDOH
Karen Puckett – OHAD
Neal Frink, Esq. – The Frink Law Firm, LLC
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Tables

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter	Units	6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-2	MW-2	MW-2	MW-2
			Screen Interval (ft above msl):	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	182.7 - 192.7	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4
			Date Sampled:	10/19/2011	5/1/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	10/21/2011	5/2/2012	6/10/2013	11/14/2013 (Post ISCO)
			On-Site Locations															
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																	
1,1,1-Trichloroethane	ug/L	5		<0.350	<0.330	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.330	<0.27	<1
1,1,2,2-Tetrachloroethane	ug/L	5		<0.310	<0.320	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<0.310	<0.320	<0.27	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<0.440	<0.420	<0.46	<1	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.420	<0.46	<1
1,1,2-Trichloroethane	ug/L	1		<0.360	<0.220	<0.34	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.220	<0.34	<1
1,1-Dichloroethane	ug/L	5		<0.430	<0.260	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.260	<0.15	<1
1,1-Dichloroethene	ug/L	5		<0.710	<0.410	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<0.710	<0.410	<0.27	<1
1,2,3-Trichlorobenzene	ug/L	5		<0.420	<0.210	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.210	<0.25	<1
1,2,4-Trichlorobenzene	ug/L	5		<0.390	<0.200	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.200	<0.24	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.00855	<0.00855	<0.0080	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006		<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<0.00855	<0.00855	<0.12	<1
1,2-Dichlorobenzene	ug/L	3		<0.360	<0.230	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.230	<0.13	<1
1,2-Dichloroethane (EDC)	ug/L	0.6		<0.420	<0.200	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.200	<0.17	<1
1,2-Dichloropropane	ug/L	1		<0.520	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.250	<0.18	<1
1,3-Dichlorobenzene	ug/L	3		<0.420	<0.230	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.230	<0.20	<1
1,4-Dichlorobenzene	ug/L	3		<0.330	<0.230	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.230	<0.18	<1
1,4-Dioxane	ug/L	NC		<22.5 R	<0.301	<0.97	<5	<5	<5	<5	<5	<3	<1	<3	<22.5 R	<0.301	<0.97	<5
2-Butanone (MEK)	ug/L	50		<0.630	<0.550	3.4 J	<10	0.79 J	0.63 J	<10	<10	<10	0.43 J	8.3 J	<0.630	<0.550	4.7 J	<10
2-Hexanone	ug/L	50		<0.260	<0.370	<0.19	<10	<10	<10	<10	<10	<10	<10	<10	<0.260	<0.370	<0.19	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<0.510	<0.350	<0.35	<10	<10	<10	0.37 J	<10	<10	<10	<10	<0.510	<0.350	<0.35	<10
Acetone	ug/L	50		<0.870	<0.280	<4.0	1.38 J	4.24 J	2.67 J	<10	1.27 J	<10	2.89 J	18	<0.870	<0.280	<4.0	0.96 J
Benzene	ug/L	1		<0.430	<0.250	<0.11	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.250	<0.11	<1
Bromochloromethane	ug/L	5		<0.470	<0.300	<0.36	<1	<1	<1	<1	<1	<1	<1	<1	<0.470	<0.300	<0.36	<1
Bromodichloromethane	ug/L	50		<0.350	<0.260	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.260	<0.19	<1
Bromoform	ug/L	50		<0.260	<0.460	<0.35	<1	<1	<1	<1	<1	<1	<1	<1	<0.260	<0.460	<0.35	<1
Bromomethane	ug/L	5		<0.510	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<0.670	<0.250	<0.18	<1
Carbon disulfide	ug/L	NC		<0.670	<0.300	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<0.500	<0.300	<0.13	<1
Carbon tetrachloride	ug/L	5		<0.500	<0.360	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.360	<0.19	<1
Chlorobenzene	ug/L	5		<0.400	<0.220	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<0.480	<0.220	<0.16	<1
Chloroethane	ug/L	5		<0.480	<0.360	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<0.780	<0.360	<0.21	<1
Chloroform	ug/L	7		<0.340	<0.220	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.220	<0.15	<1
Chloromethane	ug/L	5		<0.350	<0.280	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.280	<0.20	<1
cis-1,2-Dichloroethene	ug/L	5		<0.380	<0.300	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.300	<0.21	<1
cis-1,3-Dichloropropene	ug/L	0.4		<0.360	<0.250	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.250	<0.17	<1
Cyclohexane	ug/L	NC		<0.460	<0.380	<0.32	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.380	<0.32	<1
Dibromochloromethane	ug/L	50		<0.360	<0.240	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.240	<0.20	<1
Dichlorodifluoromethane	ug/L	5		<0.420	<0.290	<0.57	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.290	<0.57	<1
Ethylbenzene	ug/L	5		<0.340	<0.220	<0.10	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.220	<0.10	<1
Isopropylbenzene	ug/L	5		<0.390	<0.210	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.210	<0.12	<1
Methyl acetate	ug/L	NC		<0.350	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.220	<0.20	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC		<0.380	<0.240	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.240	<0.25	<1
Methylcyclohexane	ug/L	NC		<0.460	<0.360	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.360	<0.13	<1
Methylene chloride	ug/L	5		<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1.98	<1.98	<0.16	<1
Styrene	ug/L	5		<0.330	<0.250	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.250	<0.13	<1
Tetrachloroethene	ug/L	5		**57.9**	**17.1**	2	0.39 J	3	**16**	3	**10**	3	1	2	**71.7**	**189 D**	**27**	**6**
Toluene	ug/L	5		<0.390	<0.270	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<0.390	<0.270	<0.17	<1
trans-1,2-Dichloroethene	ug/L	5		<0.550	<0.350	<0.14	<1	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.350	<0.14	<1
trans-1,3-Dichloropropene	ug/L	0.4		<0.320	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.220	<0.20	<1
Trichloroethene	ug/L	5		<0.550	<0.270	<0.29	<1	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.270	<0.29	<1
Trichlorofluoromethane	ug/L	5		<0.660	<0.450	<0.28	<1	<1	<1	<1	<1	<1	<1	<1	<0.660	<0.450	<0.28	<1
Vinyl Chloride	ug/L	2		<0.460	<0.290	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.290	<0.24	<1
Xylenes (Total)	ug/L	5		<0.630	<0.690	<0.58	<3	<3	<3	<3	<3	<3	<3	<3	<0.630	<0.690	<0.58	<3
Total VOCs	ug/L	NA		57.9	17.1	5.4 J	1.77 J	7.24 J	19.3 J	0.37 J	11.27 J	3	4.32 J	26.3	71.7	189 D	31.7 J	6.96 J

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		Well ID:	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2DB
		Screen Interval (ft above msl):	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	181.4 - 191.4	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3
		Date Sampled:	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/5/2011	10/20/2011	5/2/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units	6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards															
1,1,1-Trichloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.350	<0.330	<0.27	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.280	<0.310	<0.320	<0.27	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.440	<0.420	<0.46	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<0.570	<0.360	<0.220	<0.34	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.430	<0.260	<0.15	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.710	<0.410	<0.27	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.420	<0.210	<0.25	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.390	<0.200	<0.24	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.660	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.00855	<0.00855	<0.12	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.360	<0.230	<0.13	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.420	<0.200	<0.17	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.520	<0.250	<0.18	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.420	<0.230	<0.20	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.330	<0.230	<0.18	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC	<5	<5	<5	<5	<3	<1	<3	<20.2 R	<22.5 R	<0.301	<0.97	<5	<5	<5	<5
2-Butanone (MEK)	ug/L	50	0.69 J	0.56 J	<10	<10	<10	0.34 J	13	<0.510	<0.630	<0.550	3.4 J	<10	1.15 J	0.54 J	<10
2-Hexanone	ug/L	50	<10	<10	<10	<10	<10	<10	<10	<0.370	<0.260	<0.370	<0.19	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<10	<10	<10	<10	<10	<10	0.15 J	<0.410	<0.510	<0.350	<0.35	<10	<10	<10	<10
Acetone	ug/L	50	1.92 J	3.36 J	<10	1.39 J	<10	2.04 J	11	<0.610	<0.870	<0.280	<4.0	1.23 J	5.22 J	2.07 J	<10
Benzene	ug/L	1	<1	<1	<1	<1	<1	<1	<1	<0.250	<0.430	<0.250	<0.11	<1	<1	<1	<1
Bromochloromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.470	<0.300	<0.36	<1	<1	<1	<1
Bromodichloromethane	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.350	<0.260	<0.19	<1	<1	<1	<1
Bromoform	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.260	<0.460	<0.35	<1	<1	<1	<1
Bromomethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.680	<0.670	<0.250	<0.18	<1	<1	<1	<1
Carbon disulfide	ug/L	NC	<1	<1	0.18 J	<1	<1	<1	<1	<0.330	<0.500	<0.300	<0.13	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.400	<0.360	<0.19	<1	<1	<1	<1
Chlorobenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.480	<0.220	<0.16	<1	<1	<1	<1
Chloroethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.480	<0.780	<0.360	<0.21	<1	<1	<1	<1
Chloroform	ug/L	7	<1	<1	<1	<1	<1	<1	<1	2.41	<0.340	<0.220	0.26 J	<1	<1	0.30 J	0.19 J
Chloromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.350	<0.280	<0.20	<1	<1	<1	0.24 J
cis-1,2-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1	<1	0.15 J	<0.560	<0.380	<0.300	<0.21	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.360	<0.250	<0.17	<1	<1	<1	<1
Cyclohexane	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<0.230	<0.460	<0.380	<0.32	<1	<1	<1	<1
Dibromochloromethane	ug/L	50	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.360	<0.240	<0.20	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.420	<0.290	<0.57	<1	<1	<1	<1
Ethylbenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.340	<0.220	<0.10	<1	<1	<1	<1
Isopropylbenzene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.390	<0.210	<0.12	<1	<1	<1	<1
Methyl acetate	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<0.600	<0.350	<0.220	<0.20	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.380	<0.240	<0.13	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.460	<0.360	<0.16	<1	<1	<1	<1
Methylene chloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1.98	<1.98	<1.98	<0.13	<1	<1	<1	<1
Styrene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.330	<0.250	<0.25	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	**19**	**94**	**158**	**33**	**64**	**55**	**15**	4.83	4.96	4.41	3	0.42 J	3	4	4
Toluene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	1.19	<0.390	<0.270	<0.17	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.500	<0.550	<0.350	<0.58	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.320	<0.220	<0.14	<1	<1	<1	<1
Trichloroethene	ug/L	5	<1	<1	<1	<1	<1	<1	0.15 J	<0.440	<0.550	<0.270	<0.20	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<0.220	<0.660	<0.450	<0.29	<1	<1	<1	<1
Vinyl Chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.460	<0.290	<0.28	<1	<1	<1	<1
Xylenes (Total)	ug/L	5	<3	<3	<3	<3	<3	<3	<3	<0.660	<0.630	<0.690	<0.24	<3	<3	<3	<3
Total VOCs	ug/L	NA	21.61 J	97.92 J	158.18 J	34.39 J	64	57.38 J	39.45	8.43	4.96	4.41	6.66 J	1.65 J	9.37 J	6.91 J	4.43 J

Notes:
6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.
ft above msl = feet above mean sea level
BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria
***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)
J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.
R = The result was rejected during data validation.
D = Diluted sample result
units = ug/L or parts per billion
NA = Not Available
NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		Well ID:	MW-2DB	MW-2DB	MW-2DB	MW-2DB	MW-2SB	MW-2SB	MW-2SB	(DUP) MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB	MW-2SB
		Screen Interval (ft above msl):	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	126.3 - 136.3	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9	148.9 - 158.9
		Date Sampled:	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/5/2011	10/21/2011	5/2/2012	5/2/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)
		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards															
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																
1,1,1-Trichloroethane	ug/L	5	<1	<1	<1	<1	<0.420	<0.350	<0.330	<0.330	<0.27	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5	<1	<1	<1	<1	<0.280	<0.310	<0.320	<0.320	<0.27	<1	<1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5	<1	<1	<1	<1	<0.320	<0.440	<0.420	<0.420	<0.46	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1	<1	<1	<1	<1	<0.570	<0.360	<0.220	<0.220	<0.34	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5	<1	<1	<1	<1	<0.440	<0.430	<0.260	<0.260	<0.15	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5	<1	<1	<1	<1	<0.410	<0.710	<0.410	<0.410	<0.27	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<0.550	<0.420	<0.210	<0.210	<0.25	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5	<1	<1	<1	<1	<0.340	<0.390	<0.200	<0.200	<0.24	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04	<0.05	<0.05	<0.02	<0.05	<0.660	<0.00855	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006	<1	<1	<1	<1	<0.400	<0.00855	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<0.340	<0.360	<0.230	<0.230	<0.13	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6	<1	<1	<1	<1	<0.460	<0.420	<0.200	<0.200	<0.17	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1	<1	<1	<1	<1	<0.460	<0.520	<0.250	<0.250	<0.18	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<0.410	<0.420	<0.230	<0.230	<0.20	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3	<1	<1	<1	<1	<0.430	<0.330	<0.230	<0.230	<0.18	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC	<5	<3	<1	<3	<20.2 R	<22.5 R	<0.301	<0.301	<0.97	<5	<5	<5	<5	<5	<3
2-Butanone (MEK)	ug/L	50	<10	<10	<10	12	<0.510	<0.630	<0.550	<0.550	4.7 J	<10	0.62 J	0.64 J	<10	<10	<10
2-Hexanone	ug/L	50	<10	<10	<10	<10	<0.370	<0.260	<0.370	<0.370	<0.19	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC	<10	<10	<10	0.15 J	<0.410	<0.510	<0.350	<0.350	<0.35	<10	<10	<10	<10	<10	<10
Acetone	ug/L	50	1.30 J	<10	<10	13	<0.610	<0.870	<0.280	<0.280	5.0 J	1.38 J	3.13 J	3.81 J	<10	2.26 J	<10
Benzene	ug/L	1	<1	<1	<1	<1	<0.510	<0.430	<0.250	<0.250	<0.11	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	5	<1	<1	<1	<1	<0.560	<0.470	<0.300	<0.300	<0.36	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	50	<1	<1	<1	<1	<0.440	<0.350	<0.260	<0.260	<0.19	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	50	<1	<1	<1	<1	<0.520	<0.260	<0.460	<0.460	<0.35	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	5	<1	<1	<1	<1	<0.680	<0.670	<0.250	<0.250	<0.18	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	NC	<1	<1	<1	<1	<0.330	<0.500	<0.300	<0.300	<0.13	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<0.290	<0.400	<0.360	<0.360	<0.19	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	5	<1	<1	<1	<1	<0.420	<0.480	<0.220	<0.220	<0.16	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	5	<1	<1	<1	<1	<0.480	<0.780	<0.360	<0.360	<0.21	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	7	<1	0.24 J	<1	0.16 J	**13**	2.69	2.5	2.49	1	0.96 J	0.84 J	0.60 J	0.63 J	0.55 J	0.36 J
Chloromethane	ug/L	5	<1	<1	<1	<1	<0.430	<0.350	<0.280	<0.280	<0.20	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5	<1	<1	<1	<1	<0.560	<0.380	<0.300	<0.300	<0.21	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<0.360	<0.360	<0.250	<0.250	<0.17	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	NC	<1	<1	<1	<1	<0.230	<0.460	<0.380	<0.380	<0.32	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	50	<1	<1	<1	<1	<0.430	<0.360	<0.240	<0.240	<0.20	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5	<1	<1	<1	<1	<0.420	<0.420	<0.290	<0.290	<0.57	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	5	<1	<1	<1	<1	<0.340	<0.340	<0.220	<0.220	<0.10	<1	<1	<1	<1	<1	<1
Isopropylbenzene	ug/L	5	<1	<1	<1	<1	<0.300	<0.390	<0.210	<0.210	<0.12	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	NC	<1	<1	<1	<1	<0.600	<0.350	<0.220	<0.220	<0.20	<1	<1	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC	<1	<1	<1	<1	<0.450	<0.380	<0.240	<0.240	<0.25	<1	<1	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC	<1	<1	<1	<1	<0.290	<0.460	<0.360	<0.360	<0.13	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5	<1	<1	<1	<1	<1.98	<1.98	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	<1
Styrene	ug/L	5	<1	<1	<1	<1	<0.380	<0.330	<0.250	<0.250	<0.13	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	3	3	3	2	0.988 J	0.670 J	<0.330	<0.330	0.78 J	0.71 J	1	0.52 J	0.48 J	0.34 J	0.24 J
Toluene	ug/L	5	<1	<1	<1	<1	<0.230	<0.390	<0.270	<0.270	<0.17	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	5	<1	<1	<1	<1	<0.500	<0.550	<0.350	<0.350	<0.14	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4	<1	<1	<1	<1	<0.450	<0.320	<0.220	<0.220	<0.20	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	<1	<1	<1	<1	<0.440	<0.550	<0.270	<0.270	<0.29	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	5	<1	<1	<1	<1	<0.220	<0.660	<0.450	<0.450	<0.28	<1	<1	<1	<1	<1	<1
Vinyl Chloride	ug/L	2	<1	<1	<1	<1	<0.300	<0.460	<0.290	<0.290	<0.24	<1	<1	<1	<1	<1	<1
Xylenes (Total)	ug/L	5	<3	<3	<3	<3	<0.660	<0.630	<0.690	<0.690	<0.58	<3	<3	<3	<3	<3	<3
Total VOCs	ug/L	NA	4.3 J	3.24 J	3	27.31	13.988 J	3.36 J	2.5	2.49	11.48 J	3.05 J	5.59 J	5.57 J	1.11 J	3.15 J	0.60 J

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-2SB	MW-2SB	MW-4D	MW-4D	MW-4D	MW-4D	MW-4D	MW-4D	MW-4D	DUP (MW-4D)	MW-4D	DUP (MW-4D)	MW-4D	DUP (MW-4D)	MW-4D
			Screen Interval (ft above msl):	148.9 - 158.9	148.9 - 158.9	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168
			Date Sampled:	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/5/2011	10/19/2011	5/1/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																	
1,1,1-Trichloroethane	ug/L	5		<1	<1	<8.40	<17.5	<16.5	<54	<1	<1	<20	<20	<1	<1	<1	<1	<50
1,1,2,2-Tetrachloroethane	ug/L	5		<1	<1	<5.60	<15.5	<16.0	<53	<1	<1	<20	<20	<1	<1	<1	<1	<50
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<1	<1	<6.40	<22.0	<21.0	<93	<1	<1	<20	<20	<1	<1	<1	<1	<50
1,1,2-Trichloroethane	ug/L	1		<1	<1	<11.4	<18.0	<11.0	<69	<1	<1	<20	<20	<1	<1	<1	<1	<50
1,1-Dichloroethane	ug/L	5		<1	<1	<8.80	<21.5	<13.0	<29	<1	<1	<20	<20	<1	<1	<1	<1	<50
1,1-Dichloroethene	ug/L	5		<1	<1	<8.20	<35.5	<20.5	<54	<1	<1	<20	<20	<1	<1	<1	<1	<50
1,2,3-Trichlorobenzene	ug/L	5		<1	<1	<11.0	<21.0	<10.5	<49	<1	<1	<20	<20	<1	<1	<1	<1	<50
1,2,4-Trichlorobenzene	ug/L	5		<1	<1	<6.80	<19.5	<10.0	<49	<1	<1	<20	<20	<1	<1	<1	<1	<50
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.02	<0.05	<13.2	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006		<1	<1	<8.00	<0.00855	<0.00855	<24	<1	<1	<20	<20	<1	<1	<1	<1	<50
1,2-Dichlorobenzene	ug/L	3		<1	<1	<6.80	<18.0	<11.5	<27	<1	<1	<20	<20	<1	<1	<1	<1	<50
1,2-Dichloroethane (EDC)	ug/L	0.6		<1	<1	<9.20	<21.0	<10.0	<34	<1	<1	<20	<20	<1	<1	<1	<1	<50
1,2-Dichloropropane	ug/L	1		<1	<1	<9.20	<26.0	<12.5	<36	<1	<1	<20	<20	<1	<1	<1	<1	<50
1,3-Dichlorobenzene	ug/L	3		<1	<1	<8.20	<21.0	<11.5	<40	<1	<1	<20	<20	<1	<1	<1	<1	<50
1,4-Dichlorobenzene	ug/L	3		<1	<1	<8.60	<16.5	<11.5	<36	<1	<1	<20	<20	<1	<1	<1	<1	<50
1,4-Dioxane	ug/L	NC		<1	<3	<404	<1130 R	<0.301	<0.97	<5	<5	<5	<5	<5	<5	<5	<5	<3
2-Butanone (MEK)	ug/L	50		<10	12	<10.2	<31.5	<27.5	<650	<10	0.78 J	<200	<200	<10	<10	<10	<10	20 J
2-Hexanone	ug/L	50		<10	<10	<7.40	<13.0	<18.5	<37	<10	<10	<200	<200	<10	<10	<10	<10	<500
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<10	0.17 J	<8.20	<25.5	<17.5	<70	<10	<10	<200	<200	<10	<10	<10	<10	<500
Acetone	ug/L	50		2.07 J	13	<12.2	<43.5	<14.0	<800	5.06 J	4.61 J	12 J	<200	<10	<10	1.97 J	2.02 J	<500
Benzene	ug/L	1		<1	<1	<5.00	<21.5	<12.5	<22	<1	<1	<20	<20	<1	<1	<1	<1	<50
Bromochloromethane	ug/L	5		<1	<1	<11.2	<23.5	<15.0	<72	<1	<1	<20	<20	<1	<1	<1	<1	<50
Bromodichloromethane	ug/L	50		<1	<1	<7.00	<17.5	<13.0	<38	<1	<1	<20	<20	<1	<1	<1	<1	<50
Bromoform	ug/L	50		<1	<1	<10.4	<13.0	<23.0	<70	<1	<1	<20	<20	<1	<1	<1	<1	<50
Bromomethane	ug/L	5		<1	<1	<13.6	<33.5	<12.5	<37	<1	<1	<20	<20	<1	<1	<1	<1	<50
Carbon disulfide	ug/L	NC		<1	<1	<6.60	<25.0	<15.0	<25	<1	<1	<20	<20	0.35 J	0.19 J	<1	0.28 J	<50
Carbon tetrachloride	ug/L	5		<1	<1	<5.80	<20.0	<18.0	<38	<1	<1	<20	<20	<1	<1	<1	<1	<50
Chlorobenzene	ug/L	5		<1	<1	<8.40	<24.0	<11.0	<31	<1	<1	<20	<20	<1	<1	<1	<1	<50
Chloroethane	ug/L	5		<1	<1	<9.60	<39.0	<18.0	<43	<1	<1	<20	<20	<1	<1	<1	<1	<50
Chloroform	ug/L	7		0.36 J	0.32 J	<8.20	<17.0	<11.0	<30	<1	<1	<20	<20	<1	<1	<1	<1	<50
Chloromethane	ug/L	5		<1	0.15 J	<8.60	<17.5	<14.0	<39	<1	<1	<20	<20	<1	<1	<1	<1	<50
cis-1,2-Dichloroethene	ug/L	5		<1	<1	<11.2	<19.0	<15.0	<42	<1	<1	<20	<20	<1	<1	<1	<1	<50
cis-1,3-Dichloropropene	ug/L	0.4		<1	<1	<7.20	<18.0	<12.5	<33	<1	<1	<20	<20	<1	<1	<1	<1	<50
Cyclohexane	ug/L	NC		<1	<1	<4.60	<23.0	<19.0	<65	<1	<1	<20	<20	<1	<1	<1	<1	<50
Dibromochloromethane	ug/L	50		<1	<1	<8.60	<18.0	<12.0	<40	<1	<1	<20	<20	<1	<1	<1	<1	<50
Dichlorodifluoromethane	ug/L	5		<1	<1	<8.40	<21.0	<14.5	<110	<1	<1	<20	<20	<1	<1	<1	<1	<50
Ethylbenzene	ug/L	5		<1	<1	<6.80	<17.0	<11.0	<20	<1	<1	<20	<20	<1	<1	<1	<1	<50
Isopropylbenzene	ug/L	5		<1	<1	<6.00	<19.5	<10.5	<23	<1	<1	<20	<20	<1	<1	<1	<1	<50
Methyl acetate	ug/L	NC		<1	<1	<12.0	<17.5	<11.0	<40	<1	<1	<20	<20	<1	<1	<1	<1	<50
Methyl tert-butyl ether (MTBE)	ug/L	NC		<1	<1	<9.00	<19.0	<12.0	<50	<1	<1	<20	<20	<1	<1	<1	<1	<50
Methylcyclohexane	ug/L	NC		0.24 J	<1	<5.80	<23.0	<18.0	<26	<1	<1	<20	<20	<1	<1	<1	<1	<50
Methylene chloride	ug/L	5		<1	<1	<39.6	<99.0	<99.0	<32	<1	<1	<20	<20	<1	<1	<1	<1	<50
Styrene	ug/L	5		<1	<1	<7.60	<16.5	<12.5.0	<25	<1	<1	<20	<20	<1	<1	<1	<1	<50
Tetrachloroethene	ug/L	5		0.36 J	0.22 J	**2570**	**6070**	**6140**	**5500**	**332**	**317**	**2000**	**1750**	**54**	**63**	**29**	**25**	**2490**
Toluene	ug/L	5		<1	0.13 J	<4.60	<19.5	<13.5	<33	<1	<1	<20	<20	<1	<1	<1	<1	<50
trans-1,2-Dichloroethene	ug/L	5		<1	<1	<10.0	<27.5	<17.5	<29	<1	<1	<20	<20	<1	<1	<1	<1	<50
trans-1,3-Dichloropropene	ug/L	0.4		<1	<1	<9.00	<16.0	<11.0	<40	<1	<1	<20	<20	<1	<1	<1	<1	<50
Trichloroethene	ug/L	5		<1	<1	<8.80	<27.5	<13.5	<58	0.28 J	0.30 J	<20	<20	<1	<1	<1	<1	<50
Trichlorofluoromethane	ug/L	5		<1	<1	<4.40	<33.0	<22.5	<57	<1	<1	<20	<20	<1	<1	<1	<1	<50
Vinyl Chloride	ug/L	2		<1	<1	<6.00	<23.0	<14.5	<48	<1	<1	<20	<20	<1	<1	<1	<1	<50
Xylenes (Total)	ug/L	5		<3	<3	<13.2	<31.5	<34.5	<120	<3	<3	<60	<60	<3	<3	<3	<3	<200
Total VOCs	ug/L	NA		3.03 J	25.99	2,570	6,070	6,140	5,500	337.34 J	322.69 J	2,012 J	1,750	54.35 J	63.19 J	30.97 J	27.30 J	2510 J

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	DUP (MW-4D)	MW-4D	DUP (MW-4D)	MW-4D	DUP (MW-4D)	MW-4S	MW-4S	MW-4S	MW-4S	MW-4S	DUP (MW-4S)	MW-4S	MW-4S	MW-4S	MW-4S
			Screen Interval (ft above msl):	158 - 168	158 - 168	158 - 168	158 - 168	158 - 168	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5	178.4 - 188.5
			Date Sampled:	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	10/26/2016 (Post ISCO)	10/19/2011	5/1/2012	6/10/2013	11/14/2013 (Post ISCO)	1/14/2014 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																	
1,1,1-Trichloroethane	ug/L	5		<10	<100	<100	<50	<50	<3.50	<3.30	<14	<1	<1	<1	<10	<1	<20	<10
1,1,2,2-Tetrachloroethane	ug/L	5		<10	<100	<100	<50	<50	<3.10	<3.20	<13	<1	<1	<1	<10	<1	<20	<10
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<10	<100	<100	<50	<50	<4.40	<4.20	<23	<1	<1	<1	<10	<1	<20	<10
1,1,2-Trichloroethane	ug/L	1		<10	<100	<100	<50	<50	<3.60	<2.20	<17	<1	<1	<1	<10	<1	<20	<10
1,1-Dichloroethane	ug/L	5		<10	<100	<100	<50	<50	<4.30	<2.60	**7.3**	<1	<1	<1	<10	<1	<20	<10
1,1-Dichloroethene	ug/L	5		<10	<100	<100	<50	<50	<7.10	<4.10	<13	<1	<1	<1	<10	<1	<20	<10
1,2,3-Trichlorobenzene	ug/L	5		<10	<100	<100	<50	<50	<4.20	<2.10	<12	<1	<1	<1	<10	<1	<20	<10
1,2,4-Trichlorobenzene	ug/L	5		<10	<100	<100	<50	<50	<3.90	<2.00	<12	<1	<1	<1	<10	<1	<20	<10
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.05	<0.02	<0.02	<0.05	<0.05	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006		<10	<100	<100	<50	<50	<0.00855	<0.00855	<6.1	<1	<1	<1	<10	<1	<20	<10
1,2-Dichlorobenzene	ug/L	3		<10	<100	<100	<50	<50	<3.60	<2.30	<6.7	<1	<1	<1	<10	<1	<20	<10
1,2-Dichloroethane (EDC)	ug/L	0.6		<10	<100	<100	<50	<50	<4.20	<2.00	<8.6	<1	<1	<1	<10	<1	<20	<10
1,2-Dichloropropane	ug/L	1		<10	<100	<100	<50	<50	<5.20	<2.50	<9.1	<1	<1	<1	<10	<1	<20	<10
1,3-Dichlorobenzene	ug/L	3		<10	<100	<100	<50	<50	<4.20	<2.30	<10	<1	<1	<1	<10	<1	<20	<10
1,4-Dichlorobenzene	ug/L	3		<10	<100	<100	<50	<50	<3.30	<2.30	<9.0	<1	<1	<1	<10	<1	<20	<10
1,4-Dioxane	ug/L	NC		<3	<1	<1	<3	<3	<225 R	<0.301	<0.97	<5	<5	<5	<5	<5	<5	<3
2-Butanone (MEK)	ug/L	50		2.9 J	<1000	<1000	<500	<500	<6.30	<5.50	<160	<10	0.71 J	1.00 J	<100	<10	<200	3.0 J
2-Hexanone	ug/L	50		<100	<1000	<1000	<500	<500	<2.60	<3.70	<9.4	<10	<10	<10	<100	<10	<200	<100
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<100	<1000	<1000	<500	<500	<5.10	<3.50	<18	<10	<10	<10	<100	<10	<200	<100
Acetone	ug/L	50		<100	<1000	<1000	<500	<500	<8.70	<2.80	<200	3.71 J	2.65 J	3.06 J	9.3 J	4.6 J	<200	<100
Benzene	ug/L	1		<10	<100	<100	<50	<50	<4.30	<2.50	<5.6	<1	<1	<1	<10	<1	<20	<10
Bromochloromethane	ug/L	5		<10	<100	<100	<50	<50	<4.70	<3.00	<18	<1	<1	<1	<10	<1	<20	<10
Bromodichloromethane	ug/L	50		<10	<100	<100	<50	<50	<3.50	<2.60	<9.6	<1	<1	<1	<10	<1	<20	<10
Bromoform	ug/L	50		<10	<100	<100	<50	<50	<2.60	<4.60	<18	<1	<1	<1	<10	<1	<20	<10
Bromomethane	ug/L	5		<10	<100	<100	<50	<50	<5.10	<2.50	<9.2	<1	<1	<1	<10	<1	<20	<10
Carbon disulfide	ug/L	NC		<10	<100	<100	<50	<50	<6.70	<3.00	<6.3	<1	<1	<1	<10	<1	<20	<10
Carbon tetrachloride	ug/L	5		<10	<100	<100	<50	<50	<5.00	<3.60	<9.4	<1	<1	<1	<10	<1	<20	<10
Chlorobenzene	ug/L	5		<10	<100	<100	<50	<50	<4.00	<2.20	<7.8	<1	<1	<1	<10	<1	<20	<10
Chloroethane	ug/L	5		<10	<100	<100	<50	<50	<4.80	<3.60	<11	<1	<1	<1	<10	<1	<20	<10
Chloroform	ug/L	7		<10	<100	<100	<50	<50	<3.40	<2.20	<7.5	<1	<1	<1	<10	<1	<20	<10
Chloromethane	ug/L	5		<10	<100	<100	<50	<50	<3.50	<2.80	<9.8	<1	<1	<1	<10	<1	<20	<10
cis-1,2-Dichloroethene	ug/L	5		<10	<100	<100	<50	<50	<3.80	<3.00	<11	<1	<1	<1	<10	<1	<20	<10
cis-1,3-Dichloropropene	ug/L	0.4		<10	<100	<100	<50	<50	<3.60	<2.50	<8.4	<1	<1	<1	<10	<1	<20	<10
Cyclohexane	ug/L	NC		<10	<100	<100	<50	<50	<4.60	<3.80	<16	<1	<1	<1	<10	<1	<20	<10
Dibromochloromethane	ug/L	50		<10	<100	<100	<50	<50	<3.60	<2.40	<10.0	<1	<1	<1	<10	<1	<20	<10
Dichlorodifluoromethane	ug/L	5		<10	<100	<100	<50	<50	<4.20	<2.90	<29	<1	<1	<1	<10	<1	<20	<10
Ethylbenzene	ug/L	5		<10	<100	<100	<50	<50	<3.40	<2.20	<5.1	<1	<1	<1	<10	<1	<20	<10
Isopropylbenzene	ug/L	5		<10	<100	<100	<50	<50	<3.90	<2.10	<5.8	<1	<1	<1	<10	<1	<20	<10
Methyl acetate	ug/L	NC		<10	<100	<100	<50	<50	<3.50	<2.20	<10	<1	<1	<1	<10	<1	<20	<10
Methyl tert-butyl ether (MTBE)	ug/L	NC		<10	<100	<100	<50	<50	<3.80	<2.40	<12	<1	<1	<1	<10	<1	<20	<10
Methylcyclohexane	ug/L	NC		<10	<100	<100	<50	<50	<4.60	<3.60	<6.4	<1	<1	<1	<10	<1	<20	<10
Methylene chloride	ug/L	5		<10	<100	<100	<50	<50	<1.98	<19.8	<8.1	<1	<1	<1	<10	<1	<20	<10
Styrene	ug/L	5		<10	<100	<100	<50	<50	<3.30	<2.50	<6.4	<1	<1	<1	<10	<1	<20	<10
Tetrachloroethene	ug/L	5		**840**	**1300**	**1300**	**990**	**860**	**1410**	**1020**	**1040**	**10**	**21**	**21**	**890**	**327**	**460**	**730**
Toluene	ug/L	5		<10	<100	<100	<50	<50	<3.90	<2.70	<8.3	<1	<1	<1	<10	<1	<20	<10
trans-1,2-Dichloroethene	ug/L	5		<10	<100	<100	<50	<50	<5.50	<3.50	<7.2	<1	<1	<1	<10	<1	<20	<10
trans-1,3-Dichloropropene	ug/L	0.4		<10	<100	<100	<50	<50	<3.20	<2.20	<10	<1	<1	<1	<10	<1	<20	<10
Trichloroethene	ug/L	5		<10	<100	<100	<50	<50	<5.50	<2.70	<15	<1	<1	<1	<10	<1	<20	<10
Trichlorofluoromethane	ug/L	5		<10	<100	<100	<50	<50	<6.60	<4.50	<14	<1	<1	<1	<10	<1	<20	<10
Vinyl Chloride	ug/L	2		<10	<100	<100	<50	<50	<4.60	<2.90	<12	<1	<1	<1	<10	<1	<20	<10
Xylenes (Total)	ug/L	5		<30	<300	<300	<200	<200	<6.30	<6.90	<29	<3	<3	<3	<30	<3	<60	<30
Total VOCs	ug/L	NA		842.9 J	1,300	1,300	990	860	1,410	1,020	1047.3	13.71 J	24.36 J	25.06 J	899.3 J	331.6 J	460	733 J

Notes:
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R = The result was rejected during data validation.
D = Diluted sample result
units = ug/L or parts per billion
NA = Not Available
NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-4S	MW-4S	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5DB	MW-5DB
			Screen Interval (ft above msl):	178.4 - 188.5	178.4 - 188.5	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	179.7 - 189.7	105.3 - 115.3	105.3 - 115.3
			Date Sampled:	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	10/21/2011	5/2/2012	6/10/2013	11/15/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/5/2011	10/21/2011
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																
1,1,1-Trichloroethane	ug/L	5		<10	<1	<0.350	<0.330	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.350
1,1,2,2-Tetrachloroethane	ug/L	5		<10	<1	<0.310	<0.320	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<0.280	<0.310
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<10	<1	<0.440	<0.420	<0.46	<1	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.440
1,1,2-Trichloroethane	ug/L	1		<10	<1	<0.360	<0.220	<0.34	<1	<1	<1	<1	<1	<1	<1	<1	<0.570	<0.360
1,1-Dichloroethane	ug/L	5		<10	<1	<0.430	<0.260	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.430
1,1-Dichloroethene	ug/L	5		<10	<1	<0.710	<0.410	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.710
1,2,3-Trichlorobenzene	ug/L	5		<10	<1	<0.420	<0.210	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.420
1,2,4-Trichlorobenzene	ug/L	5		<10	<1	<0.390	<0.200	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.390
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.02	<0.05	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.660	<0.00855
1,2-Dibromoethane (EDB)	ug/L	0.0006		<10	<1	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.00855
1,2-Dichlorobenzene	ug/L	3		<10	<1	<0.360	<0.230	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.360
1,2-Dichloroethane (EDC)	ug/L	0.6		<10	<1	<0.420	<0.200	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.420
1,2-Dichloropropane	ug/L	1		<10	<1	<0.520	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.520
1,3-Dichlorobenzene	ug/L	3		<10	<1	<0.420	<0.230	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.420
1,4-Dichlorobenzene	ug/L	3		<10	<1	<0.330	<0.230	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.330
1,4-Dioxane	ug/L	NC		<1	<3	<22.5 R	<0.301	<0.97	<5	<5	<5	<5	<5	<3	<1	<3	<20.2	<22.5 R
2-Butanone (MEK)	ug/L	50		<100	9.1 J	<0.630	<0.550	8.0 J	<10	0.42 J	0.84 J	<10	<10	<10	0.39 J	9.0 J	<0.510	<0.630
2-Hexanone	ug/L	50		<100	<10	<0.260	<0.370	<0.19	<10	<10	<10	<10	<10	<10	<10	<10	<0.370	<0.260
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<100	0.12 J	<0.510	<0.350	<0.35	<10	<10	<10	<10	<10	<10	<10	0.14 J	<0.410	<0.510
Acetone	ug/L	50		<100	11	<0.870	<0.280	<4.0	1.25 J	1.99 J	6.02 J	<10	0.69 J	<10	2.40 J	9.9 J	<0.610	<0.870
Benzene	ug/L	1		<10	<1	<0.430	<0.250	<0.11	<1	<1	<1	<1	<1	<1	<1	<1	<0.250	<0.430
Bromochloromethane	ug/L	5		<10	<1	<0.470	<0.300	<0.36	<1	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.470
Bromodichloromethane	ug/L	50		<10	<1	<0.350	<0.260	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.350
Bromoform	ug/L	50		<10	<1	<0.260	<0.460	<0.35	<1	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.260
Bromomethane	ug/L	5		<10	<1	<0.670	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<0.680	<0.670
Carbon disulfide	ug/L	NC		<10	<1	<0.500	<0.300	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.500
Carbon tetrachloride	ug/L	5		<10	<1	<0.400	<0.360	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.400
Chlorobenzene	ug/L	5		<10	<1	<0.480	<0.220	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.480
Chloroethane	ug/L	5		<10	<1	<0.780	<0.360	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<0.480	<0.780
Chloroform	ug/L	7		<10	<1	<0.340	<0.220	<0.15	<1	<1	<1	<1	<1	<1	<1	0.11 J	1.54	0.425 J
Chloromethane	ug/L	5		<10	0.16 J	<0.350	<0.280	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.350
cis-1,2-Dichloroethene	ug/L	5		<10	<1	<0.380	<0.300	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.380
cis-1,3-Dichloropropene	ug/L	0.4		<10	<1	<0.360	<0.250	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.360
Cyclohexane	ug/L	NC		<10	<1	<0.460	<0.380	<0.32	<1	<1	<1	<1	<1	<1	<1	<1	<0.230	<0.460
Dibromochloromethane	ug/L	50		<10	<1	<0.360	<0.240	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.360
Dichlorodifluoromethane	ug/L	5		<10	<1	<0.420	<0.290	<0.57	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.420
Ethylbenzene	ug/L	5		<10	<1	<0.340	<0.220	<0.10	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.340
Isopropylbenzene	ug/L	5		<10	<1	<0.390	<0.210	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.390
Methyl acetate	ug/L	NC		<10	<1	<0.350	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<0.600	<0.350
Methyl tert-butyl ether (MTBE)	ug/L	NC		<10	<1	<0.380	<0.240	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.380
Methylcyclohexane	ug/L	NC		<10	<1	<0.460	<0.360	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.460
Methylene chloride	ug/L	5		<10	<1	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1.98	<1.98
Styrene	ug/L	5		<10	<1	<0.330	<0.250	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.330
Tetrachloroethene	ug/L	5		**400**	**107**	**9.19**	3.14	**165**	**5**	**67**	**5**	4	4	2	2	**32**	2.53	2.37
Toluene	ug/L	5		<10	0.15 J	<0.390	<0.270	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	0.504 J	<0.390
trans-1,2-Dichloroethene	ug/L	5		<10	<1	<0.550	<0.350	<0.14	<1	<1	<1	<1	<1	<1	<1	<1	<0.500	<0.550
trans-1,3-Dichloropropene	ug/L	0.4		<10	<1	<0.320	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.320
Trichloroethene	ug/L	5		<10	<1	<0.550	<0.270	<0.29	<1	<1	<1	<1	<1	<1	<1	0.13 J	<0.440	<0.550
Trichlorofluoromethane	ug/L	5		<10	<1	<0.660	<0.450	<0.28	<1	<1	<1	<1	<1	<1	<1	<1	<0.220	<0.660
Vinyl Chloride	ug/L	2		<10	<1	<0.460	<0.290	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.460
Xylenes (Total)	ug/L	5		<30	<3	<0.630	<0.690	<0.58	<3	<3	<3	<3	<3	<3	<3	<3	<0.660	<0.630
Total VOCs	ug/L	NA		400	127.53	9.19	3.14	173 J	6.25 J	69.41 J	11.86 J	4	4.69 J	2	4.79 J	51.28	4.57 J	2.80 J

Notes:
6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.
ft above msl = feet above mean sea level
BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria
***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)
J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.
R = The result was rejected during data validation.
D = Diluted sample result
units = ug/L or parts per billion
NA = Not Available
NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-5DB	MW-5DB	MW-5DB	DUP (MW-5DB)	MW-5DB	MW-5DB	MW-5DB	MW-5DB	MW-5DB	MW-5DB	MW-5DB	MW-5SB	MW-5SB	MW-5SB	MW-5SB
			Screen Interval (ft above msl):	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	105.3 - 115.3	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1
			Date Sampled:	5/2/2012	6/10/2013	11/15/2013 (Post ISCO)	11/15/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	5/5/2011	10/25/2011	5/2/2012	6/10/2013
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																	
1,1,1-Trichloroethane	ug/L	5		<0.330	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.350	<0.330	<0.27
1,1,2,2-Tetrachloroethane	ug/L	5		<0.320	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.280	<0.310	<0.320	<0.27
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<0.420	<0.46	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.440	<0.420	<0.46
1,1,2-Trichloroethane	ug/L	1		<0.220	<0.34	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.570	<0.360	<0.220	<0.34
1,1-Dichloroethane	ug/L	5		<0.260	<0.15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.430	<0.260	<0.15
1,1-Dichloroethene	ug/L	5		<0.410	<0.27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.710	<0.410	<0.27
1,2,3-Trichlorobenzene	ug/L	5		<0.210	<0.25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.420	<0.210	<0.25
1,2,4-Trichlorobenzene	ug/L	5		<0.200	<0.24	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.390	<0.200	<0.24
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.660	<0.00855	<0.00855	<0.0080
1,2-Dibromoethane (EDB)	ug/L	0.0006		<0.00855	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.00855	<0.00855	<0.12
1,2-Dichlorobenzene	ug/L	3		<0.230	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.360	<0.230	<0.13
1,2-Dichloroethane (EDC)	ug/L	0.6		<0.200	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.420	<0.200	<0.17
1,2-Dichloropropane	ug/L	1		<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.520	<0.250	<0.18
1,3-Dichlorobenzene	ug/L	3		<0.230	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.420	<0.230	<0.20
1,4-Dichlorobenzene	ug/L	3		<0.230	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.330	<0.230	<0.18
1,4-Dioxane	ug/L	NC		<0.301	<0.97	<5	<5	<5	<5	<5	<5	<3	<1	<3	<20.2	<22.5 R	<0.301	<0.97
2-Butanone (MEK)	ug/L	50		<0.550	4.8 J	<10	<10	0.47 J	0.79 J	<10	<10	<10	<10	10	<0.510	<0.630	<0.550	<3.3
2-Hexanone	ug/L	50		<0.370	<0.19	<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.370	<0.260	<0.370	<0.19
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<0.350	<0.35	<10	<10	<10	<10	0.38 J	<10	<10	<10	0.15 J	<0.410	<0.510	<0.350	<0.35
Acetone	ug/L	50		<0.280	<4.0	<10	0.89 J	3.42 J	4.48 J	<10	1.63 J	<10	2.01 J	9.9 J	10.2	<0.870	<0.280	<4.0
Benzene	ug/L	1		<0.250	<0.11	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.250	<0.430	<0.250	<0.11
Bromochloromethane	ug/L	5		<0.300	<0.36	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.470	<0.300	<0.36
Bromodichloromethane	ug/L	50		<0.260	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.350	<0.260	<0.19
Bromoform	ug/L	50		<0.460	<0.35	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.260	<0.460	<0.35
Bromomethane	ug/L	5		<0.250	<0.18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.680	<0.670	<0.250	<0.18
Carbon disulfide	ug/L	NC		<0.300	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.500	<0.300	<0.13
Carbon tetrachloride	ug/L	5		<0.360	<0.19	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.400	<0.360	<0.19
Chlorobenzene	ug/L	5		<0.220	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.480	<0.220	<0.16
Chloroethane	ug/L	5		<0.360	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.480	<0.780	<0.360	<0.21
Chloroform	ug/L	7		<0.220	0.26 J	0.27 J	0.26 J	0.29 J	0.23 J	0.25 J	0.30 J	0.25 J	0.26 J	0.23 J	4.22	3.12	0.533 J	0.56 J
Chloromethane	ug/L	5		<0.280	<0.20	<1	<1	<1	0.44 J	0.52 J	0.46 J	<1	<1	0.29 J	<0.430	<0.350	<0.280	<0.20
cis-1,2-Dichloroethene	ug/L	5		<0.300	<0.21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.380	<0.300	<0.21
cis-1,3-Dichloropropene	ug/L	0.4		<0.250	<0.17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.360	<0.250	<0.17
Cyclohexane	ug/L	NC		<0.380	<0.32	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.230	<0.460	<0.380	<0.32
Dibromochloromethane	ug/L	50		<0.240	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.360	<0.240	<0.20
Dichlorodifluoromethane	ug/L	5		<0.290	<0.57	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.420	<0.290	<0.57
Ethylbenzene	ug/L	5		<0.220	<0.10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.340	<0.220	<0.10
Isopropylbenzene	ug/L	5		<0.210	<0.12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.390	<0.210	<0.12
Methyl acetate	ug/L	NC		<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.600	<0.350	<0.220	<0.20
Methyl tert-butyl ether (MTBE)	ug/L	NC		<0.240	<0.25	<1	<1	<1	<1	<1	<1	<1	0.24 J	<1	<0.450	<0.380	<0.240	<0.25
Methylcyclohexane	ug/L	NC		<0.360	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.460	<0.360	<0.13
Methylene chloride	ug/L	5		<1.98	<0.16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1.98	<1.98	<1.98	<0.16
Styrene	ug/L	5		<0.250	<0.13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.330	<0.250	<0.13
Tetrachloroethene	ug/L	5		4.08	1	0.81 J	0.75 J	0.95 J	0.41 J	0.48 J	0.55 J	0.39 J	0.31 J	0.25 J	**37.6**	**5.67**	**24.1**	4
Toluene	ug/L	5		<0.270	<0.17	<1	<1	<1	0.30 J	0.25 J	<1	<1	<1	0.16 J	<0.230	<0.390	<0.270	<0.17
trans-1,2-Dichloroethene	ug/L	5		<0.350	<0.14	<1	<1	<1	<1	<1	<1	<1	<3	<1	<0.500	<0.550	<0.350	<0.14
trans-1,3-Dichloropropene	ug/L	0.4		<0.220	<0.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.320	<0.220	<0.20
Trichloroethene	ug/L	5		<0.270	<0.29	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.550	<0.270	<0.29
Trichlorofluoromethane	ug/L	5		<0.450	<0.28	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.220	<0.660	<0.450	<0.28
Vinyl Chloride	ug/L	2		<0.290	<0.24	<1	<1	<1	<1	<1	0.49 J	0.45 J	<1	0.28 J	<0.300	<0.460	<0.290	<0.24
Xylenes (Total)	ug/L	5		<0.690	<0.58	<3	<3	<3	<3	<3	<3	<3	0.47 J	<3	<0.660	<0.630	<0.690	<0.58
Total VOCs	ug/L	NA		4.08	6.06 J	1.08 J	1.9 J	5.13 J	6.65 J	1.88 J	3.43	1.09 J	3.29 J	21.26	52.02	8.79	24.6 J	4.56 J

Notes:
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ft above msl = feet above mean sea level
BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria
***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)
J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.
R = The result was rejected during data validation.
D = Diluted sample result
units = ug/L or parts per billion
NA = Not Available
NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter	Units	6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-5SB	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6
			Screen Interval (ft above msl):	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	145.1 - 155.1	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6
			Date Sampled:	11/15/2013 (Post ISCO)	1/14/2014 (Post ISCO)	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	8/3/2011	10/18/2011	4/30/2012	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)
VOLATILE ORGANIC COMPOUNDS (VOCs)			Off-Site Upgradient Locations															
1,1,1-Trichloroethane	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.350	<0.330	<0.27	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.280	<0.310	<0.320	<0.27	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.320	<0.440	<0.420	<0.46	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1		<1	<1	<1	<1	<1	<1	<1	<1	<0.570	<0.360	<0.220	<0.34	<1	<1	<1
1,1-Dichloroethane	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.440	<0.430	<0.260	<0.15	<1	<1	<1
1,1-Dichloroethene	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.710	<0.410	<0.27	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.550	<0.420	<0.210	<0.25	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.390	<0.200	<0.24	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.660	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006		<1	<1	<1	<1	<1	<1	<1	<1	<0.400	<0.00855	<0.00855	<0.12	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3		<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.360	<0.230	<0.13	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6		<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.420	<0.200	<0.17	<1	<1	<1
1,2-Dichloropropane	ug/L	1		<1	<1	<1	<1	<1	<1	<1	<1	<0.460	<0.520	<0.250	<0.18	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3		<1	<1	<1	<1	<1	<1	<1	<1	<0.410	<0.420	<0.230	<0.20	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3		<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.330	<0.230	<0.18	<1	<1	<1
1,4-Dioxane	ug/L	NC		<5	<5	<5	<5	<5	<3	<1	<3	<20.2	<22.5 R	<0.301	<0.97	<5	<5	<5
2-Butanone (MEK)	ug/L	50		<10	0.70 J	0.64 J	<10	<10	<10	<10	13	2.33	<0.630	<0.550	6.2 J	0.83 J	<10	<10
2-Hexanone	ug/L	50		<10	<10	<10	<10	<10	<10	<10	<10	<0.370	<0.260	<0.370	<0.19	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<10	<10	<10	<10	<10	<10	<10	0.19 J	<0.410	<0.510	<0.350	<0.35	<10	<10	<10
Acetone	ug/L	50		0.86 J	3.86 J	4.27 J	<10	1.45 J	<10	1.23 J	21	17.7	<0.870	<0.280	<4.0	4.96 J	<10	1.31 J
Benzene	ug/L	1		<1	<1	<1	<1	<1	<1	<1	<1	<0.250	<0.430	<0.250	<0.11	<1	<1	<1
Bromochloromethane	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.560	<0.470	<0.300	<0.36	<1	<1	<1
Bromodichloromethane	ug/L	50		<1	<1	<1	<1	<1	<1	<1	<1	<0.350	<0.550	<0.260	<0.19	<1	<1	<1
Bromoform	ug/L	50		<1	<1	<1	<1	<1	<1	<1	<1	<0.520	<0.260	<0.460	<0.35	<1	<1	<1
Bromomethane	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.680	<0.670	<0.250	<0.18	<1	<1	<1
Carbon disulfide	ug/L	NC		<1	<1	<1	<1	<1	<1	<1	<1	<0.330	<0.500	<0.300	<0.13	<1	<1	<1
Carbon tetrachloride	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.290	<0.400	<0.360	<0.19	<1	<1	<1
Chlorobenzene	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.480	<0.220	<0.16	<1	<1	<1
Chloroethane	ug/L	5		<1	<1	<1	<1	0.35 J	<1	0.43 J	0.41 J	<0.480	<0.780	<0.360	<0.21	<1	<1	<1
Chloroform	ug/L	7		0.50 J	0.55 J	0.40 J	0.36 J	0.38 J	0.32 J	0.26 J	0.24 J	**11.1**	<0.340	<0.220	<0.15	<1	<1	<1
Chloromethane	ug/L	5		<1	<1	<1	<1	<1	<1	<1	0.15 J	<0.430	<0.350	<0.280	<0.20	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5		<1	<1	<1	<1	<1	<1	<1	0.11 J	<0.560	<0.380	<0.300	<0.21	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4		<1	<1	<1	<1	<1	<1	<1	<1	<0.360	<0.360	<0.250	<0.17	<1	<1	<1
Cyclohexane	ug/L	NC		<1	<1	<1	<1	<1	<1	<1	<1	<0.230	<0.460	<0.380	<0.32	<1	<1	<1
Dibromochloromethane	ug/L	50		<1	<1	<1	<1	<1	<1	<1	<1	<0.430	<0.360	<0.240	<0.20	<1	<1	<1
Dichlorodifluoromethane	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.420	<0.420	<0.290	<0.57	<1	<1	<1
Ethylbenzene	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.340	<0.340	<0.220	<0.10	<1	<1	<1
Isopropylbenzene	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.300	<0.390	<0.210	<0.12	<1	<1	<1
Methyl acetate	ug/L	NC		<1	<1	<1	<1	<1	<1	<1	<1	<0.600	<0.350	<0.220	<0.20	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC		<1	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.380	<0.240	<0.25	<1	<1	<1
Methylcyclohexane	ug/L	NC		<1	<1	<1	<1	<1	<1	0.22 J	0.20 J	<0.290	<0.460	<0.360	<0.13	<1	<1	<1
Methylene chloride	ug/L	5		<1	<1	<1	<1	0.30 J	<1	<1	<1	<1.98	<1.98	<1.98	<0.16	<1	<1	<1
Styrene	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.380	<0.330	<0.250	<0.13	<1	<1	<1
Tetrachloroethene	ug/L	5		3	3	3	2	2	2	1	2	<0.380	<0.470	<0.330	0.15 J	<1	<1	<1
Toluene	ug/L	5		<1	<1	<1	0.33 J	0.26 J	<1	<1	0.26 J	<0.230	<0.350	<0.270	<0.17	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.500	<0.550	<0.350	<0.14	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4		<1	<1	<1	<1	<1	<1	<1	<1	<0.450	<0.320	<0.220	<0.20	<1	<1	<1
Trichloroethene	ug/L	5		<1	<1	<1	<1	<1	<1	0.35 J	0.70 J	<0.440	<0.350	<0.270	<0.29	<1	<1	<1
Trichlorofluoromethane	ug/L	5		<1	<1	<1	<1	<1	<1	<1	<1	<0.220	<0.660	<0.450	<0.28	<1	<1	<1
Vinyl Chloride	ug/L	2		<1	<1	<1	<1	0.39 J	0.44 J	0.45 J	0.36 J	<0.300	<0.460	<0.290	<0.24	<1	<1	<1
Xylenes (Total)	ug/L	5		<3	<3	<3	<3	<3	<3	<3	<3	<0.660	<0.630	<0.690	<0.58	<3	<3	<3
Total VOCs	ug/L	NA		4.36 J	8.11	8.31	2.69 J	5.13 J	2.76 J	3.94 J		31.1	---	---	6.35 J	5.79 J	---	1.31 J

Notes:
6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.
ft above msl = feet above mean sea level
BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria
***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)
J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.
R = The result was rejected during data validation.
D = Diluted sample result
units = ug/L or parts per billion
NA = Not Available
NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-6	MW-6	MW-6	MW-6SB*	MW-6SB	DUP (MW-6SB)	MW-6SB	MW-6SB	MW-6SB	MW-6SB	MW-6SB	MW-6SB	MW-6SB	MW-7
			Screen Interval (ft above msl):	179.6 - 189.6	179.6 - 189.6	179.6 - 189.6	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	151.9 - 161.9	174.7 - 184.7
			Date Sampled:	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	8/3/2011	10/18/2011	10/18/2011	4/30/2012	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	5/4/2016 (Post ISCO)	10/18/2011
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units		Off-Site Downgradient Locations														
1,1,1-Trichloroethane	ug/L	5		<1	<1	<1	<0.420	<0.350	<0.350	<0.330	<0.27	<1	<1	<1	<1	<1	<1	<0.350
1,1,2,2-Tetrachloroethane	ug/L	5		<1	<1	<1	<0.280	<0.310	<0.310	<0.320	<0.27	<1	<1	<1	<1	<1	<1	<0.310
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<1	<1	<1	<0.320	<0.440	<0.440	<0.420	<0.46	<1	<1	<1	<1	<1	<1	<0.440
1,1,2-Trichloroethane	ug/L	1		<1	<1	<1	<0.570	<0.360	<0.360	<0.220	<0.34	<1	<1	<1	<1	<1	<1	<0.360
1,1-Dichloroethane	ug/L	5		<1	<1	<1	<0.440	<0.430	<0.430	<0.260	<0.15	<1	<1	<1	<1	<1	<1	<0.430
1,1-Dichloroethene	ug/L	5		<1	<1	<1	<0.410	<0.710	<0.710	<0.410	<0.27	<1	<1	<1	<1	<1	<1	<0.710
1,2,3-Trichlorobenzene	ug/L	5		<1	<1	<1	<0.550	<0.420	<0.420	<0.210	<0.25	<1	<1	<1	<1	<1	<1	<0.420
1,2,4-Trichlorobenzene	ug/L	5		<1	<1	<1	<0.340	<0.390	<0.390	<0.200	<0.24	<1	<1	<1	<1	<1	<1	<0.390
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.05	<0.02	<0.05	<0.660	<0.00855	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.00855
1,2-Dibromoethane (EDB)	ug/L	0.0006		<1	<1	<1	<0.400	<0.00855	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1	<0.00855
1,2-Dichlorobenzene	ug/L	3		<1	<1	<1	<0.340	<0.360	<0.360	<0.230	<0.13	<1	<1	<1	<1	<1	<1	<0.360
1,2-Dichloroethane (EDC)	ug/L	0.6		<1	<1	<1	<0.460	<0.420	<0.420	<0.200	<0.17	<1	<1	<1	<1	<1	<1	<0.420
1,2-Dichloropropane	ug/L	1		<1	<1	<1	<0.460	<0.520	<0.520	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<0.520
1,3-Dichlorobenzene	ug/L	3		<1	<1	<1	<0.410	<0.420	<0.420	<0.230	<0.20	<1	<1	<1	<1	<1	<1	<0.420
1,4-Dichlorobenzene	ug/L	3		<1	<1	<1	<0.430	<0.330	<0.330	<0.230	<0.18	<1	<1	<1	<1	<1	<1	<0.330
1,4-Dioxane	ug/L	NC		<3	<1	<3	<20.2	<22.5 R	<22.5 R	<0.301	<0.97	<5	<5	<5	<3	<1	<3	<22.5 R
2-Butanone (MEK)	ug/L	50		<10	<10	<10	<0.510	<0.630	<0.630	<0.550	6.4 J	0.88 J	<10	<10	<10	<10	12	<0.630
2-Hexanone	ug/L	50		<10	<10	<10	<0.370	<0.260	<0.260	<0.370	<0.19	<10	<10	<10	<10	<10	<10	<0.260
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<10	<10	<10	<0.410	<0.510	<0.510	<0.350	<0.35	<10	<10	<10	<10	<10	0.15 J	<0.510
Acetone	ug/L	50		<10	0.99 J	45	1.37	<0.870	<0.870	<0.280	<4.0	5.39 J	<10	1.50 J	<10	1.68 J	13	<0.870
Benzene	ug/L	1		<1	<1	<1	<0.250	<0.430	<0.430	<0.250	<0.11	<1	<1	<1	<1	<1	<1	<0.430
Bromochloromethane	ug/L	5		<1	<1	<1	<0.560	<0.470	<0.470	<0.300	<0.36	<1	<1	<1	<1	<1	<1	<0.470
Bromodichloromethane	ug/L	50		<1	<1	<1	0.767 J	<0.350	<0.350	<0.260	<0.19	<1	<1	<1	<1	<1	<1	<0.350
Bromoform	ug/L	50		<1	<1	<1	<0.520	<0.260	<0.260	<0.460	<0.35	<1	<1	<1	<1	<1	<1	<0.260
Bromomethane	ug/L	5		<1	<1	<1	<0.680	<0.670	<0.670	<0.250	<0.18	<1	<1	<1	<1	<1	<1	<0.670
Carbon disulfide	ug/L	NC		<1	<1	<1	<0.330	<0.500	<0.500	<0.300	<0.13	<1	<1	<1	<1	0.32 J	<1	<0.500
Carbon tetrachloride	ug/L	5		<1	<1	<1	<0.290	<0.400	<0.400	<0.360	<0.19	<1	<1	<1	<1	<1	<1	<0.400
Chlorobenzene	ug/L	5		<1	<1	<1	<0.420	<0.480	<0.480	<0.220	<0.16	<1	<1	<1	<1	<1	<1	<0.480
Chloroethane	ug/L	5		<1	<1	<1	<0.480	<0.780	<0.780	<0.360	<0.21	<1	<1	<1	<1	<1	<1	<0.780
Chloroform	ug/L	7		<1	<1	<1	**7.28**	<0.340	<0.340	<0.220	<0.15	<1	<1	<1	<1	<1	<1	<0.340
Chloromethane	ug/L	5		<1	<1	<1	<0.430	<0.350	<0.350	<0.280	<0.20	<1	<1	<1	<1	<1	<1	<0.350
cis-1,2-Dichloroethene	ug/L	5		<1	<1	<1	<0.560	<0.380	<0.380	<0.300	<0.21	<1	<1	<1	<1	<1	<1	<0.380
cis-1,3-Dichloropropene	ug/L	0.4		<1	<1	<1	<0.360	<0.360	<0.360	<0.250	<0.17	<1	<1	<1	<1	<1	<1	<0.360
Cyclohexane	ug/L	NC		<1	<1	<1	<0.230	<0.460	<0.460	<0.380	<0.32	<1	<1	<1	<1	<1	<1	<0.460
Dibromochloromethane	ug/L	50		<1	<1	<1	<0.430	<0.360	<0.360	<0.240	<0.20	<1	<1	<1	<1	<1	<1	<0.360
Dichlorodifluoromethane	ug/L	5		<1	<1	<1	<0.420	<0.420	<0.420	<0.290	<0.57	<1	<1	<1	<1	<1	<1	<0.420
Ethylbenzene	ug/L	5		<1	<1	<1	<0.340	<0.340	<0.340	<0.220	<0.10	<1	<1	<1	<1	<1	<1	<0.340
Isopropylbenzene	ug/L	5		<1	<1	<1	<0.300	<0.390	<0.390	<0.210	<0.12	<1	<1	<1	<1	<1	<1	<0.390
Methyl acetate	ug/L	NC		<1	<1	<1	<0.600	<0.350	<0.350	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<0.350
Methyl tert-butyl ether (MTBE)	ug/L	NC		<1	<1	<1	<0.450	<0.380	<0.380	<0.240	<0.25	<1	<1	<1	<1	<1	<1	<0.380
Methylcyclohexane	ug/L	NC		<1	<1	<1	<0.290	<0.460	<0.460	<0.360	<0.13	<1	<1	<1	<1	<1	<1	<0.460
Methylene chloride	ug/L	5		<1	<1	<1	<1.98	<1.98	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	<1	<1.98
Styrene	ug/L	5		<1	<1	<1	<0.380	<0.330	<0.330	<0.250	<0.13	<1	<1	<1	<1	<1	<1	<0.330
Tetrachloroethene	ug/L	5		<1	<1	<1	<0.380	<0.470	<0.470	<0.330	0.16 J	<1	<1	<1	<1	<1	<1	**26.2**
Toluene	ug/L	5		<1	<1	<1	<0.230	<0.390	<0.390	<0.270	<0.17	<1	<1	<1	<1	<1	<1	<0.390
trans-1,2-Dichloroethene	ug/L	5		<1	<1	<1	<0.500	<0.550	<0.550	<0.350	<0.14	<1	<1	<1	<1	<1	<1	<0.550
trans-1,3-Dichloropropene	ug/L	0.4		<1	<1	<1	<0.450	<0.320	<0.320	<0.220	<0.20	<1	<1	<1	<1	<1	<1	<0.320
Trichloroethene	ug/L	5		<1	<1	<1	<0.440	<0.550	<0.550	<0.270	<0.29	<1	<1	<1	<1	<1	<1	<0.550
Trichlorofluoromethane	ug/L	5		<1	<1	<1	<0.220	<0.660	<0.660	<0.450	<0.28	<1	<1	<1	<1	<1	<1	<0.660
Vinyl Chloride	ug/L	2		<1	<1	<1	<0.300	<0.460	<0.460	<0.290	<0.24	<1	<1	<1	<1	<1	<1	<0.460
Xylenes (Total)	ug/L	5		<3	<3	<3	<0.660	<0.630	<0.630	<0.690	<0.58	<3	<3	<3	<3	<3	<3	<0.630
Total VOCs	ug/L	NA		---	0.99 J	45	9.42 J	---	---	---	---	6.27 J	---	1.50 J	---	2 J	25.15	26.2

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

NA = Not Available

NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7SB	MW-7SB	MW-7SB	MW-7SB	MW-7SB	MW-7SB	MW-7SB
			Screen Interval (ft above msl):	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	174.7 - 184.7	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8	145.8 - 155.8
			Date Sampled:	5/1/2012	6/11/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	10/19/2011	5/2/2012	6/11/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/8/2015 (Post ISCO)	10/9/2015 (Post ISCO)
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																	
1,1,1-Trichloroethane	ug/L	5		<0.330	<0.10	<1	<1	<1	<1	<1	<1	<0.350	<0.330	<0.10	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5		<0.320	<0.067	<1	<1	<1	<1	<1	<1	<0.310	<0.320	<0.067	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<0.420	<0.15	<1	<1	<1	<1	<1	<1	<0.440	<0.420	<0.15	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1		<0.220	<0.039	<1	<1	<1	<1	<1	<1	<0.360	<0.220	<0.039	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5		<0.260	<0.041	<1	<1	<1	<1	<1	<1	<0.430	<0.260	<0.041	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5		<0.410	<0.055	<1	<1	<1	<1	<1	<1	<0.710	<0.410	<0.055	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5		<0.210	<0.030	<1	<1	<1	<1	<1	<1	<0.420	<0.210	0.040 JB	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5		<0.200	0.020 JB	<1	<1	<1	<1	<1	<1	<0.390	<0.200	0.040 JB	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006		<0.00855	<0.045	<1	<1	<1	<1	<1	<1	<0.00855	<0.00855	<0.045	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3		<0.230	<0.053	<1	<1	<1	<1	<1	<1	<0.360	<0.230	<0.053	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6		<0.200	<0.039	<1	<1	<1	<1	<1	<1	<0.420	<0.200	<0.039	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1		<0.250	<0.045	<1	<1	<1	<1	<1	<1	<0.520	<0.250	<0.045	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3		<0.230	<0.027	<1	<1	<1	<1	<1	<1	<0.420	<0.230	<0.027	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3		<0.230	<0.036	<1	<1	<1	<1	<1	<1	<0.330	<0.230	<0.036	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC		<0.301	<0.97	<5	<5	<5	<3	<1	<3	<22.5 R	<0.301	<0.97	<5	<5	<5	<3
2-Butanone (MEK)	ug/L	50		<0.550	4.3 J	0.79 J	<10	<10	<10	<10	11	<0.630	<0.550	4.6 J	0.65 J	<10	<10	<10
2-Hexanone	ug/L	50		<0.370	<0.30	<10	<10	<10	<10	<10	<10	<0.260	<0.370	<0.30	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<0.350	<0.14	<10	<10	<10	<10	<10	0.14 J	<0.510	<0.350	<0.14	<10	<10	<10	<10
Acetone	ug/L	50		<0.280	<3.0	5.40 J	<10	1.57 J	<10	1.79 J	13	<0.870	<0.280	<3.0	5.50 J	<10	1.43 J	<10
Benzene	ug/L	1		<0.250	<0.014	<1	<1	<1	<1	<1	<1	<0.430	<0.250	0.030 J	<1	<1	<1	<1
Bromochloromethane	ug/L	5		<0.300	<0.13	<1	<1	<1	<1	<1	<1	<0.470	<0.300	<0.13	<1	<1	<1	<1
Bromodichloromethane	ug/L	50		<0.260	<0.025	<1	<1	<1	<1	<1	<1	<0.350	<0.260	<0.025	<1	<1	<1	<1
Bromoform	ug/L	50		<0.460	<0.035	<1	<1	<1	<1	<1	<1	<0.260	<0.460	<0.035	<1	<1	<1	<1
Bromomethane	ug/L	5		<0.250	<0.13	<1	<1	<1	<1	<1	<1	<0.510	<0.250	<0.13	<1	<1	<1	<1
Carbon disulfide	ug/L	NC		<0.300	<0.028	<1	<1	<1	<1	<1	<1	<0.670	<0.300	<0.028	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5		<0.360	<0.025	<1	<1	<1	<1	<1	<1	<0.500	<0.360	<0.025	<1	<1	<1	<1
Chlorobenzene	ug/L	5		<0.220	<0.032	<1	<1	<1	<1	<1	<1	<0.400	<0.220	<0.032	<1	<1	<1	<1
Chloroethane	ug/L	5		<0.360	<0.11	<1	<1	<1	<1	<1	<1	<0.480	<0.360	<0.11	<1	<1	<1	<1
Chloroform	ug/L	7		<0.220	0.080 J	<1	<1	<1	<1	<1	<1	0.635 J	0.868 J	0.810 J	0.92 J	0.72 J	0.22 J	<1
Chloromethane	ug/L	5		<0.280	<0.072	<1	<1	<1	<1	<1	<1	<0.350	<0.280	<0.072	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5		<0.300	<0.045	<1	0.22 J	<1	<1	<1	<1	1.03	<0.300	<0.045	<1	<1	<1	0.29 J
cis-1,3-Dichloropropene	ug/L	0.4		<0.250	<0.019	<1	<1	<1	<1	<1	<1	<0.360	<0.250	<0.019	<1	<1	<1	<1
Cyclohexane	ug/L	NC		<0.380	<0.11	<1	<1	<1	<1	<1	<1	<0.460	<0.380	<0.11	<1	<1	<1	<1
Dibromochloromethane	ug/L	50		<0.240	<0.031	<1	<1	<1	<1	<1	<1	<0.360	<0.240	<0.031	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5		<0.290	<0.058	<1	<1	<1	<1	<1	<1	<0.420	<0.290	<0.058	<1	<1	<1	<1
Ethylbenzene	ug/L	5		<0.220	<0.011	<1	<1	<1	<1	<1	<1	<0.340	<0.220	<0.011	<1	<1	<1	<1
Isopropylbenzene	ug/L	5		<0.210	<0.014	<1	<1	<1	<1	<1	<1	<0.390	<0.210	<0.014	<1	<1	<1	<1
Methyl acetate	ug/L	NC		<0.220	<0.15	<1	<1	<1	<1	<1	<1	<0.350	<0.220	<0.15	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC		<0.240	<0.039	<1	<1	<1	<1	<1	<1	<0.380	<0.240	<0.039	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC		<0.360	<0.070	<1	<1	<1	<1	<1	<1	<0.460	<0.360	<0.070	<1	<1	<1	<1
Methylene chloride	ug/L	5		<1.98	<0.10	<1	<1	<1	<1	<1	<1	<1.98	<1.98	<0.10	<1	<1	<1	<1
Styrene	ug/L	5		<0.250	<0.016	<1	<1	<1	<1	<1	<1	<0.330	<0.250	<0.016	<1	<1	<1	<1
Tetrachloroethene	ug/L	5		**9.53**	**14**	**57**	**71**	**47**	**32**	**34**	**15**	**24.7**	**16**	**6**	**7**	3	1	0.97 J
Toluene	ug/L	5		<0.270	<0.17	<1	<1	<1	<1	<1	<1	<0.390	<0.270	<0.17	<1	0.22 J	<1	<1
trans-1,2-Dichloroethene	ug/L	5		<0.350	<0.072	<1	<1	<1	<1	<1	<1	<0.550	<0.350	<0.072	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4		<0.220	<0.027	<1	<1	<1	<1	<1	<1	<0.320	<0.220	<0.027	<1	<1	<1	<1
Trichloroethene	ug/L	5		<0.270	<0.10	<1	<1	0.28 J	<1	<1	<1	**6.71**	2.81	3	4	3	2	2
Trichlorofluoromethane	ug/L	5		<0.450	<0.13	<1	<1	<1	<1	<1	<1	<0.660	<0.450	<0.13	<1	<1	<1	<1
Vinyl Chloride	ug/L	2		<0.290	<0.066	<1	<1	<1	<1	<1	<1	<0.460	<0.290	<0.066	<1	<1	<1	<1
Xylenes (Total)	ug/L	5		<0.690	<0.041	<3	<3	<3	<3	<3	<3	<0.630	<0.690	<0.041	<3	<3	<3	<3
Total VOCs	ug/L	NA		9.53	14	63.19 J	71.22 J	48.85 J	32	35.79 J	39.14	33.1 J	19.7 J	6	18.07 J	6.94 J	4.65 J	3.26 J

Notes:
6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.
ft above msl = feet above mean sea level
BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria
***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)
J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.
R = The result was rejected during data validation.
D = Diluted sample result
units = ug/L or parts per billion
NA = Not Available
NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-7SB	MW-7SB	MW-8	MW-8	MW-8	DUP (MW-8)	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8SB	MW-8SB	MW-8SB
			Screen Interval (ft above msl):	145.8 - 155.8	145.8 - 155.8	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	172.3 - 182.3	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7
			Date Sampled:	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	10/20/2011	4/30/2012	6/10/2013	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	10/20/2011	4/30/2012	6/10/2013
VOLATILE ORGANIC COMPOUNDS (VOCs)	Units																	
1,1,1-Trichloroethane	ug/L	5		<1	<1	<0.350	<0.330	<0.27	<1.4	<1	<1	<1	<1	<1	<1	<0.700	<0.330	<1.4
1,1,2,2-Tetrachloroethane	ug/L	5		<1	<1	<0.310	<0.320	<0.27	<1.3	<1	<1	<1	<1	<1	<1	<0.620	<0.320	<1.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<1	<1	<0.440	<0.420	<0.46	<2.3	<1	<1	<1	<1	<1	<1	<0.880	<0.420	<2.3
1,1,2-Trichloroethane	ug/L	1		<1	<1	<0.360	<0.220	<0.34	**7**	<1	<1	<1	<1	<1	<1	<0.720	<0.220	<1.7
1,1-Dichloroethane	ug/L	5		<1	<1	<0.430	<0.260	<0.15	<0.73	<1	<1	<1	<1	<1	<1	<0.860	<0.260	<0.73
1,1-Dichloroethene	ug/L	5		<1	<1	<0.710	<0.410	<0.27	<1.3	<1	<1	<1	<1	<1	<1	<1.42	<0.410	<1.3
1,2,3-Trichlorobenzene	ug/L	5		<1	<1	<0.420	<0.210	<0.25	<1.2	<1	<1	<1	<1	<1	<1	<0.840	<0.210	<1.2
1,2,4-Trichlorobenzene	ug/L	5		<1	<1	<0.390	<0.200	<0.24	<1.2	<1	<1	<1	<1	<1	<1	<0.780	<0.200	<1.2
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.02	<0.05	<0.00855	<0.00855	<0.0080	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.00855	<0.00855	<0.0080
1,2-Dibromoethane (EDB)	ug/L	0.0006		<1	<1	<0.00855	<0.00855	<0.12	<0.61	<1	<1	<1	<1	<1	<1	<0.00855	<0.00855	<0.61
1,2-Dichlorobenzene	ug/L	3		<1	<1	<0.360	<0.230	<0.13	<0.67	<1	<1	<1	<1	<1	<1	<0.720	<0.230	<0.67
1,2-Dichloroethane (EDC)	ug/L	0.6		<1	<1	<0.420	<0.200	<0.17	<0.86	<1	<1	<1	<1	<1	<1	<0.840	<0.200	<0.86
1,2-Dichloropropane	ug/L	1		<1	<1	<0.520	<0.250	<0.18	<0.91	<1	<1	<1	<1	<1	<1	<1.04	<0.250	<0.91
1,3-Dichlorobenzene	ug/L	3		<1	<1	<0.420	<0.230	<0.20	<1.0	<1	<1	<1	<1	<1	<1	<0.840	<0.230	<1.0
1,4-Dichlorobenzene	ug/L	3		<1	<1	<0.330	<0.230	<0.18	<0.90	<1	<1	<1	<1	<1	<1	<0.660	<0.230	<0.90
1,4-Dioxane	ug/L	NC		<1	<3	<22.5 R	<0.301	<0.97	<0.97	<5	<5	<5	<3	<1	<3	<45.1 R	<0.301	<0.97
2-Butanone (MEK)	ug/L	50		0.56 J	13	<0.630	<0.550	6.3 J	<16	0.75 J	<10	<10	<10	<10	12	<1.26	<0.550	<16
2-Hexanone	ug/L	50		<10	<10	<0.260	<0.370	<0.19	<0.94	<10	<10	<10	<10	<10	<10	<0.520	<0.370	<0.94
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<10	0.18 J	<0.510	<0.350	<0.35	<1.8	<10	<10	<10	<10	<10	0.13 J	<1.02	<0.350	<1.8
Acetone	ug/L	50		3.06 J	17	<0.870	<0.280	<4.0	<20	5.26 J	<10	1.53 J	<10	1.2 J	13	<1.74	<0.280	<20
Benzene	ug/L	1		<1	<1	<0.430	<0.250	<0.11	<0.56	<1	<1	<1	<1	<1	<1	<0.860	<0.250	<0.56
Bromochloromethane	ug/L	5		<1	<1	<0.470	<0.300	<0.36	<1.8	<1	<1	<1	<1	<1	<1	<0.940	<0.300	<1.8
Bromodichloromethane	ug/L	50		<1	<1	<0.350	<0.260	<0.19	<0.96	<1	<1	<1	<1	<1	<1	<0.700	<0.260	<0.96
Bromoform	ug/L	50		<1	<1	<0.260	<0.460	<0.35	<1.8	<1	<1	<1	<1	<1	<1	<0.520	<0.460	<1.8
Bromomethane	ug/L	5		<1	<1	<0.510	<0.250	<0.18	<0.92	<1	<1	<1	<1	<1	<1	<1.34	<0.250	<0.92
Carbon disulfide	ug/L	NC		<1	<1	<0.670	<0.300	<0.13	<0.63	<1	<1	<1	<1	<1	<1	<1.00	<0.300	<0.63
Carbon tetrachloride	ug/L	5		<1	<1	<0.500	<0.360	<0.19	<0.94	<1	<1	<1	<1	<1	<1	<0.800	<0.360	<0.94
Chlorobenzene	ug/L	5		<1	<1	<0.400	<0.220	<0.16	<0.78	<1	<1	<1	<1	<1	<1	<0.960	<0.220	<0.78
Chloroethane	ug/L	5		<1	<1	<0.480	<0.360	<0.21	<1.1	<1	<1	<1	<1	<1	<1	<1.56	<0.360	<1.1
Chloroform	ug/L	7		<1	<1	<0.340	<0.220	<0.15	<0.75	<1	<1	<1	<1	<1	<1	2.23	<0.220	<0.75
Chloromethane	ug/L	5		<1	<1	<0.350	<0.280	<0.20	<0.98	<1	<1	<1	<1	<1	<1	<0.700	<0.280	<0.98
cis-1,2-Dichloroethene	ug/L	5		<1	0.15 J	2.21	**8.56**	**5**	4.8 J	2	**5**	2	**5**	2	**5**	**7.32**	**3.98**	4.4 J
cis-1,3-Dichloropropene	ug/L	0.4		<1	<1	<0.360	<0.250	<0.17	<0.84	<1	<1	<1	<1	<1	<1	<0.720	<0.250	<0.84
Cyclohexane	ug/L	NC		<1	<1	<0.460	<0.380	<0.32	<1.6	<1	<1	<1	<1	<1	<1	<0.920	<0.380	<1.6
Dibromochloromethane	ug/L	50		<1	<1	<0.360	<0.240	<0.20	<1.00	<1	<1	<1	<1	<1	<1	<0.720	<0.240	<1.00
Dichlorodifluoromethane	ug/L	5		<1	<1	<0.420	<0.290	<0.57	<2.9	<1	<1	<1	<1	<1	<1	<0.840	<0.290	<2.9
Ethylbenzene	ug/L	5		<1	<1	<0.340	<0.220	<0.10	<0.51	<1	<1	<1	<1	<1	<1	<0.680	<0.220	<0.51
Isopropylbenzene	ug/L	5		<1	<1	<0.390	<0.210	<0.12	<0.58	<1	<1	<1	<1	<1	<1	<0.780	<0.210	<0.58
Methyl acetate	ug/L	NC		<1	<1	<0.350	<0.220	<0.20	<1.0	<1	<1	<1	<1	<1	<1	<0.700	<0.220	<1.0
Methyl tert-butyl ether (MTBE)	ug/L	NC		<1	<1	<0.380	<0.240	<0.25	<1.2	<1	<1	<1	<1	<1	<1	<0.760	<0.240	<1.2
Methylcyclohexane	ug/L	NC		<1	<1	<0.460	<0.360	<0.13	<0.64	<1	<1	<1	<1	<1	<1	<0.920	<0.360	<0.64
Methylene chloride	ug/L	5		<1	<1	<1.98	<1.98	<0.16	<0.81	<1	<1	0.36 J	<1	<1	<1	<3.96	<1.98	<0.81
Styrene	ug/L	5		<1	<1	<0.330	<0.250	<0.13	<0.64	<1	<1	<1	<1	<1	<1	<0.660	<0.250	<0.64
Tetrachloroethene	ug/L	5		0.86 J	0.59 J	**21.3**	**26.3**	1	<0.67	4	1	2	1	1	1	**250**	**217 D**	**265**
Toluene	ug/L	5		<1	<1	<0.390	<0.270	<0.17	<0.83	<1	<1	<1	<1	<1	<1	<0.780	<0.270	<0.83
trans-1,2-Dichloroethene	ug/L	5		<1	<1	<0.550	<0.350	0.26 J	<0.72	0.22 J	0.31 J	0.26 J	0.30 J	0.20 J	0.27 J	<1.10	<0.350	<0.72
trans-1,3-Dichloropropene	ug/L	0.4		<1	<1	<0.320	<0.220	<0.20	<1.0	<1	<1	<1	<1	<1	<1	<0.640	<0.220	<1.0
Trichloroethene	ug/L	5		0.62 J	0.89 J	0.598 J	<0.270	0.38 J	**9**	0.42 J	0.35 J	0.26 J	0.49 J	0.24 J	0.50 J	**8.99**	**9.22**	**10**
Trichlorofluoromethane	ug/L	5		<1	<1	<0.660	<0.450	<0.28	<1.4	<1	<1	<1	<1	<1	<1	<1.32	<0.450	<1.4
Vinyl Chloride	ug/L	2		<1	<1	**2.67**	**3.34**	<0.24	<1.2	**16**	**14**	**17**	**12**	**20**	**8**	<0.920	<0.290	<1.2
Xylenes (Total)	ug/L	5		<3	<3	<0.630	<0.690	<0.58	<2.9	<3	<3	<3	<3	<3	<3	<1.26	<0.690	<2.9
Total VOCs	ug/L	NA		5.1 J	31.81	26.8 J	39.5	5	20.8 J	28.65 J	20.66 J	23.41 J	18.79 J	24.64 J	39.9	269	230	275

Notes:
6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.
ft above msl = feet above mean sea level
BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria
***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)
J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.
R = The result was rejected during data validation.
D = Diluted sample result
units = ug/L or parts per billion
NA = Not Available
NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter		6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-8SB	MW-8SB	MW-8SB	MW-8SB	MW-8SB	MW-8SB	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9
			Screen Interval (ft above msl):	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7	141.7 - 151.7	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8	175.8 - 185.8
			Date Sampled:	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)	10/20/2011	5/1/2012	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)
VOLATILE ORGANIC COMPOUNDS (VOCs)	**Units**																	
1,1,1-Trichloroethane	ug/L	5		<5	<1	<10	<5	<10	<20	<0.350	<0.330	<0.27	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5		<5	<1	<10	<5	<10	<20	<0.310	<0.320	<0.27	<1	<1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<5	<1	<10	<5	<10	<20	<0.440	<0.420	<0.46	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1		<5	<1	<10	<5	<10	<20	<0.360	<0.220	<0.34	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5		<5	<1	<10	<5	<10	<20	<0.430	<0.260	<0.15	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5		<5	<1	<10	<5	<10	<20	<0.710	<0.410	<0.27	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5		<5	<1	<10	<5	<10	<20	<0.420	<0.210	<0.25	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5		<5	<1	<10	<5	<10	<20	<0.390	<0.200	<0.24	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006		<5	<1	<10	<5	<10	<20	<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3		<5	<1	<10	<5	<10	<20	<0.360	<0.230	<0.13	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6		<5	<1	<10	<5	<10	<20	<0.420	<0.200	<0.17	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1		<5	<1	<10	<5	<10	<20	<0.520	<0.250	<0.18	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3		<5	<1	<10	<5	<10	<20	<0.420	<0.230	<0.20	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3		<5	<1	<10	<5	<10	<20	<0.330	<0.230	<0.18	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC		<5	<5	<5	<3	<1	<3	<22.5 R	<0.301	<0.97	<5	<5	<5	<3	<1	<3
2-Butanone (MEK)	ug/L	50		<50	<10	<100	1.7 J	<100	<200	<0.630	<0.550	3.7 J	1.09 J	<10	<10	<10	<10	<10
2-Hexanone	ug/L	50		<50	<10	<100	<50	<100	<200	<0.260	<0.370	<0.19	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<50	<10	<100	<50	<100	<200	<0.510	<0.350	<0.35	<10	<10	<10	<10	<10	<10
Acetone	ug/L	50		6.9 J	<10	<100	<50	<100	<200	<0.870	<0.280	<4.0	5.10 J	<10	1.60 J	<10	2.63 J	41
Benzene	ug/L	1		<5	<1	<10	<5	<10	<20	<0.430	<0.250	<0.11	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	5		<5	<1	<10	<5	<10	<20	<0.470	<0.300	<0.36	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	50		<5	<1	<10	<5	<10	<20	<0.350	<0.260	<0.19	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	50		<5	<1	<10	<5	<10	<20	<0.260	<0.460	<0.35	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	5		<5	<1	<10	<5	<10	<20	<0.670	<0.250	<0.18	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	NC		<5	<1	<10	<5	<10	<20	<0.500	<0.300	<0.13	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5		<5	<1	<10	<5	<10	<20	<0.400	<0.360	<0.19	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	5		<5	<1	<10	<5	<10	<20	<0.480	<0.220	<0.16	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	5		<5	<1	<10	<5	<10	<20	<0.780	<0.360	<0.21	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	7		<5	5	<10	<5	<10	<20	**9.28**	<0.220	<0.15	<1	<1	<1	<1	<1	0.11 J
Chloromethane	ug/L	5		<5	<1	<10	<5	<10	<20	<0.350	<0.280	<0.20	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5		**9**	<1	**10**	**10**	**8.3 J**	**9.6 J**	<0.380	<0.300	<0.21	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	0.4		<5	<1	<10	<5	<10	<20	<0.360	<0.250	<0.17	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	NC		<5	<1	<10	<5	<10	<20	<0.460	<0.380	<0.32	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	50		<5	<1	<10	<5	<10	<20	<0.360	<0.240	<0.20	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5		<5	<1	<10	<5	<10	<20	<0.420	<0.290	<0.57	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	5		<5	<1	<10	<5	<10	<20	<0.340	<0.220	<0.10	<1	<1	<1	<1	<1	<1
Isopropylbenzene	ug/L	5		<5	<1	<10	<5	<10	<20	<0.390	<0.210	<0.12	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	NC		<5	<1	<10	<5	<10	<20	<0.350	<0.220	<0.20	<1	<1	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC		<5	<1	<10	<5	<10	<20	<0.380	<0.240	<0.25	<1	<1	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC		<5	<1	<10	<5	<10	<20	<0.460	<0.360	<0.13	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5		<5	<1	<10	<5	<10	<20	<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	<1
Styrene	ug/L	5		<5	<1	<10	<5	<10	<20	<0.330	<0.250	<0.13	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5		**292**	3	**280**	**359**	**240**	**190**	<0.470	<0.330	0.18 J	<1	0.38 J	<1	0.25 J	<1	0.31 J
Toluene	ug/L	5		<5	<1	<10	<5	<10	<20	<0.390	<0.270	<0.17	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	5		<5	<1	<10	<5	<10	<20	<0.550	<0.350	<0.14	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4		<5	<1	<10	<5	<10	<20	<0.320	<0.220	<0.20	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5		**12**	<1	10	**14**	**10**	**14.2 J**	<0.550	<0.270	<0.29	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	5		<5	<1	<10	<5	<10	<20	<0.660	<0.450	<0.28	<1	<1	<1	<1	<1	<1
Vinyl Chloride	ug/L	2		<5	<1	<10	<5	<10	<20	<0.460	<0.290	<0.24	<1	<1	<1	<1	<1	<1
Xylenes (Total)	ug/L	5		<20	<3	<30	<20	<30	<60	<0.630	<0.690	<0.58	<3	<3	<3	<3	<3	<3
Total VOCs	ug/L	NA		319.9 J	8	300	384.7 J	258.3 J	213.8	9.28	---	---	6.19 J	0.38 J	1.60 J	0.25 J	2.63 J	41.42

Notes:
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ft above msl = feet above mean sea level
BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria
***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)
J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.
R = The result was rejected during data validation.
D = Diluted sample result
units = ug/L or parts per billion
NA = Not Available
NC = No Criteria

Table 1
Groundwater Quality VOC Data Summary
Groundwater Sampling Report
Brownfield Cleanup Program No. C360115
1-5 Holland Avenue, White Plains, NY

Parameter	Units	6 NYCRR Part 703/TOGS 1.1.1 Class GA Groundwater Standards	Well ID:	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB	MW-9SB
			Screen Interval (ft above msl):	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8	144.8 - 155.8
			Date Sampled:	10/20/2011	5/2/2012	6/10/2013	7/17/2014 (Post ISCO)	10/10/2014 (Post ISCO)	5/7/2015 (Post ISCO)	10/9/2015 (Post ISCO)	5/4/2016 (Post ISCO)	10/26/2016 (Post ISCO)
VOLATILE ORGANIC COMPOUNDS (VOCs)												
1,1,1-Trichloroethane	ug/L	5		<0.350	<0.330	<0.27	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	5		<0.310	<0.320	<0.27	<1	<1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/L	5		<0.440	<0.420	<0.46	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	ug/L	1		<0.360	<0.220	<0.34	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	5		<0.430	<0.260	<0.15	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	5		<0.710	<0.410	<0.27	<1	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	5		<0.420	<0.210	<0.25	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	5		<0.390	<0.200	<0.24	<1	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	0.04		<0.00855	<0.00855	<0.0080	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
1,2-Dibromoethane (EDB)	ug/L	0.0006		<0.00855	<0.00855	<0.12	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	3		<0.360	<0.230	<0.13	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane (EDC)	ug/L	0.6		<0.420	<0.200	<0.17	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	ug/L	1		<0.520	<0.250	<0.18	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	3		<0.420	<0.230	<0.20	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	ug/L	3		<0.330	<0.230	<0.18	<1	<1	<1	<1	<1	<1
1,4-Dioxane	ug/L	NC		<22.5 R	<0.301	<0.97	<5	<5	<5	<3	<1	<3
2-Butanone (MEK)	ug/L	50		<0.630	<0.550	<3.3	0.69 J	<10	<10	<10	<10	<10
2-Hexanone	ug/L	50		<0.260	<0.370	<0.19	<10	<10	<10	<10	<10	<10
4-Methyl-2-pentanone (MIBK)	ug/L	NC		<0.510	<0.350	<0.35	<10	<10	<10	<10	<10	0.10 J
Acetone	ug/L	50		<0.870	<0.280	<4.0	4.63 J	<10	1.70 J	<10	1.29 J	42
Benzene	ug/L	1		**2**	<0.250	<0.11	<1	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	5		<0.470	<0.300	<0.36	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	50		<0.350	<0.260	<0.19	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	50		<0.260	<0.460	<0.35	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	5		<0.670	<0.250	<0.18	<1	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	NC		<0.500	<0.300	<0.13	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	5		<0.400	<0.360	<0.19	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	5		<0.480	<0.220	<0.16	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	5		<0.780	<0.360	<0.21	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	7		3.81	0.563 J	<0.94 J	0.88 J	0.88 J	0.86 J	0.83 J	0.61 J	0.53 J
Chloromethane	ug/L	5		<0.350	<0.280	<0.20	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5		1.55	1.14	0.36 J	<1	<1	<1	<1	<1	0.15 J
cis-1,3-Dichloropropene	ug/L	0.4		<0.360	<0.250	<0.17	<1	<1	<1	<1	<1	<1
Cyclohexane	ug/L	NC		<0.460	<0.380	<0.32	<1	<1	<1	<1	<1	<1
Dibromochloromethane	ug/L	50		<0.360	<0.240	<0.20	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	5		<0.420	<0.290	<0.57	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	5		<0.340	<0.220	<0.10	<1	<1	<1	<1	<1	<1
Isopropylbenzene	ug/L	5		<0.390	<0.210	<0.12	<1	<1	<1	<1	<1	<1
Methyl acetate	ug/L	NC		<0.350	<0.220	<0.20	<1	<1	<1	<1	<1	<1
Methyl tert-butyl ether (MTBE)	ug/L	NC		<0.380	<0.240	<0.25	<1	<1	<1	<1	<1	<1
Methylcyclohexane	ug/L	NC		<0.460	<0.360	<0.13	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	5		<1.98	<1.98	<0.16	<1	<1	<1	<1	<1	0.10 J
Styrene	ug/L	5		<0.330	<0.250	<0.13	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5		1.23	1.09	0.30 J	0.34 J	0.26 J	0.21 J	<1	<1	<1
Toluene	ug/L	5		<0.390	<0.270	<0.17	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	5		<0.550	<0.350	<0.14	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	0.4		<0.320	<0.220	<0.20	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5		<0.550	<0.270	<0.29	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	5		<0.660	<0.450	<0.28	<1	<1	<1	<1	<1	<1
Vinyl Chloride	ug/L	2		<0.460	<0.290	<0.24	<1	<1	<1	<1	<1	<1
Xylenes (Total)	ug/L	5		<0.630	<0.690	<0.58	<3	<3	<3	<3	<3	<3
Total VOCs	ug/L	NA		8.59	2.79 J	0.66	6.54 J	1.14 J	2.77 J	0.83 J	1.9 J	42.88

Notes:

6 NYCRR Part 703 and TOGS 1.1.1 = Division of Water Technical and Operational Guidance Series Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.

ft above msl = feet above mean sea level

BOLD = Exceeds TOGS 1.1.1 Class GA Groundwater Standards/Criteria

***** = Analyzed for but Not Detected at the Method Detection Limit (MDL)

J = The concentration was detected at a value below the Reporting Limit (RL) and above the MDL.

R = The result was rejected during data validation.

D = Diluted sample result

units = ug/L or parts per billion

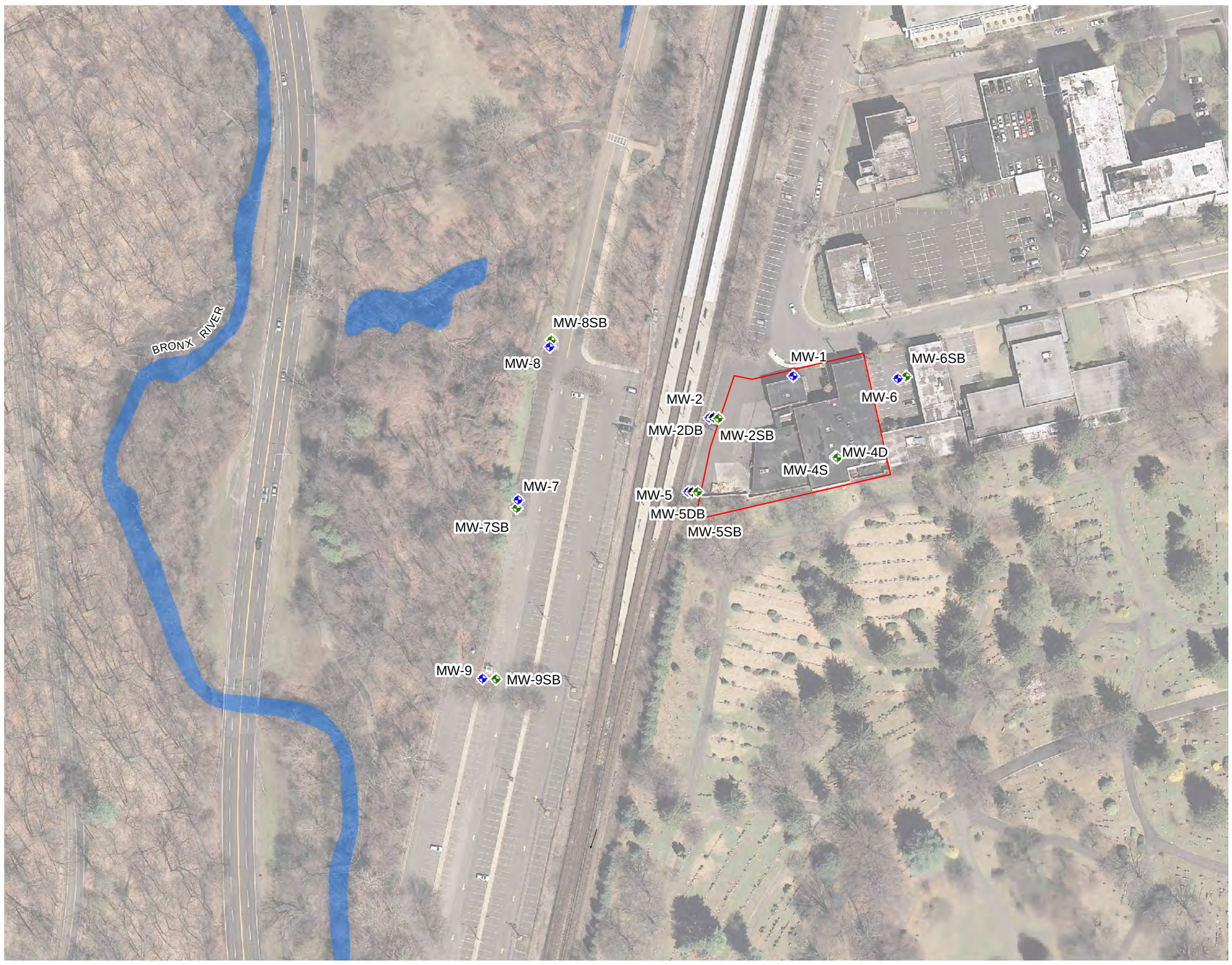
NA = Not Available

NC = No Criteria

Figures

\\Syrna01\projects\Feintool-Ny.14206\60464.Smp-Implementat\Docs\DWG\MXD\MW_Locs.mxd

FIGURE 1



LEGEND

- OVERBURDEN MONITORING WELL
- SHALLOW BEDROCK MONITORING WELL
- DEEP BEDROCK MONITORING WELL
- PROPERTY BOUNDARY

SITE MANAGEMENT PLAN
BROWNFIELD CLEANUP
PROGRAM NO. C360115
1-5 HOLLAND AVENUE
WHITE PLAINS, NY

GROUNDWATER MONITORING WELL LOCATIONS

0 60 120 240
Feet

JUNE 2015
14206.60464

O'BRIEN & GERE

This document was developed in color. Reproduction in B/W may not represent the data as intended.

PLOTDATE: 04/14/14 12:19:57 PM ReidLS

Appendices

Groundwater Sampling Logs

Location ID	Ground Elevation (ft amsl)	Well Casing Elevation (ft amsl)	Well Screen Interval		Well Screen Interval (ft bgs)	Hydrogeologic Screen Interval	Date Deployment	Depth to GW (PVC)	Date Retrieval/Sample Collection	Depth to GW (PVC)	Field Parameters					
			Top	Bottom							pH	Temp. (°C)	Spec. Conductance (mS/cm)	ORP (mV)	TDS (ppm)	Dis. Ox. (mg/L)
MW-1	198.9	198.61	192.7	182.7	5.9-15.9	Overburden	10/7/2016	13.55	10/26/2016	13.59	7.7	13.8	0.02	50.1	10	10
MW-2	204.7	204.39	191.4	181.4	13-23	Overburden	10/7/2016	19.58	10/26/2016	19.37	7.16	14.92	2.33	77.1	1562	3.48
MW-2DB	204.3	204.04	136.3	126.3	68-78	Deep Bedrock	10/7/2016	18.71	10/26/2016	18.66	8.01	13.02	0.33	41.3	222	0.58
MW-2SB	203.9	203.55	158.9	148.9	45-55	Shallow Bedrock	10/7/2016	18.1	10/26/2016	17.95	7.89	13.6	0.36	40.5	239	1.1
MW-4S	202.5	202.27	188.5	178.4	14-24	Overburden	10/7/2016	16.95	10/26/2016	16.82	10.66	14.65	0.76	53.5	507	2.91
MW-4D	202.5	202.07	168.0	158.0	34.5-44.5	Shallow Bedrock	10/7/2016	16.78	10/26/2016	16.59	10.62	14.28	0.89	56.3	595	8.1
MW-5	203.7	203.39	189.7	179.7	14-24	Overburden	10/7/2016	18.68	10/26/2016	18.43	7.55	13.59	0.80	26.7	536	4.41
MW-5DB	203.4	203.07	115.4	105.4	88-98	Deep Bedrock	10/7/2016	18.01	10/26/2016	17.56	8.43	12.64	0.36	38.6	241	0.4
MW-5SB	203.1	202.80	155.1	145.1	48-58	Shallow Bedrock	10/7/2016	17.76	10/26/2016	17.82	8.19	12.65	0.53	-66.8	354	0.49
MW-6	204.0	203.63	190.0	180.0	14-24	Overburden	10/7/2016	18.22	10/26/2016	18.02	7.62	16.1	2.24	133.3	1499	5.34
MW-6SB	204.2	203.83	162.4	152.4	41.9-51.9	Shallow Bedrock	10/7/2016	18.49	10/26/2016	18.3	7.76	14.32	0.48	114.4	322	8.7
MW-7	200.2	199.73	185.2	175.2	15-25	Overburden	10/7/2016	16.4	10/26/2016	15.87	7.4	13.11	2.11	142.1	1410	4.27
MW-7SB	200.2	199.79	156.2	146.2	44-54	Shallow Bedrock	10/7/2016	15.57	10/26/2016	15.35	7.37	12.64	2.98	114.5	1993	0.78

Location ID	Ground Elevation (ft amsl)	Well Casing Elevation (ft amsl)	Well Screen Interval		Well Screen Interval (ft bgs)	Hydrogeologic Screen Interval	Date Deployment	Depth to GW (PVC)	Date Retrieval/Sample Collection	Depth to GW (PVC)	Field Parameters					
			Top	Bottom							pH	Temp. (°C)	Spec. Conductance (mS/cm)	ORP (mV)	TDS (ppm)	Dis. Ox. (mg/L)
MW-8	197.6	197.34	182.6	172.6	15-25	Overburden	10/7/2016	13.45	10/26/2016	13.04	6.74	15.68	4.54	-10.8	3040	0.3
MW-8SB	197.3	196.68	152.3	142.3	45-55	Shallow Bedrock	10/7/2016	12.55	10/26/2016	12.37	7.07	13.15	2.37	36.5	1587	0.25
MW-9	201.3	200.80	186.3	176.3	15-25	Overburden	10/7/2016	17.59	10/26/2016	17.17	7.43	13.77	0.88	113.3	588	2.6
MW-9SB	201.3	200.76	155.3	145.3	46-56	Shallow Bedrock	10/7/2016	16.75	10/26/2016	16.61	7.35	12.28	0.95	66.6	639	0.42

Field Notes: Blind Duplicate Installed: MW-4D
MS/MSD Installed: MW-2SB
TDS calculation = (TDS) ppm = Conductivity mS/cm x 0.67 x 1,000

Sampler Deployment: Mark Randazzo
Sampler Retrieval: Mark Randazzo

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-1

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: Sunny/50°

Well Information:

Depth of Well: 16 ft. bmp*
Depth to Water: 13.59 ft. bmp*
Length of Water Column (LWC): 2.41 ft.
PDB Midpoint: 14.7 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-2

Project No.: ~~60464~~ 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: 50°/Sunny

Well Information:

Depth of Well: 23 ft. bmp*
Depth to Water: 19.37 ft. bmp*
Length of Water Column (LWC): 3.6 ft.
PDB Midpoint: 21.2 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-2SB

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: 50°/sunny

Well Information:

Depth of Well: 55 ft. bmp*
Depth to Water: 17.95 ft. bmp*
Length of Water Column (LWC): 37.05 ft.
PDB Midpoint: 50 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes: MS/MSD collected

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-2DB

Project No.: ~~60464~~ 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: 50/sunny

Well Information:

Depth of Well: 78 ft. bmp*
Depth to Water: 18.66 ft. bmp*
Length of Water Column (LWC): 59.34 ft.
PDB Midpoint: 73 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-4S

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather:

Well Information:

Depth of Well: 24 ft. bmp*
Depth to Water: 16.82 ft. bmp*
Length of Water Column (LWC): 7.18 ft.
PDB Midpoint: 20.4 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-4D

Project No.: ~~60464~~ 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather:

Well Information:

Depth of Well: 44.5 ft. bmp*
Depth to Water: 16.59 ft. bmp*
Length of Water Column (LWC): 27.91 ft.
PDB Midpoint: 39.5 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes: BD-1 collected here.

O'BRIEN & GERE | PDB Groundwater Sampling Log | Well ID: MW-5

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: Sunny/50

Well Information:

Depth of Well: 24 ft. bmp*
Depth to Water: 18.43 ft. bmp*
Length of Water Column (LWC): 5.57 ft.
PDB Midpoint: 21.23 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE | PDB Groundwater Sampling Log | Well ID: MW-5SB

Project No.: ~~60464~~ 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: Sunny/50

Well Information:

Depth of Well: 58 ft. bmp*
Depth to Water: 17.82 ft. bmp*
Length of Water Column (LWC): 40.18 ft.
PDB Midpoint: 53 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-5DB

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: Sunny/50

Well Information:

Depth of Well: 98 ft. bmp*
Depth to Water: 17.56 ft. bmp*
Length of Water Column (LWC): 80.44 ft.
PDB Midpoint: 93 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-6

Project No.: ~~60484~~ 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: Sunny/50

Well Information:

Depth of Well: 24 ft. bmp*
Depth to Water: 18.02 ft. bmp*
Length of Water Column (LWC): 6 ft.
PDB Midpoint: 21 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-65B

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: Sunny/50

Well Information:

Depth of Well: 52 ft. bmp*
Depth to Water: 18.30 ft. bmp*
Length of Water Column (LWC): 33.7 ft.
PDB Midpoint: 47 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE

PDB Groundwater Sampling Log

Well ID: MW-7

Project No.: ~~60464~~ 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: Sunny/50

Well Information:

Depth of Well: 25 ft. bmp*
Depth to Water: 15.9 ft. bmp*
Length of Water Column (LWC): 9.1 ft.
PDB Midpoint: 20.5 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE — PDB Groundwater Sampling Log — Well ID: MW-75B

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: Sunny/50

Well Information:

Depth of Well: 54 ft. bmp*
Depth to Water: 15.35 ft. bmp*
Length of Water Column (LWC): 38.65 ft.
PDB Midpoint: 29 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 10/26 & 10/27/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE — PDB Groundwater Sampling Log — Well ID: MW-8

Project No.: ~~60464~~ 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: Sunny/50

Well Information:

Depth of Well: 25 ft. bmp*
Depth to Water: 13.04 ft. bmp*
Length of Water Column (LWC): 11.96 ft.
PDB Midpoint: 20 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE — PDB Groundwater Sampling Log — Well ID: MW-85B

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: Sunny 50

Well Information:

Depth of Well: 55 ft. bmp*
Depth to Water: 12.37 ft. bmp*
Length of Water Column (LWC): 42.6 ft.
PDB Midpoint: 50 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE — PDB Groundwater Sampling Log — Well ID: MW-9

Project No.: ~~60464~~ 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: Sunny 50

Well Information:

Depth of Well: 25 ft. bmp*
Depth to Water: 17.17 ft. bmp*
Length of Water Column (LWC): 7.83 ft.
PDB Midpoint: ~21 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other:

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE — PDB Groundwater Sampling Log — Well ID: MW-95B

Project No.: 63124
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: 10/26/16
Weather: sunny 50°

Well Information:

Depth of Well: 56 ft. bmp*
Depth to Water: 16.6 ft. bmp*
Length of Water Column (LWC): 39.4 ft.
PDB Midpoint: 51 ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: 10/7/16
PDB Removal Date: 10/26/16

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

O'BRIEN & GERE — PDB Groundwater Sampling Log — Well ID: _____

Project No.: 60464
Site Name: 1-5 Holland Avenue
Site Loc.: One Holland Avenue Development

Field Personnel: MAR
Date: _____
Weather: _____

Well Information:

Depth of Well: _____ ft. bmp*
Depth to Water: _____ ft. bmp*
Length of Water Column (LWC): _____ ft.
PDB Midpoint: _____ ft.

* Measurement Point:
X Well Casing
☐ Protective Casing
☐ Other: _____

PDB Installation Date: _____
PDB Removal Date: _____

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	VOA	3	No	HCL	<2

Notes:

Merit's Laboratory Analytical Report

Analytical Laboratory Report

Report ID: S77144.01(01)
Generated on 11/14/2016

Report to

Attention: Mark Randazzo
O'Brien & Gere Engineers
22 Sawmill River Rd
Hawthorne, NY

Phone: 781-883-6432 FAX:
Email: mark.randazzo@obg.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S77144.01-S77144.21
Project: 63124/OHAD SMP
Collected Date: 10/26/2016
Submitted Date/Time: 10/27/2016 09:45
Sampled by: Mark Randazzo
P.O. #: 11600289

Table of Contents

Maya Murshak
Technical Director

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.
QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.
Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report Narrative

There is no additional narrative for this analytical report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods

Method Summary

Method	Version
N/A	Not Applicable
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs

Sample Summary (21 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S77144.01	MW-1	Groundwater	10/26/16 13:30
S77144.02	MW-2SB	Groundwater	10/26/16 11:15
S77144.03	MW-2SB MS	Groundwater	10/26/16 11:15
S77144.04	MW-2SB MSD	Groundwater	10/26/16 11:15
S77144.05	MW-2DB	Groundwater	10/26/16 11:30
S77144.06	MW-2	Groundwater	10/26/16 11:00
S77144.07	MW-4S	Groundwater	10/26/16 13:45
S77144.08	MW-4D	Groundwater	10/26/16 14:00
S77144.09	MW-5	Groundwater	10/26/16 12:45
S77144.10	MW-5SB	Groundwater	10/26/16 13:00
S77144.11	MW-5DB	Groundwater	10/26/16 13:15
S77144.12	MW-6	Groundwater	10/26/16 06:45
S77144.13	MW-6SB	Groundwater	10/26/16 07:00
S77144.14	MW-7	Groundwater	10/26/16 08:30
S77144.15	MW-7SB	Groundwater	10/26/16 08:45
S77144.16	MW-8	Groundwater	10/26/16 10:00
S77144.17	MW-8SB	Groundwater	10/26/16 10:15
S77144.18	MW-9	Groundwater	10/26/16 09:15
S77144.19	MW-9SB	Groundwater	10/26/16 09:30
S77144.20	TB-1	Liquid	10/26/16 00:01
S77144.21	BD-1	Groundwater	10/26/16 00:01

Analytical Laboratory Report

Lab Sample ID: S77144.01
Sample Tag: MW-1
Collected Date/Time: 10/26/2016 13:30
Matrix: Groundwater
COC Reference: 83571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 15:28	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 15:28	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.30	
Acetone	18	ug/L	10	SW5030C/8260C	11/08/16 20:39	JGH	8.5	
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
2-Butanone (MEK)	8.3	ug/L	10	SW5030C/8260C	11/08/16 20:39	JGH	4.7	J
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.40	
Chloromethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Vinyl chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Methylene chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Chloroform	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Trichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Toluene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.050	
Tetrachloroethene	2	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.01 (continued)
Sample Tag: MW-1

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.020	
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/08/16 20:39	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:39	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.02
Sample Tag: MW-2SB
Collected Date/Time: 10/26/2016 11:15
Matrix: Groundwater
COC Reference: 83571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 15:05	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 15:05	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.30	
Acetone	13	ug/L	10	SW5030C/8260C	11/08/16 20:17	JGH	8.5	
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
2-Butanone (MEK)	12	ug/L	10	SW5030C/8260C	11/08/16 20:17	JGH	4.7	
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.40	
Chloromethane*	0.15	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	J
Vinyl chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Methylene chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Chloroform	0.32	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	J
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	0.17	ug/L	10	SW5030C/8260C	11/08/16 20:17	JGH	0.10	J
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Trichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Toluene	0.13	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	J
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.050	
Tetrachloroethene	0.22	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.20	J

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.02 (continued)
Sample Tag: MW-2SB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.020	
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/08/16 20:17	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 20:17	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.03
Sample Tag: MW-2SB MS
Collected Date/Time: 10/26/2016 11:15
Matrix: Groundwater
COC Reference: 83571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	0.11	ug/L	0.05	SW8260B - SIM	11/08/16 15:47	JGH	0.466	1
1,4-Dioxane*	45	ug/L	3	SW8260B - SIM	11/08/16 15:47	JGH	0	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	52	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.30	2
Acetone	109	ug/L	10	SW5030C/8260C	11/08/16 17:48	JGH	8.5	2
Carbon disulfide	52	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
Methyl Acetate*	48	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
tert-Methyl butyl ether (MTBE)	49	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
2-Butanone (MEK)	120	ug/L	10	SW5030C/8260C	11/08/16 17:48	JGH	4.7	2
Dichlorodifluoromethane	49	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.40	2
Chloromethane*	48	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
Vinyl chloride	47	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
Bromomethane	53	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
Chloroethane	63	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.20	2
Trichlorofluoromethane	51	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.40	2
1,1-Dichloroethene	48	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
Methylene chloride	47	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
trans-1,2-Dichloroethene	47	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
1,1-Dichloroethane	47	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
cis-1,2-Dichloroethene	47	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
Chloroform	47	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
Bromochloromethane	46	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
1,1,1-Trichloroethane	48	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
Cyclohexane	22	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
4-Methyl-2-pentanone (MIBK)	54	ug/L	10	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
2-Hexanone	82	ug/L	10	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
Carbon tetrachloride	49	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
Benzene	47	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
1,2-Dichloroethane	47	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
Trichloroethene	47	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
1,2-Dichloropropane	48	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
Bromodichloromethane	49	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
Methyl cyclohexane	51	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
cis-1,3-Dichloropropene	50	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
Toluene	47	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
trans-1,3-Dichloropropene	50	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	2
1,1,2-Trichloroethane	46	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.050	2

1-Spiked at 0.1ug/L
2-Spiked at 50ug/L

Lab Sample ID: S77144.03 (continued)
Sample Tag: MW-2SB MS

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Tetrachloroethene	29	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.20	1
Dibromochloromethane	50	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.020	1
1,2-Dibromoethane	47	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	1
Chlorobenzene	47	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	1
Ethylbenzene	48	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	1
Total Xylenes	145	ug/L	3	SW5030C/8260C	11/08/16 17:48	JGH	0.25	1
Styrene	48	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	1
Isopropylbenzene	48	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.030	1
Bromoform	50	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	1
1,1,2,2-Tetrachloroethane	48	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.050	1
1,3-Dichlorobenzene	48	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	1
1,4-Dichlorobenzene	47	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	1
1,2-Dichlorobenzene	48	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	1
1,2,4-Trichlorobenzene	48	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.10	1
1,2,3-Trichlorobenzene	47	ug/L	1	SW5030C/8260C	11/08/16 17:48	JGH	0.040	1

1-Spiked at 50ug/L

Analytical Laboratory Report

Lab Sample ID: S77144.04
Sample Tag: MW-2SB MSD
Collected Date/Time: 10/26/2016 11:15
Matrix: Groundwater
COC Reference: 83571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	0.09	ug/L	0.05	SW8260B - SIM	11/08/16 16:07	JGH	0.466	1
1,4-Dioxane*	43	ug/L	3	SW8260B - SIM	11/08/16 16:07	JGH	0	2
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	51	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.30	2
Acetone	130	ug/L	10	SW5030C/8260C	11/08/16 18:10	JGH	8.5	2
Carbon disulfide	51	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
Methyl Acetate*	49	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
tert-Methyl butyl ether (MTBE)	50	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
2-Butanone (MEK)	119	ug/L	10	SW5030C/8260C	11/08/16 18:10	JGH	4.7	2
Dichlorodifluoromethane	49	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.40	2
Chloromethane*	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
Vinyl chloride	46	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
Bromomethane	54	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
Chloroethane	65	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.20	2
Trichlorofluoromethane	51	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.40	2
1,1-Dichloroethene	49	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
Methylene chloride	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
trans-1,2-Dichloroethene	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
1,1-Dichloroethane	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
cis-1,2-Dichloroethene	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
Chloroform	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
Bromochloromethane	47	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
1,1,1-Trichloroethane	49	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
Cyclohexane	26	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
4-Methyl-2-pentanone (MIBK)	55	ug/L	10	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
2-Hexanone	84	ug/L	10	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
Carbon tetrachloride	51	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
Benzene	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
1,2-Dichloroethane	49	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
Trichloroethene	47	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
1,2-Dichloropropane	49	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
Bromodichloromethane	51	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
Methyl cyclohexane	51	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
cis-1,3-Dichloropropene	52	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
Toluene	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
trans-1,3-Dichloropropene	51	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	2
1,1,2-Trichloroethane	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.050	2

1-Spiked at 0.1ug/L
2-Spiked at 50ug/L

Lab Sample ID: S77144.04 (continued)
Sample Tag: MW-2SB MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Tetrachloroethene	30	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.20	1
Dibromochloromethane	49	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.020	1
1,2-Dibromoethane	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	1
Chlorobenzene	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	1
Ethylbenzene	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	1
Total Xylenes	142	ug/L	3	SW5030C/8260C	11/08/16 18:10	JGH	0.25	1
Styrene	46	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	1
Isopropylbenzene	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.030	1
Bromoform	47	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	1
1,1,2,2-Tetrachloroethane	49	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.050	1
1,3-Dichlorobenzene	49	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	1
1,4-Dichlorobenzene	49	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	1
1,2-Dichlorobenzene	49	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	1
1,2,4-Trichlorobenzene	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.10	1
1,2,3-Trichlorobenzene	48	ug/L	1	SW5030C/8260C	11/08/16 18:10	JGH	0.040	1

1-Spiked at 50ug/L

Analytical Laboratory Report

Lab Sample ID: S77144.05
Sample Tag: MW-2DB
Collected Date/Time: 10/26/2016 11:30
Matrix: Groundwater
COC Reference: 83571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 15:53	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 15:53	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.30	
Acetone	13	ug/L	10	SW5030C/8260C	11/08/16 21:00	JGH	8.5	
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
2-Butanone (MEK)	12	ug/L	10	SW5030C/8260C	11/08/16 21:00	JGH	4.7	
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.40	
Chloromethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Vinyl chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Methylene chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Chloroform	0.16	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	J
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	0.15	ug/L	10	SW5030C/8260C	11/08/16 21:00	JGH	0.10	J
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Trichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Toluene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.050	
Tetrachloroethene	2	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.05 (continued)
Sample Tag: MW-2DB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.020	
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/08/16 21:00	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:00	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.06
Sample Tag: MW-2
Collected Date/Time: 10/26/2016 11:00
Matrix: Groundwater
COC Reference: 83571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 16:13	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 16:13	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.30	
Acetone	11	ug/L	10	SW5030C/8260C	11/08/16 21:23	JGH	8.5	
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
2-Butanone (MEK)	13	ug/L	10	SW5030C/8260C	11/08/16 21:23	JGH	4.7	
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.40	
Chloromethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Vinyl chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Methylene chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
cis-1,2-Dichloroethene	0.15	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	J
Chloroform	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	0.15	ug/L	10	SW5030C/8260C	11/08/16 21:23	JGH	0.10	J
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Trichloroethene	0.15	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	J
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Toluene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.050	
Tetrachloroethene	15	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.06 (continued)
Sample Tag: MW-2

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.020	
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/08/16 21:23	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:23	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.07
Sample Tag: MW-4S
Collected Date/Time: 10/26/2016 13:45
Matrix: Groundwater
COC Reference: 83571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 16:32	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 16:32	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.30	
Acetone	11	ug/L	10	SW5030C/8260C	11/08/16 21:44	JGH	8.5	
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
2-Butanone (MEK)	9.1	ug/L	10	SW5030C/8260C	11/08/16 21:44	JGH	4.7	J
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.40	
Chloromethane*	0.16	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	J
Vinyl chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Methylene chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Chloroform	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	0.12	ug/L	10	SW5030C/8260C	11/08/16 21:44	JGH	0.10	J
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Trichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Toluene	0.15	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	J
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.050	
Tetrachloroethene	107	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.07 (continued)
Sample Tag: MW-4S

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.020	
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/08/16 21:44	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 21:44	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.08
Sample Tag: MW-4D
Collected Date/Time: 10/26/2016 14:00
Matrix: Groundwater
COC Reference: 83571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 16:52	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 16:52	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	15	Y
Acetone	Not detected	ug/L	500	SW5030C/8260C	11/09/16 15:05	JGH	430	Y
Carbon disulfide	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Methyl Acetate*	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
2-Butanone (MEK)	Not detected	ug/L	500	SW5030C/8260C	11/09/16 15:05	JGH	240	Y
Dichlorodifluoromethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	20	Y
Chloromethane*	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Vinyl chloride	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Bromomethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Chloroethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	10	Y
Trichlorofluoromethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	20	Y
1,1-Dichloroethene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Methylene chloride	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
trans-1,2-Dichloroethene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
1,1-Dichloroethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
cis-1,2-Dichloroethene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Chloroform	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Bromochloromethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
1,1,1-Trichloroethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Cyclohexane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	500	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
2-Hexanone	Not detected	ug/L	500	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Carbon tetrachloride	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Benzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
1,2-Dichloroethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Trichloroethene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
1,2-Dichloropropane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Bromodichloromethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Methyl cyclohexane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
cis-1,3-Dichloropropene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Toluene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
trans-1,3-Dichloropropene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
1,1,2-Trichloroethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	2.5	Y
Tetrachloroethene	990	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	10	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S77144.08 (continued)
Sample Tag: MW-4D

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	1.0	Y
1,2-Dibromoethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Chlorobenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Ethylbenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Total Xylenes	Not detected	ug/L	200	SW5030C/8260C	11/09/16 15:05	JGH	13	Y
Styrene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
Isopropylbenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	1.5	Y
Bromoform	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
1,1,2,2-Tetrachloroethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	2.5	Y
1,3-Dichlorobenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
1,4-Dichlorobenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
1,2-Dichlorobenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
1,2,4-Trichlorobenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	5.0	Y
1,2,3-Trichlorobenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:05	JGH	2.0	Y

Y-Elevated reporting limit due to high target concentration

Analytical Laboratory Report

Lab Sample ID: S77144.09
Sample Tag: MW-5
Collected Date/Time: 10/26/2016 12:45
Matrix: Groundwater
COC Reference: 83571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 17:17	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 17:17	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.30	
Acetone	9.9	ug/L	10	SW5030C/8260C	11/08/16 22:28	JGH	8.5	J
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
2-Butanone (MEK)	9.0	ug/L	10	SW5030C/8260C	11/08/16 22:28	JGH	4.7	J
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.40	
Chloromethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Vinyl chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Methylene chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Chloroform	0.11	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	J
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	0.14	ug/L	10	SW5030C/8260C	11/08/16 22:28	JGH	0.10	J
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Trichloroethene	0.13	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	J
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Toluene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.050	
Tetrachloroethene	32	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.09 (continued)
Sample Tag: MW-5

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.020	
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/08/16 22:28	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:28	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.10
Sample Tag: MW-5SB
Collected Date/Time: 10/26/2016 13:00
Matrix: Groundwater
COC Reference: 83571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 17:42	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 17:42	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.30	
Acetone	21	ug/L	10	SW5030C/8260C	11/08/16 22:50	JGH	8.5	
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
2-Butanone (MEK)	13	ug/L	10	SW5030C/8260C	11/08/16 22:50	JGH	4.7	
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.40	
Chloromethane*	0.15	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	J
Vinyl chloride	0.36	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	J
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
Chloroethane	0.41	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.20	J
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
Methylene chloride	0.20	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	J
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
cis-1,2-Dichloroethene	0.11	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	J
Chloroform	0.24	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	J
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	0.19	ug/L	10	SW5030C/8260C	11/08/16 22:50	JGH	0.10	J
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
Trichloroethene	0.70	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	J
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
Toluene	0.26	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	J
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.050	
Tetrachloroethene	2	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.10 (continued)
Sample Tag: MW-5SB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.020	
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/08/16 22:50	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 22:50	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.11
Sample Tag: MW-5DB
Collected Date/Time: 10/26/2016 13:15
Matrix: Groundwater
COC Reference: 83571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 18:03	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 18:03	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.30	
Acetone	9.9	ug/L	10	SW5030C/8260C	11/09/16 13:11	JGH	8.5	J
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
2-Butanone (MEK)	10	ug/L	10	SW5030C/8260C	11/09/16 13:11	JGH	4.7	
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.40	
Chloromethane*	0.29	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	J
Vinyl chloride	0.28	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	J
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Methylene chloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Chloroform	0.23	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	J
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	0.15	ug/L	10	SW5030C/8260C	11/09/16 13:11	JGH	0.10	J
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Trichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Toluene	0.16	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	J
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.050	
Tetrachloroethene	0.25	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.20	J

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.11 (continued)
Sample Tag: MW-5DB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.020	
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/09/16 13:11	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:11	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.12
Sample Tag: MW-6
Collected Date/Time: 10/26/2016 06:45
Matrix: Groundwater
COC Reference: 83571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 18:28	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 18:28	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.30	
Acetone	45	ug/L	10	SW5030C/8260C	11/09/16 13:33	JGH	8.5	
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
2-Butanone (MEK)	Not detected	ug/L	10	SW5030C/8260C	11/09/16 13:33	JGH	4.7	
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.40	
Chloromethane*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Vinyl chloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Methylene chloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Chloroform	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Trichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Toluene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.050	
Tetrachloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.20	
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.020	

Lab Sample ID: S77144.12 (continued)
Sample Tag: MW-6

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/09/16 13:33	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:33	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.13
Sample Tag: MW-6SB
Collected Date/Time: 10/26/2016 07:00
Matrix: Groundwater
COC Reference: 83571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 18:51	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 18:51	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.30	
Acetone	13	ug/L	10	SW5030C/8260C	11/08/16 23:56	JGH	8.5	
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
2-Butanone (MEK)	12	ug/L	10	SW5030C/8260C	11/08/16 23:56	JGH	4.7	
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.40	
Chloromethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Vinyl chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Methylene chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Chloroform	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	0.15	ug/L	10	SW5030C/8260C	11/08/16 23:56	JGH	0.10	J
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Trichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Toluene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.050	
Tetrachloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.13 (continued)
Sample Tag: MW-6SB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.020	
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/08/16 23:56	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 23:56	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.14
Sample Tag: MW-7
Collected Date/Time: 10/26/2016 08:30
Matrix: Groundwater
COC Reference: 83571

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 19:16	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 19:16	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.30	
Acetone	13	ug/L	10	SW5030C/8260C	11/09/16 00:18	JGH	8.5	
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
2-Butanone (MEK)	11	ug/L	10	SW5030C/8260C	11/09/16 00:18	JGH	4.7	
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.40	
Chloromethane*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Vinyl chloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Methylene chloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Chloroform	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	0.14	ug/L	10	SW5030C/8260C	11/09/16 00:18	JGH	0.10	J
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Trichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Toluene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.050	
Tetrachloroethene	15	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.14 (continued)
Sample Tag: MW-7

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.020	
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/09/16 00:18	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:18	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.15
Sample Tag: MW-7SB
Collected Date/Time: 10/26/2016 08:45
Matrix: Groundwater
COC Reference: 093883

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 19:39	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 19:39	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.30	
Acetone	17	ug/L	10	SW5030C/8260C	11/09/16 00:40	JGH	8.5	
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
2-Butanone (MEK)	13	ug/L	10	SW5030C/8260C	11/09/16 00:40	JGH	4.7	
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.40	
Chloromethane*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Vinyl chloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Methylene chloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
cis-1,2-Dichloroethene	0.15	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	J
Chloroform	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	0.18	ug/L	10	SW5030C/8260C	11/09/16 00:40	JGH	0.10	J
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Trichloroethene	0.89	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	J
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Toluene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.050	
Tetrachloroethene	0.59	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.20	J

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.15 (continued)
Sample Tag: MW-7SB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.020	
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/09/16 00:40	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 00:40	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.16
Sample Tag: MW-8
Collected Date/Time: 10/26/2016 10:00
Matrix: Groundwater
COC Reference: 093883

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 20:02	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 20:02	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.30	
Acetone	13	ug/L	10	SW5030C/8260C	11/09/16 01:01	JGH	8.5	
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
2-Butanone (MEK)	12	ug/L	10	SW5030C/8260C	11/09/16 01:01	JGH	4.7	
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.40	
Chloromethane*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Vinyl chloride	8	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Methylene chloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
trans-1,2-Dichloroethene	0.27	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	J
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
cis-1,2-Dichloroethene	5	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Chloroform	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	0.13	ug/L	10	SW5030C/8260C	11/09/16 01:01	JGH	0.10	J
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Trichloroethene	0.50	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	J
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Toluene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.050	
Tetrachloroethene	1	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.16 (continued)
Sample Tag: MW-8

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.020	
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/09/16 01:01	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 01:01	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.17
Sample Tag: MW-8SB
Collected Date/Time: 10/26/2016 10:15
Matrix: Groundwater
COC Reference: 093883

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 20:26	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 20:26	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	6.0	Y
Acetone	Not detected	ug/L	200	SW5030C/8260C	11/09/16 14:43	JGH	170	Y
Carbon disulfide	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Methyl Acetate*	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
2-Butanone (MEK)	Not detected	ug/L	200	SW5030C/8260C	11/09/16 14:43	JGH	94	Y
Dichlorodifluoromethane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	8.0	Y
Chloromethane*	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Vinyl chloride	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Bromomethane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Chloroethane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	4.0	Y
Trichlorofluoromethane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	8.0	Y
1,1-Dichloroethene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Methylene chloride	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
trans-1,2-Dichloroethene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
1,1-Dichloroethane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
cis-1,2-Dichloroethene	9.6	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	JY
Chloroform	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Bromochloromethane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
1,1,1-Trichloroethane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Cyclohexane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	200	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
2-Hexanone	Not detected	ug/L	200	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Carbon tetrachloride	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Benzene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
1,2-Dichloroethane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Trichloroethene	14.2	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	JY
1,2-Dichloropropane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Bromodichloromethane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Methyl cyclohexane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
cis-1,3-Dichloropropene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Toluene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
trans-1,3-Dichloropropene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
1,1,2-Trichloroethane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	1.0	Y

Y-Elevated reporting limit due to high target concentration
J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.17 (continued)
Sample Tag: MW-8SB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Tetrachloroethene	190	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	4.0	Y
Dibromochloromethane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	0.40	Y
1,2-Dibromoethane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Chlorobenzene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Ethylbenzene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Total Xylenes	Not detected	ug/L	60	SW5030C/8260C	11/09/16 14:43	JGH	5.0	Y
Styrene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
Isopropylbenzene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	0.60	Y
Bromoform	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
1,1,2,2-Tetrachloroethane	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	1.0	Y
1,3-Dichlorobenzene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
1,4-Dichlorobenzene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
1,2-Dichlorobenzene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
1,2,4-Trichlorobenzene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	2.0	Y
1,2,3-Trichlorobenzene	Not detected	ug/L	20	SW5030C/8260C	11/09/16 14:43	JGH	0.80	Y

Y-Elevated reporting limit due to high target concentration

Analytical Laboratory Report

Lab Sample ID: S77144.18
Sample Tag: MW-9
Collected Date/Time: 10/26/2016 09:15
Matrix: Groundwater
COC Reference: 093883

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 20:49	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 20:49	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.30	
Acetone	41	ug/L	10	SW5030C/8260C	11/09/16 13:54	JGH	8.5	
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
2-Butanone (MEK)	Not detected	ug/L	10	SW5030C/8260C	11/09/16 13:54	JGH	4.7	
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.40	
Chloromethane*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Vinyl chloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Methylene chloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Chloroform	0.11	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	J
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Trichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Toluene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.050	
Tetrachloroethene	0.31	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.20	J

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.18 (continued)
Sample Tag: MW-9

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.020	
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/09/16 13:54	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 13:54	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.19
Sample Tag: MW-9SB
Collected Date/Time: 10/26/2016 09:30
Matrix: Groundwater
COC Reference: 093883

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 21:59	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 21:59	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.30	
Acetone	42	ug/L	10	SW5030C/8260C	11/09/16 14:21	JGH	8.5	
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
2-Butanone (MEK)	Not detected	ug/L	10	SW5030C/8260C	11/09/16 14:21	JGH	4.7	
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.40	
Chloromethane*	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Vinyl chloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Methylene chloride	0.10	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	J
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
cis-1,2-Dichloroethene	0.15	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	J
Chloroform	0.53	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	J
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	0.10	ug/L	10	SW5030C/8260C	11/09/16 14:21	JGH	0.10	J
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Trichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Toluene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.050	
Tetrachloroethene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.20	

J-Estimated value less than reporting limit, but greater than MDL

Lab Sample ID: S77144.19 (continued)
Sample Tag: MW-9SB

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.020	
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/09/16 14:21	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/09/16 14:21	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.20
Sample Tag: TB-1
Collected Date/Time: 10/26/2016 00:01
Matrix: Liquid
COC Reference: 093883

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 14:42	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 14:42	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.30	
Acetone	Not detected	ug/L	10	SW5030C/8260C	11/08/16 19:55	JGH	8.5	
Carbon disulfide	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Methyl Acetate*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
2-Butanone (MEK)	Not detected	ug/L	10	SW5030C/8260C	11/08/16 19:55	JGH	4.7	
Dichlorodifluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.40	
Chloromethane*	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Vinyl chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Bromomethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Chloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.20	
Trichlorofluoromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.40	
1,1-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Methylene chloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
1,1-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Chloroform	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Bromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
2-Hexanone	Not detected	ug/L	10	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Carbon tetrachloride	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Benzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
1,2-Dichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Trichloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
1,2-Dichloropropane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Bromodichloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Methyl cyclohexane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Toluene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.050	
Tetrachloroethene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.20	
Dibromochloromethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.020	

Lab Sample ID: S77144.20 (continued)
Sample Tag: TB-1

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
1,2-Dibromoethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Chlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Ethylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Total Xylenes	Not detected	ug/L	3	SW5030C/8260C	11/08/16 19:55	JGH	0.25	
Styrene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
Isopropylbenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.030	
Bromoform	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.050	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
1,2,4-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.10	
1,2,3-Trichlorobenzene	Not detected	ug/L	1	SW5030C/8260C	11/08/16 19:55	JGH	0.040	

Analytical Laboratory Report

Lab Sample ID: S77144.21
Sample Tag: BD-1
Collected Date/Time: 10/26/2016 00:01
Matrix: Groundwater
COC Reference: 093883

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Extraction / Prep.								
pH check for VOCs*	<2	STD Units		N/A	11/09/16 11:00	JML		
Organics - Volatiles								
1,2-Dibromo-3-chloropropane*	Not detected	ug/L	0.05	SW8260B - SIM	11/09/16 21:34	JGH	0.466	
1,4-Dioxane*	Not detected	ug/L	3	SW8260B - SIM	11/09/16 21:34	JGH	0	
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane*	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	15	Y
Acetone	Not detected	ug/L	500	SW5030C/8260C	11/09/16 15:30	JGH	430	Y
Carbon disulfide	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Methyl Acetate*	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
2-Butanone (MEK)	Not detected	ug/L	500	SW5030C/8260C	11/09/16 15:30	JGH	240	Y
Dichlorodifluoromethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	20	Y
Chloromethane*	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Vinyl chloride	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Bromomethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Chloroethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	10	Y
Trichlorofluoromethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	20	Y
1,1-Dichloroethene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Methylene chloride	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
trans-1,2-Dichloroethene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
1,1-Dichloroethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
cis-1,2-Dichloroethene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Chloroform	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Bromochloromethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
1,1,1-Trichloroethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Cyclohexane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	500	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
2-Hexanone	Not detected	ug/L	500	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Carbon tetrachloride	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Benzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
1,2-Dichloroethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Trichloroethene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
1,2-Dichloropropane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Bromodichloromethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Methyl cyclohexane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
cis-1,3-Dichloropropene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Toluene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
trans-1,3-Dichloropropene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
1,1,2-Trichloroethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	2.5	Y
Tetrachloroethene	860	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	10	Y

Y-Elevated reporting limit due to high target concentration

Lab Sample ID: S77144.21 (continued)
Sample Tag: BD-1

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	MDL	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Dibromochloromethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	1.0	Y
1,2-Dibromoethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Chlorobenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Ethylbenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Total Xylenes	Not detected	ug/L	200	SW5030C/8260C	11/09/16 15:30	JGH	13	Y
Styrene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
Isopropylbenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	1.5	Y
Bromoform	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
1,1,2,2-Tetrachloroethane	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	2.5	Y
1,3-Dichlorobenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
1,4-Dichlorobenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
1,2-Dichlorobenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
1,2,4-Trichlorobenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	5.0	Y
1,2,3-Trichlorobenzene	Not detected	ug/L	50	SW5030C/8260C	11/09/16 15:30	JGH	2.0	Y

Y-Elevated reporting limit due to high target concentration

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 1 OF 2

83571

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Mark A. Randazzo
COMPANY: O'Brien & Gere Engineers
ADDRESS: 22 Saw Mill River Rd
CITY: Hawthorne STATE: NY ZIP CODE: 10532
PHONE NO.: 781-883-6432 FAX NO.: 914-345-1611 P.O. NO.: 11600289
E-MAIL ADDRESS: Mark.Randazzo@OBG.com QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 63124/OHAD SMP
SAMPLER(S) - PLEASE PRINT/SIGN NAME: Mark Randazzo

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS X STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV X EDD X OTHER QCD

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

8260

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit X New York
☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	8260
77144.01	10/26/16	1330	MW-1	GW	3		X						X
.02/.03/.04	10/26/16	1115	MW-2SB	GW	9		X						X
.05	10/26/16	1130	MW-2DB	GW	3		X						X
.06	10/26/16	1100	MW-2	GW	3		X						X
.07	10/26/16	1345	MW-4S	GW	3		X						X
.08	10/26/16	1400	MW-4D	GW	3		X						X
.09	10/26/16	1245	MW-5	GW	3		X						X
.10	10/26/16	1300	MW-5SB	GW	3		X						X
.11	10/26/16	1315	MW-5DB	GW	3		X						X
.12	10/26/16	645	MW-6	GW	3		X						X
.13	10/26/16	700	MW-6SB	GW	3		X						X
.14	10/26/16	0830	MW-7	GW	3		X						X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: OBG X Sampler DATE: 10/26/16 TIME: 1500
RECEIVED BY: SIGNATURE/ORGANIZATION: DATE: TIME:

RELINQUISHED BY: SIGNATURE/ORGANIZATION: FedEx DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: M Allcott DATE: 10/27/16 TIME: 0945

RELINQUISHED BY: SIGNATURE/ORGANIZATION: FEDEX DATE: TIME:
RECEIVED BY: SIGNATURE/ORGANIZATION: FedEx DATE: TIME:

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS:
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS:

NOTES: TEMP. ON ARRIVAL 5.6
Follow QCD

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE FEDEX No.

Rev. 5.18.12

Merit Laboratories, Inc.

2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # 2 OF 2

093883

CHAIN OF CUSTODY RECORD

REPORT TO

CONTACT NAME: Mark A. Randazzo
COMPANY: O'Brien & Gere Engineers
ADDRESS: 22 Saw Mill River Rd
CITY: Hawthorne STATE: NY ZIP CODE: 10532
PHONE NO.: 781-883-1632 FAX NO.: 914-345-1612 P.O. NO.: 111.00289
E-MAIL ADDRESS: Mark.Randazzo@OBG.com QUOTE NO.:

INVOICE TO

CONTACT NAME: X SAME
COMPANY:
ADDRESS:
CITY: STATE: ZIP CODE:
PHONE NO.: E-MAIL ADDRESS:

PROJECT NO./NAME: 63124 / OHAD SMP
SAMPLER(S) - PLEASE PRINT & SIGN NAME: Mark Randazzo

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☒ EDD ☒ OTHER QCD

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations
☐ Detroit ☒ New York
☐ Other

Special Instructions

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR DATE	YEAR TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives: NONE	HCl	HNO_3	H_2SO_4	NaOH	MeOH	OTHER	8260
771441.15	10/26/16	0845	MW-7SB	GW	3		X						X
.16	10/26/16	1000	MW-8	GW	3		X						X
.17	10/26/16	1015	MW-9SB	GW	3		X						X
.18	10/26/16	915	MW-9	GW	3		X						X
.19	10/26/16	930	MW-9SB	GW	3		X						X
.20	—	—	TB-1	—	2		X						X
.21	10/26/16	—	BD-1	GW	3		X						X

RELINQUISHED BY: SIGNATURE/ORGANIZATION: Mark Randazzo Sampler DATE: 10/26/16 TIME: 1500
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION: FEDEX DATE TIME
RECEIVED BY: SIGNATURE/ORGANIZATION DATE TIME

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS
SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL
FEDEX No. 860805219027
Shipped on ice

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Rev. 5.18.12

Data Usability Summary Report

DATA VALIDATION MEMORANDUM

TO:	Mark Randazzo	cc:	GA Swenson – OBG
FROM:	KA Storne		
RE:	Data Usability Summary Report for One Holland Avenue site, Sampling Performed October 2016		
FILE:	14206/63124		
DATE:	December 22, 2016		

This Data Usability Summary Report (DUSR) presents the results of data validation performed for groundwater samples collected by O'Brien & Gere (OBG) in October 2016 in accordance with the *Site Management Plan*, *BCP No. C360115, 1-5 Holland Avenue, White Plains, New York* (SMP; OBG December 2014).

Merit Laboratories, Inc. (Merit) of East Lansing, Michigan performed the laboratory analyses for the sampling event. The laboratory packages contain summary forms for quality control analysis and supportive raw data.

The analysis performed for this sampling event is summarized in Table 1.

Table 1. ***Analytical Methods and References***

Parameter	Method	Reference
Volatile Organic Compounds (VOCs)	USEPA Method 8260B/8260C/SIM	1

Note:

1. United States Environmental Protection Agency (USEPA). 2006. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846,* 3rd Edition. Washington D.C.

SIM indicates selected ion monitoring.

The samples submitted for data validation are summarized in attached Table 2. Table 3 presents the specific data validation approach applied to data generated for this investigation. Table 4 presents the Laboratory QA/QC analysis definitions.

Full validation was performed on the samples collected for this sampling event.

The analytical data generated for this investigation were evaluated by OBG using the quality assurance/quality control (QA/QC) information presented in the following document:

- O'Brien & Gere. 2010. Quality Control Document (QCD), 1 – 5 Holland Avenue Site White Plains, New York. Syracuse, New York.

Data affected by excursions from the previously mentioned QA/QC criteria were qualified using the following USEPA data validation guidance and professional judgment:

- USEPA. 2014. USEPA Region II Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C, SOP HW-24 Revision 4.

USEPA data validation guidelines have been modified to reflect the requirements of the methods used in the analysis of samples collected for this sampling event. Qualifiers were applied to data that failed to meet the quality control criteria presented in the USEPA methods and the QCD.

The validation included checking the following parameters:

- QCD compliance
- Chain-of-custody record
- Sample collection

- Holding times
- Calibrations
- Blank analysis
- Surrogate results
- Matrix spike/ matrix spike duplicate (MS/MSD) analysis
- Laboratory control sample (LCS) analysis
- Internal standards performance
- Field duplicate analysis
- Gas chromatography/mass spectrometry (GC/MS) instrument performance check
- Target analyte quantitation, identification, and quantitation limits (QLs); and
- Documentation completeness.

The following sections of this report present the results of the comparison of the analytical data to the QA/QC criteria specified above. Based on the QA/QC information review, an overall evaluation of data usability is also presented in the final section.

VOLATILE ORGANIC COMPOUND DATA EVALUATION SUMMARY

The following QA/QC parameters were found to meet method and validation criteria or did not result in additional qualification of sample results:

- QCD compliance
- Sample collection
- Holding times
- Surrogate results
- Blank analysis
- Internal standards performance
- Field duplicate analysis
- GC/MS instrument performance check
- Target analyte identification

Excursions from method or validation criteria and additional observations are described below.

I. CHAIN OF CUSTODY RECORD

For the samples collected 10/26/16, the laboratory did not sign page 2 of the record to document receipt of the samples on 10/27/16 at 09:45.

II. DOCUMENTATION COMPLETENESS

Supplemental laboratory information and revised data was requested during data validation. This was required to complete the validation process. Data was revised to remove the method detection limit (MDL) value from the SIM results and report the SIM results to the QL concentration.

III. CALIBRATIONS

The following results were qualified as approximate (UJ, J) due to minor calibration accuracy excursions:

- Results for cyclohexane, acetone and 2-butanone in samples MW-1, MW-2SB, MW-2DB, MW-2, MW-4S, MW-5, MW-5SB, MW-5DB, MW-6SB, MW-7, MW-7SB and MW-8.
- Results for cyclohexane in samples MW-4D, MW-8SB, TB-1 and BD-1 [MW-4D].
- Results for cyclohexane and acetone in samples MW-6, MW-9 and MW-9SB.
- Results for 2-butanone, 2-hexanone and tetrachloroethene in samples MW-1, MW-2SB, MW-2DB, MW-2, MW-4S, MW-5, MW-5SB, MW-6SB, MW-7, MW-7SB, MW-8 and TB-1
- Results for acetone, 2-butanone, cyclohexane, 2-hexanone and tetrachloroethene in samples MW-4D, MW-5DB, MW-6, MW-8SB, MW-9, MW-9SB and BD-1 [MW-4D].

IV. LCS ANALYSIS

The following results were qualified as approximate (UJ, J) due to minor LCS accuracy excursions:

- Result for tetrachloroethene in sample TB-1.
- Results for 2-butanone and tetrachloroethene in samples MW-1, MW-2SB, MW-2DB, MW-2, MW-4S, MW-5, MW-5SB, MW-6SB, MW-7, MW-7SB and MW-8.
- Results for tetrachloroethene in samples MW-4D, MW-8SB and BD-1 [MW-4D].
- Results for acetone, 2-butanone and tetrachloroethene in samples MW-5SB,
- Results for acetone and tetrachloroethene in samples MW-6, MW-9 and MW-9SB.

V. MS/MSD ANALYSIS

The following results were qualified as approximate (J) due to minor MS/MSD accuracy excursions:

- Results for acetone, 2-butanone and tetrachloroethene in samples MW-2SB.

VI. TARGET ANALYTE QUANTITATION AND QLS.

Samples were analyzed using dilution analyses since target analyte concentrations were detected above the analytical calibration range.

Sample results detected at concentrations greater than laboratory method detection limits (MDLs) but less than laboratory QLs were qualified as approximate (J).

The laboratory does not report an MDL concentration for analysis generated through the SIM technique. Therefore, the SIM data were reported to the QL concentration.

DATA USABILITY

The groundwater samples collected as part of the 1-5 Holland Avenue Site SMP in White Plains, New York were evaluated based on QA/QC criteria established by methods as listed in Table 1 and the data validation approach as described in Table 3.

Major deficiencies in the data generation process would have resulted in results being rejected, indicating that the rejected data are considered unusable for either quantitative or qualitative purposes. Major excursions were not identified during the validation process. Minor deficiencies in the data generation process resulted in sample data being characterized as approximate.

A discussion of the data quality with regard to the data usability parameters follows:

Precision: Data were not rejected for precision excursions.

Sensitivity: Sensitivity is established by QLs, which represent measurable concentrations of analytes which can be determined with a designated level of confidence, that meet project requirements. Dilutions were performed for analyses due to elevated concentrations of target analytes in the samples.

Accuracy: Results were not rejected due to major accuracy excursions.

Representativeness: Results were not rejected due to major representativeness excursions.

Comparability: Data usability with respect to comparability is 100 percent, as standardized analytical methods, QLs, reference materials, and data deliverables were used throughout the data generation process for this project.

Completeness: Overall data usability with respect to completeness is 100 percent for the complete data set. Therefore, the data were identified as usable for qualitative and quantitative purposes

Table 2 - Sample Cross Reference Table

Sample collected and submitted for data validation

Laboratory Name	Date Collected	Laboratory Identification	Client Identification	Matrix	Analysis Required
Merit	10/26/2016	S77144.01	MW-1	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.02	MW-2SB	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.03	MW-2SB MS	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.04	MW-2SB MSD	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.05	MW-2DB	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.06	MW-2	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.07	MW-4S	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.08	MW-4D	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.09	MW-5	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.10	MW-5SB	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016		MW-5DB	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.12	MW-6	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.13	MW-6SB	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.14	MW-7	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.15	MW-7SB	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.16	MW-8	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.17	MW-8SB	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.18	MW-9	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.19	MW-9SB	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.20	TB-1	Aqueous	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260
Merit	10/26/2016	S77144.21	BD-1 [MW-4D]	Groundwater	1,2-Dibromo-3-chloropropane- SIMS, 1,4-Dioxane- SIMS, TCL VOCs- 8260

Note:

Merit indicates Merit Laboratories, Inc. of East Lansing, Michigan.
VOCs indicates volatile organic compounds.
TB indicates trip blank.
MS/MSD indicates matrix spike/matrix spike duplicate.
BD indicates field duplicate.
The location in brackets indicates the field duplicate sampling location.

O'Brien & Gere Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), SVOCs (8270C/8270D), Pesticides (8081B), PCBs (8082A), Metals (6010B), Cyanide and Inorganics by various methods	
General Validation Approach	The validation approach taken by O'Brien & Gere is a conservative one; qualifiers are applied to sample data to indicate both major and minor excursions so that data associated with any type of excursion are identified to the data user. Major excursions result in data being rejected (R), indicating that the data are considered unusable for either quantitative or qualitative purposes. Minor excursions result in sample data being qualified as approximate (J, UJ, JN) or non-detected (U) that is otherwise usable for quantitative or qualitative purposes.
	Excursions are subdivided into excursions that are within the laboratory's control and those that are out of the laboratory's control. Excursions involving laboratory control sample recovery, calibration response, method blank excursions, low or high spike recovery due to inaccurate spiking solutions or poor instrument response, holding times, interpretation errors, and quantitation errors are within the control of the laboratory. Excursions resulting from matrix spike recovery, serial dilution recovery, surrogate, and internal standard performance due to interference from the matrix of the samples are examples of those excursions that are not within the laboratory's control if the laboratory has followed proper method procedures, including performing appropriate cleanup techniques.
Applying professional judgment	USEPA data validation directs professional judgment to be used when applying qualifiers in some cases. When utilizing professional judgment, provide justification for actions taken in the associated validation notes.
Validation Parameter	O'Brien & Gere Data Validation Approach based on Region II guidelines for SW-846 method. Since Region II guidelines available for metals apply only to the CLP method, only the general approach to applying qualifiers was utilized for metals and inorganics.
Validation Qualifiers - Organics	U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the quantitation limit (QL). J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the QL). NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. UJ - The analyte was not detected at a level greater than or equal to the QL. However, the QL is approximate and may be inaccurate or imprecise. R - The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
Cooler Temperature	Results for samples submitted for organic and inorganic analyses that are impacted by coolers that did not contain ice, or if the ice melted upon receipt and the cooler temperatures are greater than 10°C, are qualified as approximate (UJ, J). If samples are delivered to the laboratory the same day as sample collection and samples did not have sufficient time to reach 10°C, samples are not qualified, unless proper preservation was not provided for samples between sample collection and sample receipt at the laboratory. Results for samples received at ambient temperature involved in extended shipment-day issues may be rejected, applying professional judgment.
Percent Solids	Results for samples submitted for organic and inorganic analyses that are impacted by percent solids of 50 percent or less are qualified as approximate (UJ, J).
Holding Time	Results for samples analyzed less than two times the holding time window established in the method or the QAPP for preparation and/or analysis are qualified as approximate (UJ, J). Non-detected results for samples analyzed greater than two times the holding time window for preparation and/or analysis are rejected (R). Detected results for samples analyzed greater than two times the holding time window for preparation and/or analysis are qualified as approximate (J). The entire sample target list for a VOC sample impacted by a holding time excursion is qualified.

O'Brien & Gere Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), SVOCs (8270C/8270D), Pesticides (8081B), PCBs (8082A), Metals (6010B), Cyanide and Inorganics by various methods	
General Calibration Actions	Due to relative standard deviation (RSD) calibration excursions, detected results for analytes in samples associated with the calibration are qualified as approximate (J). Non-detected results associated with RSD excursions may be qualified as approximate (UJ) based on professional judgment. If the RSD calibration excursion is greater than 90, detected results for analytes in samples associated with the calibration are qualified as approximate (J) and non-detected results may be rejected (R), applying professional judgment. Due to %D calibration verification excursions, detected and non-detected results for analytes in samples associated with the calibration are qualified as approximate (J, UJ). The response direction and detection of target analytes in associated sample may be considered in applying qualifiers. For response factor excursions, detected results are qualified as approximate (J) and non-detected results are rejected (R). For initial calibration verifications (ICV) excursions, detected and non-detected results for analytes in samples associated with the calibration are qualified as approximate (J, UJ). The response direction and detection of target analytes in associated sample may be considered in applying qualifiers.
VOCs Calibration Evaluation	VOC target analytes are evaluated using the criteria of 20 percent relative standard deviation (%RSD) or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20 percent difference (%D) for target analytes. Initial calibrations and calibration verifications are also evaluated using the response factor (RF) criteria described in the method Table 4. If not listed on the Table, RF ≥0.05, RF ≥0.01 for other poor responding analytes. ICV recoveries are evaluated using laboratory control limits if available or 70 to 130%.
SVOCs Calibration Evaluation	SVOC target analytes are evaluated using the criteria of 15 %RSD (<20 %RSD Method 8270D) or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20 %D for the target analytes. Initial calibrations and calibration verifications are also evaluated using the criterion of a RF value of greater than or equal to a value of 0.05 for the target analytes using Method 8270C or Table 4 of 8270D. ICV recoveries are evaluated using laboratory control limits if available or 70 to 130%.
PCBs Calibration Evaluation	PCB target analytes are evaluated using the criteria of 20 %RSD or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 15 %D for target analytes. ICV recoveries are evaluated using laboratory control limits if available or 70 to 130%.
Pesticides Calibration Evaluation	Pesticide target analytes are evaluated using the criteria of 25% RSD for alpha BHC/delta BHC, 30%RSD for toxaphene. 30% RSD for surrogates and 20 %RSD for the remaining target analytes or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20 %D for the target analytes. ICV recoveries are evaluated using laboratory control limits if available or 70 to 130%.
Associating samples with Field and Laboratory QC Samples	Trip blanks are associated with samples in the same sample cooler.
	Equipment blanks (Rinsate blanks) are associated with samples collected in the same day (or sampling event) using the same sample collection equipment and decontamination solutions. When sampling equipment or decontamination solutions are changed, a new equipment blank should be collected. Each sample should be associated with one equipment blank, which is collected as close to the sample collection date/time as possible. Use professional judgment.
	Field blanks are associated with the sample containers used to collect samples. When sampling container lots are changed, a new field blank should be collected.
	Method blanks are associated with samples prepared at the same time (if preparation is required) or analyzed in the same analytical batch as the samples. Method blanks should reflect the sample matrix type (aqueous, low level solid, medium level solid).
	LCSs are associated with samples prepared at the same time (if preparation is required) or analyzed in the same analytical batch as the samples.
	MS/MSD and laboratory duplicate samples are collected in the field. The laboratory must prepare using project samples. MS/MSDs and laboratory duplicates are associated with samples prepared at the same time or close to the same time (if preparation is required) with the same matrix type.
	Field duplicates are collected in the field and are associated with samples of the same matrix type.

O'Brien & Gere Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), SVOCs (8270C/8270D), Pesticides (8081B), PCBs (8082A), Metals (6010B), Cyanide and Inorganics by various methods	
	In the case that insufficient QC samples are provided due to field or laboratory problems, use professional judgment to associate each sample with a QC sample that reflects the sample matrix and analysis conditions. If insufficient QC samples are available to properly associate samples, record the impact in the DV notes.
Evaluation and Action for MS/MSD, LCS, Surrogate and Laboratory Duplicate Data for VOCs and SVOCs	The laboratory control limit (CL) is used to assess MS/MSD, LCS, surrogate and laboratory duplicate data. Refer to Region II guidelines if laboratory control limits are not available.
	In the case that excursions are identified in more than one quality control sample of the same matrix within one sample delivery group, samples are batched according to sample preparation or analysis date and qualified accordingly (see batching description above).
	If percent recoveries are less than laboratory CLs but greater than 10%, non-detected and detected results are qualified as approximate (UJ, J).
	If percent recoveries are greater than laboratory CLs, detected results are qualified as approximate (J).
	If percent recoveries are less than 10%, detected results are qualified as approximate (J) and non-detected results are qualified as rejected (R).
	If RPDs for MSDs or laboratory duplicates are outside of laboratory CLs, detected results are qualified as approximate (J). Non-detected results may not be qualified, applying professional judgment.
Evaluation of MS/MSD, Surrogate, and Field Duplicate Data for VOCs and SVOCS	Qualification is performed only when both MS and MSD recoveries are outside of laboratory CLs.
	Organic data are rejected (R) in the case that both MS/MSD recoveries are less than 10%.
	Qualification is not performed if MS/MSD or surrogate recoveries are outside of laboratory CLs with an analysis that applied a dilution factor of 10 times or more, applying professional judgment.
	Qualification of data associated with MS/MSD or field duplicate excursions is limited to the un-spiked sample or the field duplicate pair, respectively.
	Field duplicate data are evaluated against relative percent difference (RPD) criteria of less than 50 percent for aqueous samples and less than 100 percent for soils when results are greater than or equal to five times the QL. When a field duplicate result is less than five times the QL, a control limit of plus or minus two times the QL (difference criterion) is applied. If RPDs or differences are outside of criterion, detected and non-detected results are qualified as approximate (UJ, J) to indicate minor excursions.
Evaluation and Actions for Blank Results for VOC, SVOC, Pesticides, Herbicides and PCB Data	Blanks are not qualified due to contamination of another blank. Sample results qualified as non-detected (U) are treated as hits when qualifying for surrogate or calibration excursions. The following approach is utilized for applying qualifiers, using twice the quantitation limit (QL) for methylene chloride, 2-butanone and acetone: 1. For blank results less than the QL, samples with concentrations less than the QL are reported at the QL and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL are not qualified or may apply the Blank Rule Option. 2. For blank results greater than the QL, samples with concentrations less than the QL are reported at the QL and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL and less than the blank contamination level are reported and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL and greater than or equal to the blank contamination level are not qualified or may apply the Blank Rule Option. 3. For blank results equal to the QL, sample concentrations less than the QL are reported at the QL value and qualified as non-detected (U). Samples greater than or equal to the QL are not qualified or may apply the Blank Rule Option. 4. For gross contamination in blanks (saturated peaks, interference peaks, poor baselines), all associated sample detected results are rejected (R) or qualified as non-detected (U) using professional judgment. Blank Rule Option: If methylene chloride, acetone or 2-butanone is detected in the sample at a concentration that is less than ten times the concentration in the associated blank, the sample result is qualified as "U". If other target analytes are detected in the sample at a concentration that is less than five times the concentration detected in the associated blank, the sample result is qualified as "U".
Evaluation and Actions for Surrogate Data for PCB, Pesticides and Herbicides	The following approach is utilized for applying qualifiers when both surrogate recoveries from the primary column are outside of laboratory CLs (also considering confirmation column results): 1. Detected result associated with recovery of greater than upper laboratory CLs is qualified as approximate (J). Non-detected result is not qualified.

O'Brien & Gere Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), SVOCs (8270C/8270D), Pesticides (8081B), PCBs (8082A), Metals (6010B), Cyanide and Inorganics by various methods	
	2. Detected result associated with recovery of greater than or equal to 10% but less than the lower laboratory CL is qualified as approximate (J). Non-detected result is qualified as approximate (UJ). 3. Detected result associated with recoveries of less than 10% is qualified as approximate (J). Non-detected result is rejected (R). 4. If the sample was diluted using a dilution factor of 10 times or more, detected and non-detected results are not qualified since the surrogate concentration is diluted, using professional judgment. 5. If the retention times of the surrogates are outside of the laboratory retention time window, associated sample results are qualified as approximate (UJ, J) or rejected (R), using professional judgment.
Evaluation of LCS Data for PCB, Pesticides and Herbicides	The following approach is utilized for applying qualifiers when one LCS result (including all primary and confirmation column results) is outside of laboratory CLs for recovery: 1. Detected result associated with recovery of greater than upper laboratory CL is qualified as approximate (J). Non-detected result is not qualified. 2. Detected result associated with recovery of less than lower laboratory CL is qualified as approximate (J). 3. Non-detected result associated with a recovery of less than 10% is rejected (R).
Evaluation of MS/MSD Data for PCB, Pesticides and Herbicides	The following approach is utilized for applying qualifiers when both MS and MSD results are outside of laboratory CLs for recovery or RPD criteria: 1. Detected result associated with recoveries of greater than or equal to 10% is qualified as approximate (J). Non-detected result is qualified as approximate (UJ). 2. Detected result associated with recoveries of greater than the upper laboratory CL and outside of RPD criterion is qualified as approximate (J). Non-detected result is not qualified. 3. Detected result associated with recoveries of less than 10% is qualified as approximate (J). Non-detected result is rejected (R).
Evaluation of Dual Column Results for Pesticide, Herbicides and PCB Data	%D value, calculated for the positive results from the primary and confirmation chromatographic columns, is defined as the difference between the columns divided by the primary column, times 100. The following approach is utilized for applying qualifiers: 1. For detected result greater than the method detection limit (MDL) and less than the QL, with a %D greater than 50, replace result with the QL and qualify as non-detected (U). 2. For detected result greater than the QL with a %D greater than 25: a. With a %D of 26 to 70, result is qualified as approximate (J). b. With a %D of 71 to 100, result is qualified as approximate and tentative (JN). c. With a %D greater than 100 without evidence of interference, result is rejected (R) or qualified as non-detected (U), applying professional judgment. d. With a %D greater than 100 with evidence of interference, result is qualified as approximate (JN).
Evaluation of MS/MSD, Surrogate, and Field Duplicate Data for VOCs and SVOCS	Qualification is performed only when both MS and MSD recoveries are outside of laboratory CLs.
	Organic data are rejected (R) in the case that both MS/MSD recoveries are less than 10%.
	Qualification is not performed if MS/MSD or surrogate recoveries are outside of laboratory CLs with an analysis that applied a dilution factor of 10 times or more, applying professional judgment.
	Qualification of data associated with MS/MSD or field duplicate excursions is limited to the un-spiked sample or the field duplicate pair, respectively.
	Field duplicate data are evaluated against relative percent difference (RPD) criteria of less than 50 percent for aqueous samples and less than 100 percent for soils when results are greater than or equal to five times the QL. When a field duplicate result is less than five times the QL, a control limit of plus or minus two times the QL (difference criterion) is applied. If RPDs or differences are outside of criterion, detected and non-detected results are qualified as approximate (UJ, J) to indicate minor excursions.
Evaluation of Internal Standards for VOCs and SVOCs	Internal standard recoveries are evaluated using control limits of from 50% of the lower standard area to 100% of the upper standard area of the associated calibration verification standard. The results associated with internal standard area recoveries 25% or greater but less than 50% are qualified as approximate (J, UJ). Non-detected results associated with internal standard area recoveries less than 25% are rejected (R), using professional judgment.
Metals, Mercury, and Inorganic MS/MSD,	Qualification of sample results associated with MS/MSD, laboratory duplicate and field duplicate excursions is performed on samples for the same matrix, within the same preparation batch, within the same SDG group. [Region II only qualifies the Field Duplicate and associated sample.

O'Brien & Gere Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), SVOCs (8270C/8270D), Pesticides (8081B), PCBs (8082A), Metals (6010B), Cyanide and Inorganics by various methods	
Laboratory/Field Duplicate, Serial Dilution	
Evaluation of LCS Data for Metals, Mercury, and Inorganics	To apply qualifiers if LCS result is outside of laboratory CLs or 80 to 120%: Aqueous sample: 1. Detected and non-detected result associated with a recovery of less than 50% is rejected (R). 2. Detected result associated with recovery between 50 and 79%, is qualified as approximate (J). Non-detected result is qualified as approximate (UJ). 3. Detected result associated with recoveries of between 121 and 150% is qualified as approximate (J). 4. Detected result associated with recoveries of greater than 150% is rejected (R), applying professional judgment. Soil sample: 1. Detected result associated with recovery greater than the upper CL is qualified as approximate (J). 2. Detected result associated with recovery less than the lower CL is qualified as approximate (J) and non-detected result is qualified as approximate (UJ). 3. Detected and non-detected result associated with a recovery of less than 10% is rejected (R).
Evaluation of MS/MSD Data for Metals, Mercury, and Inorganics	To apply qualifiers if either MS or MSD result is outside of laboratory CL or 75 to 125%: Aqueous sample: 1. Detected and non-detected result associated with a recovery of less than 30% is rejected (R). 2. Detected result associated with recoveries between 30 and 74%, is qualified as approximate (J). Non-detected result is qualified as approximate (UJ). 3. Detected result associated with recoveries of between 126 and 150% is qualified as approximate (J). 4. Detected result associated with recoveries of greater than 150% is rejected (R) or qualified as approximate (J) applying professional judgment. Soil sample: 1. Detected and non-detected result associated with a recovery of less than 10% is rejected (R). 2. Detected result associated with recovery of between 10 and 74%, is qualified as approximate (J). Non-detected result is qualified as approximate (UJ). 3. Detected result associated with recoveries of between 126 and 200% is qualified as approximate (J). 4. Detected result associated with recoveries of greater than 200% is rejected (R) or qualified as approximate (J) applying professional judgment.
Evaluation of Laboratory Duplicate and Field Duplicate for Metals, Mercury, and Inorganics	To apply qualifiers if laboratory duplicate results are outside of RPD or difference criteria: Aqueous sample with sample and duplicate values both greater than or equal to 5 times the QL: 1. Detected result greater than or equal to the QL, associated with an RPD of greater than 20 is qualified as approximate (J). Aqueous sample when either detected sample or duplicate value is less than 5 times the QL: 1. Detected results with absolute difference greater than the QL are qualified as approximate (J). Non-detected results are qualified as approximate (UJ). Soil sample for sample and duplicate values both greater than or equal to 5 times the QL: 1. Detected result greater than or equal to the QL, associated with an RPD of greater than or equal to 35 is qualified as approximate (J). Soil sample when either detected sample or duplicate value is less than 5 times the QL: 1. Sample results with absolute difference greater than 2 times the QL are qualified as approximate (J). Non-detected results are qualified as approximate (UJ).
Evaluation of Metals, Mercury, and Inorganic Blank Data	For calibration blanks and preparation blanks at concentrations greater than laboratory MDLs but less than or equal to QLs: 1. Concentration in the associated samples of greater than or equal to the MDLs but less than or equal to QLs are revised to the QL level and qualified as non-detected (U).
	For calibration blanks, preparation blanks and field blanks at concentrations greater than laboratory QLs: 1. Concentration in the associated samples of greater than the blank concentration and less than ten times the blank concentration are qualified as approximate (J). 2. Concentrations in the associated samples of greater than or equal to the MDLs but less than or equal to QLs are revised to the QL level and are qualified as non-detected (U). 3. Concentration in the associated samples of greater than the QLs and less than the blank concentration are rejected (R) or qualified as non-detected (U), applying professional judgment.

O'Brien & Gere Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), SVOCs (8270C/8270D), Pesticides (8081B), PCBs (8082A), Metals (6010B), Cyanide and Inorganics by various methods	
Evaluation of Metals, Mercury, and Inorganic Blank Data	For calibration blanks and preparation blanks at concentrations less than the negative value of the QLs: 1. Concentration in the associated samples of less than ten times the QLs are qualified as approximate (J). 2. Non-detected concentrations in the associated samples are qualified as approximate (UJ).
Evaluation of Serial Dilution Data	Serial dilution results are evaluated for data with initial sample concentrations that are greater than 50 times the MDL. If the percent difference is greater than 10%, associated sample results greater than or equal to the MDL are qualified as approximate (J). If the percent difference is greater than or equal to 100%, associated sample results greater than or equal to the MDL are rejected (R).
Source O'Brien & Gere	

Table 4. *Laboratory QA/QC analyses definitions.*	
QA/QC Term	Definition
Accuracy	The closeness or agreement of the observed value or test response to the true or acceptable reference value or the test response from a reference method. It is influenced by both random error (precision) and systematic error (bias). The terms “bias” and “precision” are often used in lieu of “accuracy”.
Precision	A measure of mutual agreement between two or more individual measurements of the same property, obtained under similar conditions.
Representativeness	A measure of the degree to which data accurately and precisely characterize a population; the correspondence between the analytical result and the actual quality or condition experienced by a contaminant receptor.
Sensitivity	The capability of a method or instrument to discriminate between measurement responses representing different levels of a variable of interest.
Completeness	A measure of the amount of valid data obtained from a measurement system as compared to the planned amount, usually expressed as a percentage; also a measure of the degree to which the sampling scheme represents the available range in something, regardless of what was planned.
Detection limit	The lowest concentration or amount of the target analyte that can be determined to be different from zero by a single measurement at a stated level of probability.
Quantitation limit	The level above which numerical results may be obtained with a specified degree of confidence; the minimum concentration of an analyte in a specific matrix that can be identified and quantified above the method detection limit and within specified limits of precision and bias during routine analytical operating conditions.
Method detection limit	The minimum concentration of an analyte that undergoes preparation similar to the environmental samples and can be reported with a stated level of confidence that the analyte concentration is greater than zero.
Instrument detection limit	The lowest concentration of a metal target analyte that, when directly inputted and processed on a specific analytical instrument, produces a signal/response that is statistically distinct from the signal/response arising from equipment “noise” alone.
Gas chromatography/mass spectrometry (GC/MS) instrument performance check	Performed to verify mass resolution, identification, and to some degree, instrument sensitivity. These criteria are not sample specific; conformance is determined using standard materials.
Control limits	The variation in a process data set expressed as plus/minus standard deviations from the mean, generally placed on a chart to indicate the upper and lower acceptable ranges of process data and to judge whether the process is in or out of statistical limitations.
Calibration	Compliance requirements for satisfactory instrument calibration are established to verify that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of analysis and calibration verifications document satisfactory maintenance and adjustment of the instrument on a day-to-day basis.
Relative Response Factor	A measure of the relative mass spectral response of an analyte compared to its internal standard. Relative Response Factors are determined by analysis of standards and are used in the calculation of concentrations of analytes in samples.
Relative standard deviation	The standard deviation divided by the mean; a unit-free measure of variability.
Correlation coefficient	A measure of the strength of the relationship between two variables.
Relative Percent Difference	Used to compare two values; the relative percent difference is based on the mean of the two values, and is reported as an absolute value, i.e., always expressed as a positive number or zero.
Percent Difference	Used to compare two values; the percent difference indicates both the direction and the magnitude of the comparison, i.e., the percent difference may be either negative, positive, or zero.

Table 4. *Laboratory QA/QC analyses definitions.*	
Drift	The deviation in instrument response from its set or reference value over a period of time.
Percent Recovery	The act of determining whether or not the methodology measures all of the target analytes contained in a sample.
Blanks	Several types of blanks are analyzed by the laboratory. Corrective action procedures are implemented for blank analyses if target compounds are detected at concentrations greater than the method criteria. The criteria for evaluation of blanks apply to any blank associated with a group of samples. If problems with a blank exist, data associated with the project are evaluated to determine whether or not there is an inherent variability in the data for the project or if the problem is an isolated occurrence not affecting other data.
Reagent blank	Consists of laboratory target analyte-free water and any reagents added to a sample during analysis. This type of blank is analyzed to evaluate whether contamination occurred during the analysis of the sample due to reagent contamination. A reagent blank is usually analyzed following highly contaminated samples to assess the potential for cross-contamination during analysis.
Instrument blank	Consists of clean solvent spiked with the surrogates and analyzed on each GC column and instrument used for sample analysis by GC. This type of blank is analyzed to evaluate whether contamination occurred during the analysis of the sample due to instrument contamination.
Calibration blank	Consists of acids and reagent water used to prepare metal samples for analysis. This type of blank is analyzed to evaluate whether contamination is occurring during the preparation and analysis of the sample.
Method blank	A water or soil blank that undergoes the preparation procedures applied to a sample (i.e., extraction, digestion, clean-up). These samples are analyzed to examine whether sample preparation, clean-up, and analysis techniques result in sample contamination.
Field/equipment	Collected and submitted for laboratory analysis, where appropriate. Field/equipment blanks are handled in the same manner as environmental samples. Equipment/field blanks are analyzed to assess contamination introduced during field sampling procedures.
Trip blank	Consist of samples of analyte-free water that have undergone shipment from the sampling site to the laboratory in coolers with the environmental samples submitted for volatile organic compound (VOC) analysis. Trip blanks will be analyzed for VOCs to determine if contamination has taken place during sample handling and/or shipment. Trip blanks will be utilized at a frequency of one each per cooler sent to the laboratory for VOC analysis.
Storage blank	Consists of sample vials filled with laboratory analyte-free water. The vials are stored at the laboratory with the samples collected for VOC analysis, under the same conditions as the samples. The storage blank is analyzed with the VOC samples to evaluate for contamination due to sample storage.
Internal standards performance	Compounds not found in environmental samples which are spiked into samples and quality control samples at the time of sample preparation for organic analyses. Internal standards must meet retention time and recovery criteria specified in the analytical method. Internal standards are used as the basis for quantitation of the target analytes.
Surrogate recovery	Compounds similar in nature to the target analytes but not expected to be detected in the environmental media which are spiked into environmental samples, blanks, and quality control samples prior to sample preparation for organic analyses. Surrogates are used to evaluate analytical efficiency by measuring recovery.
Laboratory control sample Matrix spike blank analyses	Standard solutions that consist of known concentrations of the target analytes spiked into laboratory analyte-free water or sand. They are prepared or purchased from a certified manufacturer from a source independent from the calibration standards to provide an independent verification of the calibration procedure. They are prepared and analyzed following the same procedures employed for environmental sample analysis to assess method accuracy independently of sample matrix effects.
Laboratory duplicate	Two or more representative portions taken from one homogeneous sample by the analyst and analyzed in the same laboratory.

Table 4. *Laboratory QA/QC analyses definitions.*	
Matrix	The material of which the sample is composed or the substrate containing the analyte of interest, such as drinking water, waste water, air, soil/sediment, biological material.
Matrix Spike (MS)	An aliquot of a matrix (water or soil) fortified (spiked) with known quantities of specific target analytes and subjected to the entire analytical procedure in order to indicate the appropriateness of the method for the matrix by measuring recovery.
Matrix spike duplicate (MSD)	A second aliquot of the same matrix as the matrix spike that is spiked in order to determine the precision of the method.
Retention time	The time a target analyte is retained on a GC column before elution. The identification of a target analyte is dependent on a target compound's retention time falling within the specified retention time window established for that compound.
Relative retention time	The ratio of the retention time of a compound to that of a standard.
Resolution	The separation between peaks on a chromatogram.
Interference	An element, compound, or other matrix effect present in a sample which disturbs the detection of a target analyte leading to inaccurate concentration results for the target analyte.
Percent Moisture	An approximation of the amount of water in a soil/sediment sample made by drying an aliquot of the sample.
Raw data	The documentation generated during sampling and analysis which includes, but is not limited to, field notes, hardcopies of electronic data, disks, un-tabulated sample results, QC sample results, printouts of chromatograms, instrument outputs, and handwritten notes.
Source O'Brien & Gere	

OBG

THERE'S A WAY

VI Reports (2 Holland Avenue)

April 10, 2017

Kiera Thompson
Engineering Geologist
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, NY 12233-7014

RE: VI Monitoring Report – 2 Holland Avenue, One Holland Avenue Development,
NYSDEC BCP No. C360115

FILE: 14206/63124

Dear Ms. Thompson:

In accordance with the *Site Management Plan*, *BCP No. C360115, 1-5 Holland Avenue, White Plains, New York* (SMP) dated December 2014, the following is the Soil Vapor Intrusion (VI) Monitoring Report for the property located at 2 Holland Avenue, White Plains, New York.

This report has been organized into the following sections:

- Section 1 - Background
- Section 2 - Field Activities
- Section 3 - Sample Results
- Section 4 - RAO Assessment

1. BACKGROUND

As detailed in the *Remedial Investigation Report, BCP No. C360115, 1-5 Holland Avenue, White Plains, New York* dated April 2014, tetrachloroethylene (PCE) was detected in soil vapor under the buildings at 1-5 Holland Avenue, the neighboring building to the east at 7-11 Holland Avenue and to the north at 2 Holland Avenue. Vapor mitigation, consisting of a sub-slab depressurization system, was implemented at both the 1-5 and 7-11 Holland Avenue properties as detailed in the *Interim Remedial Measure Construction Completion Report, BCP No. C360115, 1-5 Holland Avenue, White Plains, New York* (IRM CCR) dated October 2014.

As detailed in the SMP and as required per the NYSDEC Periodic Review Report (PRR) acceptance letter dated June 15, 2016, VI monitoring consisting of indoor air and sub-slab vapor was conducted in December 2016 to evaluate the continued absence of impacts to indoor air at the property located at 2 Holland Avenue. This monitoring report represents the third VI monitoring report following receipt of the Brownfield Cleanup Program (BCP) Certificate of Completion in December 2014.

2. FIELD ACTIVITIES

On December 14, 2016, O'Brien & Gere Engineers, Inc. (OBG) collected one indoor air and one sub-slab soil vapor sample from the southwest portion of 2 Holland Avenue, and one upwind ambient air sample; sample locations are depicted on Figure 1.

Samples were collected in accordance with the Field Activities Plan presented in Appendix F of the SMP, and shipped under routine chain-of-custody procedures to TestAmerica Laboratories, Inc. (TestAmerica) for analysis of volatile organic compounds by USEPA Method TO-15.

A slab inspection was also conducted on this date in the southwestern portion of 2 Holland Avenue. No cracks or penetrations were observed; however, the slab has finished tile and/or carpet flooring, which obstructs a thorough inspection. The slab inspection results indicate that there were no observable changes to the building slab's integrity since the last inspection in December 2015.

3. SAMPLE RESULTS

Analytical results for this sampling event and historical sampling events are summarized on Table 1. Several compounds were detected during this sampling event, but only one compound, PCE, can be attributed to prior operations at 1-5 Holland Avenue. A summary of detected compounds during this sampling event is presented below.

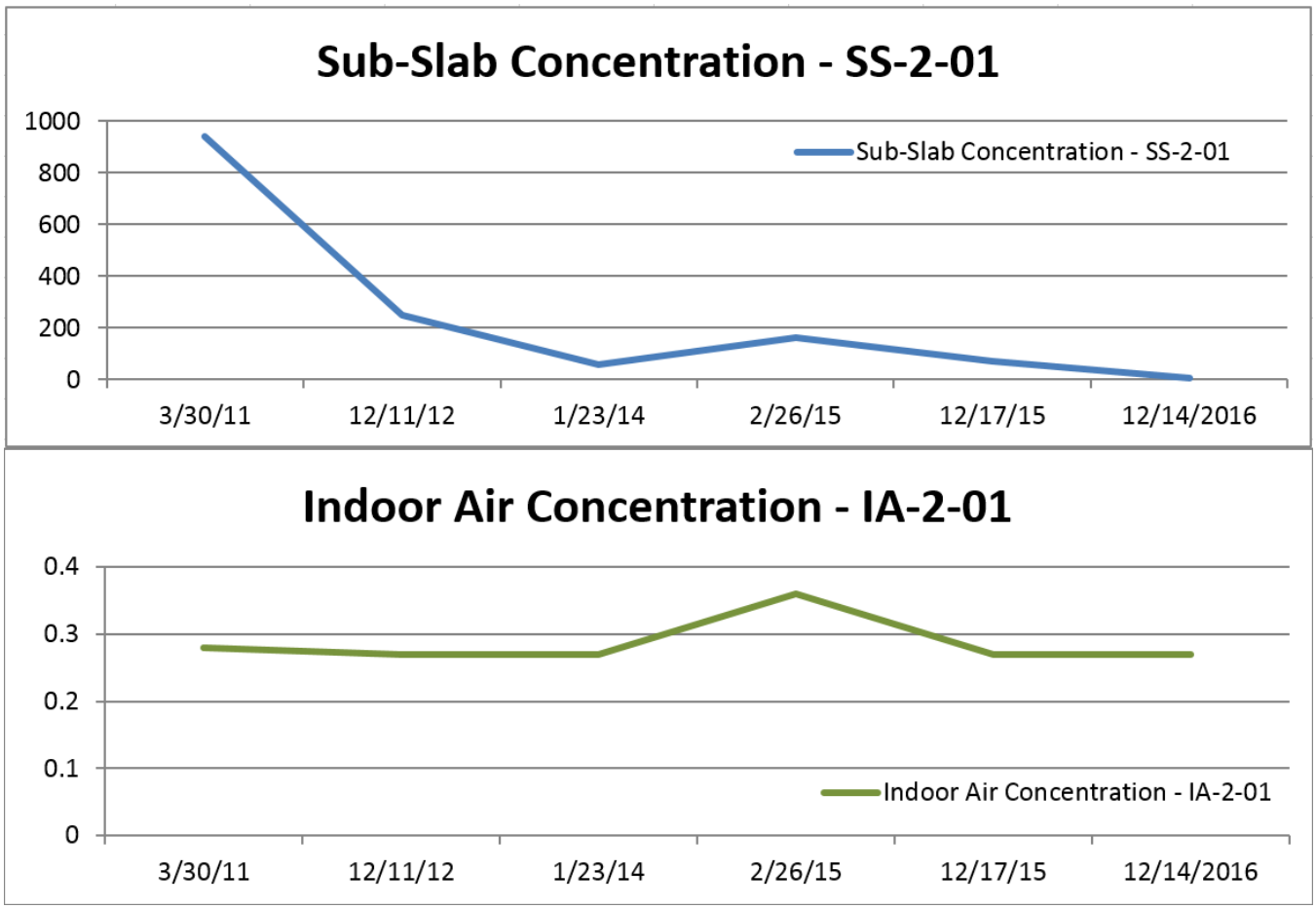
Summary of Detected Off-Site Vapor Intrusion Sampling Results

Sample ID:	2-AA-021915	2-IA-021915	2-SS-021915
Air Sample Type:	**Outdoor**	**Indoor**	**Sub-Slab**
Sample Date:	**12/14/2016**	**12/14/2016**	**12/14/2016**
Site Related Compounds			
Tetrachloroethene	0.27 U	0.27 U	**6.8**
Other Compounds			
1,3-Butadiene	0.18U	0.18U	**0.87**
Benzene	**0.41**	**0.46**	**5.7**
Carbon tetrachloride	**0.51**	**0.46**	1.3U
Cyclohexane	0.14U	0.16	0.69U
Dichlorodifluoromethane	**3.7***	**3.5***	**2.7**
Ethylbenzene	0.17U	**0.20**	**1.1**
m-Xylene & p-Xylene	0.35U	**0.49**	**4.0**
n-Heptane	**0.20**	**0.55**	0.82U
n-Hexane	**0.32**	**0.51**	0.70U
o-Xylene	0.17U	0.17U	**1.4**
Toluene	**0.38**	**0.84**	**13**
Trichlorofluoromethane	**1.7***	**1.5***	**1.3**
Xylenes, Total	**0.24**	**0.64**	**5.4**

Note: Results are reported in units of micrograms per cubic meter (µg/m³)
U - Compound not detected above the reporting limit.

TestAmerica's laboratory analytical report and OBG's data usability summary report for this sampling event are presented in Appendices A and B, respectively. This data has been entered into the NYSDEC Environmental Information Management System.

Sample results indicate that PCE was not detected in the indoor and ambient air samples. PCE was detected in the sub-slab sample at a concentration of 6.8 µg/m^3. A graphical presentation of current and historical data is presented below:



4. RAO ASSESSMENT

As detailed in the *Final Engineering Report, NYSDEC Site Number: C360115, 1-5 Holland Avenue, White Plains, New York* dated December 2014, the Remedial Action Objective (RAO) for soil vapor is to mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings.

New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York provides that no further actions are needed to address human exposures when the subslab vapor concentration of PCE is less than 100 µg/m^3 (See Matrix 2, Final NYSDOH CEH BEEI Soil Vapor Intrusion Guidance, October 2006). Following a substantial decline in 2011 and 2012, the average sub-slab PCE concentration over the past 4 years has been less than 100 µg/m^3. The December 2016 sampling event results show indoor air PCE concentration are within background levels and sub-slab PCE concentration below 100 µg/m^3 (6.8 µg/m^3).

The reduction in sub-slab PCE concentration since 2011 and consistently low indoor air results indicate that the RAO selected for 2 Holland Avenue has been met. The December 2016 monitoring confirms that consistent with NYSDOH Guidance no further action is required to address vapor intrusion at the 2 Holland Avenue property.

Should you have any questions or concerns regarding this matter, please feel free to contact me at (781) 883-6432.

Very truly yours,
O'BRIEN & GERE ENGINEERS, INC.

Mark A. Randazzo, CHMM, CPG
Project Manager

Attachments: Table 1 – Historical Summary of VI Monitoring Data
Figure 1 – Vapor Intrusion Sampling Results
Appendix A – TestAmerica's Laboratory Report
Appendix B – Data Usability Summary Report

cc: Kiera Becker – NYSDEC
David Crosby – NYSDEC
Stephanie Selmer – NYSDOH
Karen Puckett – OHAD
Neal Frink, Esq. – The Frink Law Firm
Eric Alongi – OBG
Douglas Crawford, PE – OBG
Mark Distler – OBG
Guy Swenson, CPG – OBG

Table 1
Summary of Off-Site Vapor Intrusion Sampling Results
Off-Site Property: 2 Holland Avenue
One Holland Avenue Development, LLC
1-5 Holland Avenue
White Plains, New York

Sample Type:	Sub-slab		Sub-slab		Sub-slab		Sub-slab		Indoor Air		Indoor Air		Ambient Air		Sub-slab		Indoor Air		Ambient Air		Sub-slab		Indoor Air		Ambient Air		Sub-slab		Indoor Air		Ambient Air		Sub-slab		Indoor Air		Ambient Air	
Sample ID:	SS-2-01-033011		SS-2-DUP-033011		SS-2-02-033011		SS-2-03-033011		IA-2-01-033011		IA-2-DUP-033011		AMB-2-033011		2-SS-121112		2-IA-121112		7-AA-121112		2-SS-012314		2-IA-012314		2-AA-012314		2-SS-021915		2-IA-021915		2-AA-021915		2-SS-121715		2-IA-121715		2-AA-121715		2-SS-121416		2-IA-121416		2-AA-121416	
Sample Date:	3/30/2011		3/30/2011		3/30/2011		3/30/2011		3/30/2011		3/30/2011		3/30/2011		12/11/2012		12/11/2012		12/11/2012		1/23/2014		1/23/2014		1/23/2014		2/19/2015		2/19/2015		2/19/2015		12/17/2015		12/17/2015		12/17/2015		12/14/2016		12/14/2016		12/14/2016	
Site-related Compounds																																											
Tetrachloroethene (PCE)	**940**		**790**		**32**		**2.2**		**0.27**		**0.28**		0.27	U	**250**		0.27	U	0.27	U	**56**		0.27	U	0.27	U	**160**		**0.36**		0.27	U	**72**		0.27	U	0.27	U	**6.8**		0.27		0.27	
Other Compounds																																											
Carbon tetrachloride (CT)	7.6	U	6.3	U	1.3	U	1.3	U	**0.37**		**0.42**		**0.45**		1.6	U	**0.46**		**0.43**		1.3	U	**0.37**		**0.43**		1.3	U	**0.37**		**0.47**		1.3	U	**0.37**		**0.29**		1.3	U	**0.46**		**0.51**	
1,1,1-Trichloroethane (1,1,1-TCA)	6.6	U	5.5	U	1.1	U	1.1	U	0.22	U	0.22	U	0.22	U	1.4	U	0.22	U	0.22	U	1.1	U	0.22	U	0.22	U	1.1	U	0.22	U	0.22	U	1.1	U	0.22	U	0.22	U	1.1	U	0.22	U	0.22	U
1,1-Dichloroethene (1,1-DCE)	4.8	U	4.0	U	0.79	U	0.79	U	0.16	U	0.16	U	0.16	U	0.99	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U
cis-1,2-Dichloroethene (cis 1,2-DCE)	4.8	U	4.0	U	0.79	U	0.79	U	0.16	U	0.16	U	0.16	U	0.99	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U
Trichloroethene (TCE)	6.5	U	5.4	U	1.1	U	1.1	U	0.21	U	0.21	U	0.21	U	1.3	U	0.21	U	0.21	U	8.9		0.21	U	0.21	U	**2.8**		0.21	U	0.21	U	1.1	U	0.21	U	0.21	U	1.1	U	0.21	U	0.21	U
Vinyl chloride (VC)	3.1	U	2.6	U	0.51	U	0.51	U	0.20	U	0.20	U	0.20	U	0.64	U*	0.20	U	0.20	U	0.51	U	0.20	U	0.20	U	0.51	U	0.20	U	0.20	U	0.51	U	0.20	U	0.20	U	0.51	U	0.20	U	0.20	U
1,1,2,2-Tetrachloroethane	8.3	U	6.9	U	1.4	U	1.4	U	0.27	U	0.27	U	0.27	U	1.7	U	0.27	U	0.27	U	1.4	U	0.27	U	0.27	U	1.4	U	0.27	U	0.27	U	1.4	U	0.27	U	0.27	U	1.4	U	0.27	U	0.27	U
1,1,2-Trichloroethane	6.6	U	5.5	U	1.1	U	1.1	U	0.22	U	0.22	U	0.22	U	1.4	U	0.22	U	0.22	U	1.1	U	0.22	U	0.22	U	1.1	U	0.22	U	0.22	U	1.1	U	0.22	U	0.22	U	1.1	U	0.22	U	0.22	U
1,1-Dichloroethane	4.9	U	4.0	U	0.81	U	0.81	U	0.16	U	0.16	U	0.16	U	1.0	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U	0.81	U	0.16	U	0.16	U	0.81	U	0.16	U	0.16	U	0.81	U	0.16	U	0.16	U
1,2-Dibromoethane	9.3	U	7.7	U	1.5	U	1.5	U	0.31	U	0.31	U	0.31	U	1.9	U	0.31	U	0.31	U	1.5	U	0.31	U	0.31	U	1.5	U	0.31	U	0.31	U	1.5	U	0.31	U	0.31	U	1.5	U	0.31	U	0.31	U
1,2-Dichloroethane	4.9	U	4.0	U	0.81	U	0.81	U	0.32	U	0.32	U	0.32	U	1.0	U	0.32	U	0.32	U	0.81	U	0.32	U	0.31	U	0.81	U	0.32	U	0.32	U	0.81	U	0.32	U	0.32	U	0.81	U	0.32	U	0.32	U
1,2-Dichloroethene, Total	4.8	U	4.0	U	0.79	U	0.79	U	0.16	U	0.16	U	0.16	U	0.99	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U	1.6	U	0.16	U	0.16	U	1.6	U	0.16	U	0.16	U
1,2-Dichloropropane	5.6	U	4.6	U	0.92	U	0.92	U	0.37	U	0.37	U	0.37	U	1.2	U	0.37	U	0.37	U	0.92	U	0.37	U	0.37	U	0.92	U	0.37	U	0.37	U	0.92	U	0.37	U	0.37	U	0.92	U	0.37	U	0.37	U
1,2-Dichlorotetrafluoroethane	8.5	U	7.0	U	1.4	U	1.4	U	0.28	U	0.28	U	0.28	U	1.7	U	0.28	U	0.28	U	1.4	U	0.28	U	0.28	U	1.4	U	0.28	U	0.28	U	1.4	U	0.28	U	0.28	U	1.4	U	0.28	U	0.28	U
1,3,5-Trimethylbenzene	6.0	U	4.9	U	0.98	U	0.98	U	0.39	U	0.39	U	0.39	U	**1.3**		0.39	U	0.39	U	**1.1**		0.39	U	0.39	U	0.98	U	0.39	U	0.39	U	0.98	U	0.39	U	0.39	U	0.98	U	0.39	U	0.39	U
1,3-Butadiene	2.7	U	2.2	U	0.44	U	0.44	U	0.18	U	0.18	U	0.18	U	0.55	U*	0.18	U	0.18	U	**1.6**		0.18	U	0.18	U	**0.95**		0.18	U	0.18	U	0.44	U	0.18	U	0.18	U	**0.87**		0.18	U	0.18	U
2,2,4-Trimethylpentane	5.7	U	4.7	U	0.93	U	0.93	U	0.19	U	**0.20**		**0.23**		1.2	U	0.19	U	**0.22**		0.93	U	0.19	U	**0.22**		0.93	U	0.19	U	0.19	U	0.93	U	**0.19**		**0.25**		0.93	U	0.19	U	0.19	U
3-Chloropropene	9.5	U	7.8	U	1.6	U	1.6	U	0.25	U	0.25	U	0.25	U	2.0	U	0.25	U	0.25	U	1.6	U	0.25	U	0.25	U	1.6	U	0.25	U	0.25	U	1.6	U	0.25	U	0.25	U	1.6	U	0.25	U	0.25	U
4-Ethyltoluene	6.0	U	4.9	U	0.98	U	0.98	U	**0.29**		**0.27**		0.20	U	1.2	U	**0.20**		0.20	U	**1.1**		0.20	U*	0.20	U*	0.98	U	0.20	U	0.20	U	0.98	U	0.20	U	0.20	U	0.98	U	0.20	U	0.20	U
Benzene	3.9	U	3.2	U	**0.88**		**0.63**		**0.52**		**0.59**		**0.55**		**1.1**		**0.41**		**0.36**		**6.5**		**0.39**		**0.48**		**5.5**		**0.45**		0.54	U	0.64	U	**0.53**		**0.47**		**5.7**		**0.46**		**0.41**	
Bromodichloromethane	8.1	U	6.7	U	1.3	U	1.3	U	0.27	U	0.27	U	0.27	U	1.7	U	0.27	U	0.27	U	1.3	U	0.27	U	0.27	U	1.3	U	0.27	U	0.27	U	1.3	U	0.27	U	0.27	U	1.3	U	0.27	U	0.27	U
Bromoethene(Vinyl Bromide)	5.3	U	4.4	U	0.87	U	0.87	U	0.35	U	0.35	U	0.35	U	1.1	U	0.35	U	0.35	U	0.87	U	0.35	U	0.35	U	0.87	U	0.35	U	0.35	U	0.87	U	0.35	U	0.35	U	0.87	U	0.35	U	0.35	U
Bromoform	13	U	10	U	2.1	U	2.1	U	0.41	U	0.41	U	0.41	U	2.6	U	0.41	U	0.41	U	2.1	U	0.41	U	0.41	U	2.1	U	0.41	U	0.41	U	2.1	U	0.41	U	0.41	U	2.1	U	0.41	U	0.41	U
Bromomethane	4.7	U	3.9	U	0.78	U	0.78	U	0.31	U	0.31	U	0.31	U	0.97	U	0.31	U	0.31	U	0.78	U	0.31	U	0.31	U	0.78	U	0.31	U	0.31	U	0.78	U	0.31	U	0.31	U	0.78	U	0.31	U	0.31	U
Chloroethane	8.0	U	6.6	U	1.3	U	1.3	U	0.21	U	0.21	U	0.21	U	1.6	U	0.21	U	0.21	U	**4.1**		0.21	U	0.21	U	1.3	U	0.21	U	0.21	U	1.3	U	0.21	U	0.21	U	1.3	U	0.21	U	0.21	U
Chloroform	5.9	U	4.9	U	0.98	U	0.98	U	0.20	U	0.20	U	0.20	U	1.2	U	0.20	U	0.20	U	0.98	U	0.20	U	0.20	U	0.98	U	0.20	U	0.20	U	0.98	U	0.20	U	0.20	U	0.98	U	0.20	U	0.20	U
cis-1,3-Dichloropropene	5.5	U	4.5	U	0.91	U	0.91	U	0.18	U	0.18	U	0.18	U	1.1	U	0.18	U	0.18	U	0.91	U	0.18	U	0.18	U	0.91	U	0.18	U	0.18	U	0.91	U	0.18	U	0.18	U	0.91	U	0.16	U	0.16	U
Cyclohexane	4.2	U	3.4	U	0.69	U	**0.68**		0.14	U	0.14	U	**0.35**		0.86	U	0.14	U	0.14	U	**3.0**		0.14	U	0.14	U	0.69	U	**0.50**		0.14	U	0.69	U	**0.14**		0.14	U	0.69	U	**0.16**		0.14	U
Dibromochloromethane	10	U	8.5	U	1.7	U	1.7	U	0.34	U	0.34	U	0.34	U	2.1	U	0.34	U	0.34	U	1.7	U	0.34	U	0.34	U	1.7	U	0.34	U	0.34	U	1.7	U	0.34	U	0.34	U	1.7	U	0.34	U	0.34	U
Dichlorodifluoromethane	15	U	12	U	2.5	U	2.5	U	**2.5**		**2.2**		**2.3**		**3.6**		**3.1**		3.2		**2.8**		**1.8**		**2.1**		2.5	U	**1.9**		**2.4**		**11**		**2.0**		**1.7**		**2.7**		**3.5**		**3.7**	
Ethylbenzene	5.3	U	4.3	U	**1.3**		**0.99**		0.22	U	**0.25**		**0.18**		**3.2**		**0.3**		0.17	U	**6.8**		**0.24**		0.17	U	**2.3**		**0.47**		0.17	U	0.87	U	**0.25**		**0.20**		**1.1**		**0.2**		**0.17**	U
m,p-Xylene	13	U	11	U	**6.0**		**4.5**		**0.63**		**0.65**		**0.52**		**13**		**0.86**		**0.62**		**23**		**0.69**		0.35	U	**5.0**		**1.3**		0.35	U	**3.6**		**0.58**		**0.51**		**4.0**		**0.49**		0.35	U
Methyl tert-butyl ether	4.4	U	3.6	U	0.72	U	0.72	U	0.14	U	0.14	U	0.14	U	0.90	U	0.14	U	0.14	U	0.72	U	0.14	U	0.14	U	0.72	U	0.14	U	0.14	U	0.72	U	0.14	U	0.14	U	0.72	U	0.14	U	0.14	U
Methylene Chloride	11	U	8.7	U	1.7	U	1.7	U	2.8	U	2.8	U	2.8	U	2.2	U	1.4	U	1.4	U	1.7	U	1.4	U	1.4	U	1.7	U	**32**	**D**	1.4	U	1.7	U	**1.5**		1.4	U	1.7	U	2.8	U	2.8	U
n-Heptane	5.0	U	4.1	U	0.82	U	0.82	U	0.16	U	**0.19**		**0.16**		**1.6**		**0.19**		**0.21**		**2.9**		**0.31**		**0.33**		**0.98**		**0.91**		**0.19**		0.82	U	**0.70**		**0.24**		0.82	U	**0.55**		**0.2**	
n-Hexane	4.3	U	3.5	U	0.70	U	0.70	U	**0.30**		**0.31**		**0.41**		**1.5**		0.28	U	**0.38**		**3.2**		**0.33**		**0.64**		**0.80**		**20**	**D**	0.28	U	0.70	U	**0.42**		**0.36**		0.70	U	**0.51**		**0.32**	
Toluene	4.6	U	3.8	U	**4.6**		**3.1**		**0.92**		**0.83**		**1.4**		**9.2**		**1**		**2**		**50**		**0.71**		**0.54**		**6.0**		**5.3**		**0.57**		**5.1**		**1.0**		**1.0**		**1.3**		**0.84**		**0.38**	
trans-1,2-Dichloroethene	4.8	U	4.0	U	0.79	U	0.79	U	0.16	U	0.16	U	0.16	U	0.99	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U	0.79	U	0.16	U	0.16	U
trans-1,3-Dichloropropene	5.5	U	4.5	U	0.91	U	0.91	U	0.18	U	0.18	U	0.18	U	1.1	U	0.18	U	0.18	U	0.91	U	0.18	U	0.18	U	0.91	U	0.18	U	0.18	U	0.91	U	0.18	U	0.18	U	0.91	U	0.18	U	0.18	U
Trichlorofluoromethane	6.8	U	5.6	U	**1.5**		**1.4**		**1.1**		**1.1**		**1.1**		1.4	U	**1.3**		**1.3**		**1.2**		**0.89**		**1.1**		**1.3**		**0.89**		**1.2**		1.1	U	**0.91**		**0.82**		**1.3**		**1.5**		**1.7**	
Xylene (total)	5.3	U	4.3	U	**8.1**		**5.9**		0.86	U	**0.87**		**0.70**		**17**		**1.2**		**0.87**		**29**		**0.94**		**0.45**		**7.6**		**1.8**		**0.47**		**4.8**		**0.83**		**0.71**		**5.4**		**0.64**		**0.24**	
Xylene, o-	5.3	U	4.3	U	**2.1**		**1.4**		**0.23**		**0.22**		**0.18**		**4.4**		**0.3**		**0.25**		**6.5**		**0.24**		0.17	U	**2.3**		**0.50**		0.17	U	**1.2**		**0.25**		**0.20**		**1.4**		**0.17**	U	**0.17**	U

Note: Results are reported in units of micrograms per cubic meter (ug/m ^{3}).

U - Compound not detected above the reporting limit.

D - Sample results are obtained from a dilution.

I:\Feintool-Ny.14206\63124.Smp-Activities\Docs\DWG\MXD\VI_2HolandAve_Dec2016.mxd

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PLOTDATE: 01/16/17 8:03:49 AM newtonjm

FIGURE 1

N

LEGEND

- INDOOR AIR SAMPLE
- SUB-SLAB VAPOR SAMPLE
- AMBIENT AIR SAMPLE

AMBIENT UPWIND	-- SAMPLE TYPE
PCE = ND (<0.27 ug/m³)	-- 2016 RESULTS

NOTE:
ND = NON-DETECT

One Holland Avenue Development
1-5 Holland Avenue
White Plains, NY

VAPOR INTRUSION SAMPLING RESULTS DECEMBER 2016

FOR
2 HOLLAND AVENUE
WHITE PLAINS, NEW YORK

0 20 40 80
Feet

JANUARY 2017
14206/63124

O'BRIEN & GERE

Test America's Laboratory Report

ANALYTICAL REPORT

Job Number: 200-36706-1

SDG Number: 200-36706-1

Job Description: Fein Tool

For:
O'Brien & Gere Inc of North America
333 West Washington St.
PO BOX 4873
East Syracuse, NY 13221

Attention: Mr. Eric Alongi

Approved for release.
James W Madison
Senior Project Manager
2/28/2017 8:14 AM

Designee for
Don C Dawicki, Manager of Project Management
30 Community Drive, South Burlington, VT, 05403
(802)660-1990
don.dawicki@testamericainc.com
02/28/2017

cc: Mr. Mark A Randazzo

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

CASE NARRATIVE

Client: O'Brien & Gere Inc of North America

Project: Fein Tool

Report Number: 200-36706-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 12/19/2016; the samples arrived in good condition.

VOLATILE ORGANIC COMPOUNDS
Sample 2-SS-121416 was analyzed for Volatile Organic Compounds in accordance with EPA Method TO-15. The sample was analyzed on 12/23/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

LOW LEVEL VOLATILE ORGANIC COMPOUNDS
Samples 2-IA-121416 and 2-AA-121416 were analyzed for Low Level Volatile Organic Compounds in accordance with EPA Method TO-15. The samples were analyzed on 12/30/2016.

The laboratory control sample (LCS) and continuing calibration verification (CCV) for analytical batch 200-112819 yielded percent recoveries of several target analytes that exceeded the upper control criteria.. Of the affected compounds, Dichlorodifluoromethane and Trichloroofluoromethane were reported in the samples referenced above at levels above the reporting limits.

The samples referenced above were analyzed at 4-fold dilution in order to provide for the project requested reporting limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

EXECUTIVE SUMMARY - Detections

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
200-36706-1	**2-IA-121416**					
Dichlorodifluoromethane		0.72	*	0.040	ppb v/v	TO15 LL
Dichlorodifluoromethane		3.5	*	0.20	ug/m3	TO15 LL
Trichlorofluoromethane		0.26	*	0.040	ppb v/v	TO15 LL
Trichlorofluoromethane		1.5	*	0.22	ug/m3	TO15 LL
n-Hexane		0.15		0.080	ppb v/v	TO15 LL
n-Hexane		0.51		0.28	ug/m3	TO15 LL
Cyclohexane		0.047		0.040	ppb v/v	TO15 LL
Cyclohexane		0.16		0.14	ug/m3	TO15 LL
Carbon tetrachloride		0.073		0.040	ppb v/v	TO15 LL
Carbon tetrachloride		0.46		0.25	ug/m3	TO15 LL
Benzene		0.14		0.040	ppb v/v	TO15 LL
Benzene		0.46		0.13	ug/m3	TO15 LL
n-Heptane		0.14		0.040	ppb v/v	TO15 LL
n-Heptane		0.55		0.16	ug/m3	TO15 LL
Toluene		0.22		0.040	ppb v/v	TO15 LL
Toluene		0.84		0.15	ug/m3	TO15 LL
Ethylbenzene		0.046		0.040	ppb v/v	TO15 LL
Ethylbenzene		0.20		0.17	ug/m3	TO15 LL
m-Xylene & p-Xylene		0.11		0.080	ppb v/v	TO15 LL
m-Xylene & p-Xylene		0.49		0.35	ug/m3	TO15 LL
Xylenes, Total		0.15		0.040	ppb v/v	TO15 LL
Xylenes, Total		0.64		0.17	ug/m3	TO15 LL

EXECUTIVE SUMMARY - Detections

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
200-36706-2	**2-SS-121416**					
Dichlorodifluoromethane		0.54		0.50	ppb v/v	TO-15
Dichlorodifluoromethane		2.7		2.5	ug/m3	TO-15
1,3-Butadiene		0.39		0.20	ppb v/v	TO-15
1,3-Butadiene		0.87		0.44	ug/m3	TO-15
Trichlorofluoromethane		0.22		0.20	ppb v/v	TO-15
Trichlorofluoromethane		1.3		1.1	ug/m3	TO-15
Benzene		1.8		0.20	ppb v/v	TO-15
Benzene		5.7		0.64	ug/m3	TO-15
Toluene		3.4		0.20	ppb v/v	TO-15
Toluene		13		0.75	ug/m3	TO-15
Tetrachloroethene		1.0		0.20	ppb v/v	TO-15
Tetrachloroethene		6.8		1.4	ug/m3	TO-15
Ethylbenzene		0.26		0.20	ppb v/v	TO-15
Ethylbenzene		1.1		0.87	ug/m3	TO-15
m,p-Xylene		0.92		0.50	ppb v/v	TO-15
m,p-Xylene		4.0		2.2	ug/m3	TO-15
Xylene, o-		0.32		0.20	ppb v/v	TO-15
Xylene, o-		1.4		0.87	ug/m3	TO-15
Xylene (total)		1.2		0.70	ppb v/v	TO-15
Xylene (total)		5.4		3.0	ug/m3	TO-15
200-36706-3	**2-AA-121416**					
Dichlorodifluoromethane		0.75	*	0.040	ppb v/v	TO15 LL
Dichlorodifluoromethane		3.7	*	0.20	ug/m3	TO15 LL
Trichlorofluoromethane		0.30	*	0.040	ppb v/v	TO15 LL
Trichlorofluoromethane		1.7	*	0.22	ug/m3	TO15 LL
n-Hexane		0.091		0.080	ppb v/v	TO15 LL
n-Hexane		0.32		0.28	ug/m3	TO15 LL
Carbon tetrachloride		0.081		0.040	ppb v/v	TO15 LL
Carbon tetrachloride		0.51		0.25	ug/m3	TO15 LL
Benzene		0.13		0.040	ppb v/v	TO15 LL
Benzene		0.41		0.13	ug/m3	TO15 LL
n-Heptane		0.048		0.040	ppb v/v	TO15 LL
n-Heptane		0.20		0.16	ug/m3	TO15 LL
Toluene		0.10		0.040	ppb v/v	TO15 LL
Toluene		0.38		0.15	ug/m3	TO15 LL
Xylenes, Total		0.055		0.040	ppb v/v	TO15 LL
Xylenes, Total		0.24		0.17	ug/m3	TO15 LL

METHOD SUMMARY

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Description	Lab Location	Method	Preparation Method
Matrix: Air			
Volatile Organic Compounds in Ambient Air	TAL BUR	EPA TO-15	
Collection via Summa Canister	TAL BUR		Summa Canister
Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	TAL BUR	EPA TO15 LL	
Collection via Summa Canister	TAL BUR		Summa Canister

Lab References:

TAL BUR = TestAmerica Burlington

Method References:

EPA = US Environmental Protection Agency

METHOD / ANALYST SUMMARY

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Method	Analyst	Analyst ID
EPA TO-15	Daigle, Paul A	PAD
EPA TO15 LL	Desjardins, William R	WRD

SAMPLE SUMMARY

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
200-36706-1	2-IA-121416	Air	12/14/2016 1402	12/19/2016 1030
200-36706-2	2-SS-121416	Air	12/14/2016 1416	12/19/2016 1030
200-36706-3	2-AA-121416	Air	12/14/2016 1420	12/19/2016 1030

SAMPLE RESULTS

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Client Sample ID: 2-SS-121416

Lab Sample ID: 200-36706-2
Client Matrix: Air

Date Sampled: 12/14/2016 1416
Date Received: 12/19/2016 1030

TO-15 Volatile Organic Compounds in Ambient Air

Analysis Method:	TO-15	Analysis Batch:	200-112711	Instrument ID:	CHW.i
Prep Method:	Summa Canister	Prep Batch:	N/A	Lab File ID:	23244_06.d
Dilution:	1.0			Initial Weight/Volume:	200 mL
Analysis Date:	12/23/2016 1503			Final Weight/Volume:	200 mL
Prep Date:	12/23/2016 1503			Injection Volume:	200 mL

Analyte	Result (ppb v/v)	Qualifier	RL
Dichlorodifluoromethane	0.54		0.50
1,2-Dichlorotetrafluoroethane	0.20	U	0.20
Vinyl chloride	0.20	U	0.20
1,3-Butadiene	0.39		0.20
Bromomethane	0.20	U	0.20
Chloroethane	0.50	U	0.50
Bromoethene(Vinyl Bromide)	0.20	U	0.20
Trichlorofluoromethane	0.22		0.20
1,1-Dichloroethene	0.20	U	0.20
3-Chloropropene	0.50	U	0.50
Methylene Chloride	0.50	U	0.50
Methyl tert-butyl ether	0.20	U	0.20
trans-1,2-Dichloroethene	0.20	U	0.20
n-Hexane	0.20	U	0.20
1,1-Dichloroethane	0.20	U	0.20
cis-1,2-Dichloroethene	0.20	U	0.20
1,2-Dichloroethene, Total	0.40	U	0.40
Chloroform	0.20	U	0.20
1,1,1-Trichloroethane	0.20	U	0.20
Cyclohexane	0.20	U	0.20
Carbon tetrachloride	0.20	U	0.20
2,2,4-Trimethylpentane	0.20	U	0.20
Benzene	1.8		0.20
1,2-Dichloroethane	0.20	U	0.20
n-Heptane	0.20	U	0.20
Trichloroethene	0.20	U	0.20
1,2-Dichloropropane	0.20	U	0.20
Bromodichloromethane	0.20	U	0.20
cis-1,3-Dichloropropene	0.20	U	0.20
Toluene	3.4		0.20
trans-1,3-Dichloropropene	0.20	U	0.20
1,1,2-Trichloroethane	0.20	U	0.20
Tetrachloroethene	1.0		0.20
Dibromochloromethane	0.20	U	0.20
1,2-Dibromoethane	0.20	U	0.20
Ethylbenzene	0.26		0.20
m,p-Xylene	0.92		0.50
Xylene, o-	0.32		0.20
Xylene (total)	1.2		0.70
Bromoform	0.20	U	0.20
1,1,2,2-Tetrachloroethane	0.20	U	0.20
4-Ethyltoluene	0.20	U	0.20
1,3,5-Trimethylbenzene	0.20	U	0.20

Analyte	Result (ug/m3)	Qualifier	RL
Dichlorodifluoromethane	2.7		2.5

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Client Sample ID: 2-SS-121416

Lab Sample ID: 200-36706-2
Client Matrix: Air

Date Sampled: 12/14/2016 1416
Date Received: 12/19/2016 1030

TO-15 Volatile Organic Compounds in Ambient Air

Analysis Method:	TO-15	Analysis Batch:	200-112711	Instrument ID:	CHW.i
Prep Method:	Summa Canister	Prep Batch:	N/A	Lab File ID:	23244_06.d
Dilution:	1.0			Initial Weight/Volume:	200 mL
Analysis Date:	12/23/2016 1503			Final Weight/Volume:	200 mL
Prep Date:	12/23/2016 1503			Injection Volume:	200 mL

Analyte	Result (ug/m3)	Qualifier	RL
1,2-Dichlorotetrafluoroethane	1.4	U	1.4
Vinyl chloride	0.51	U	0.51
1,3-Butadiene	0.87		0.44
Bromomethane	0.78	U	0.78
Chloroethane	1.3	U	1.3
Bromoethene(Vinyl Bromide)	0.87	U	0.87
Trichlorofluoromethane	1.3		1.1
1,1-Dichloroethene	0.79	U	0.79
3-Chloropropene	1.6	U	1.6
Methylene Chloride	1.7	U	1.7
Methyl tert-butyl ether	0.72	U	0.72
trans-1,2-Dichloroethene	0.79	U	0.79
n-Hexane	0.70	U	0.70
1,1-Dichloroethane	0.81	U	0.81
cis-1,2-Dichloroethene	0.79	U	0.79
1,2-Dichloroethene, Total	1.6	U	1.6
Chloroform	0.98	U	0.98
1,1,1-Trichloroethane	1.1	U	1.1
Cyclohexane	0.69	U	0.69
Carbon tetrachloride	1.3	U	1.3
2,2,4-Trimethylpentane	0.93	U	0.93
Benzene	5.7		0.64
1,2-Dichloroethane	0.81	U	0.81
n-Heptane	0.82	U	0.82
Trichloroethene	1.1	U	1.1
1,2-Dichloropropane	0.92	U	0.92
Bromodichloromethane	1.3	U	1.3
cis-1,3-Dichloropropene	0.91	U	0.91
Toluene	13		0.75
trans-1,3-Dichloropropene	0.91	U	0.91
1,1,2-Trichloroethane	1.1	U	1.1
Tetrachloroethene	6.8		1.4
Dibromochloromethane	1.7	U	1.7
1,2-Dibromoethane	1.5	U	1.5
Ethylbenzene	1.1		0.87
m,p-Xylene	4.0		2.2
Xylene, o-	1.4		0.87
Xylene (total)	5.4		3.0
Bromoform	2.1	U	2.1
1,1,2,2-Tetrachloroethane	1.4	U	1.4
4-Ethyltoluene	0.98	U	0.98
1,3,5-Trimethylbenzene	0.98	U	0.98

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Client Sample ID: 2-IA-121416

Lab Sample ID: 200-36706-1
Client Matrix: Air

Date Sampled: 12/14/2016 1402
Date Received: 12/19/2016 1030

TO15 LL Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analysis Method:	TO15 LL	Analysis Batch:	200-112819	Instrument ID:	CHE.i
Prep Method:	Summa Canister	Prep Batch:	N/A	Lab File ID:	23284-019.D
Dilution:	4.0			Initial Weight/Volume:	125 mL
Analysis Date:	12/30/2016 0252			Final Weight/Volume:	500 mL
Prep Date:	12/30/2016 0252			Injection Volume:	500 mL

Analyte	Result (ppb v/v)	Qualifier	RL
Dichlorodifluoromethane	0.72	*	0.040
1,2-Dichlorotetrafluoroethane	0.040	U *	0.040
Vinyl chloride	0.080	U *	0.080
1,3-Butadiene	0.080	U	0.080
Bromomethane	0.080	U	0.080
Chloroethane	0.080	U	0.080
Bromoethene(Vinyl Bromide)	0.080	U	0.080
Trichlorofluoromethane	0.26	*	0.040
1,1-Dichloroethene	0.040	U	0.040
3-Chloropropene	0.080	U	0.080
Methylene Chloride	0.80	U *	0.80
Methyl tert-butyl ether	0.040	U	0.040
trans-1,2-Dichloroethene	0.040	U	0.040
n-Hexane	0.15		0.080
1,1-Dichloroethane	0.040	U	0.040
cis-1,2-Dichloroethene	0.040	U	0.040
Chloroform	0.040	U	0.040
1,1,1-Trichloroethane	0.040	U	0.040
Cyclohexane	0.047		0.040
Carbon tetrachloride	0.073		0.040
2,2,4-Trimethylpentane	0.040	U	0.040
Benzene	0.14		0.040
1,2-Dichloroethane	0.080	U	0.080
n-Heptane	0.14		0.040
Trichloroethene	0.040	U	0.040
1,2-Dichloropropane	0.080	U	0.080
Bromodichloromethane	0.040	U	0.040
cis-1,3-Dichloropropene	0.040	U	0.040
Toluene	0.22		0.040
trans-1,3-Dichloropropene	0.040	U	0.040
1,1,2-Trichloroethane	0.040	U	0.040
Tetrachloroethene	0.040	U	0.040
Dibromochloromethane	0.040	U	0.040
1,2-Dibromoethane	0.040	U	0.040
Ethylbenzene	0.046		0.040
o-Xylene	0.040	U	0.040
Bromoform	0.040	U	0.040
1,1,2,2-Tetrachloroethane	0.040	U	0.040
4-Ethyltoluene	0.040	U	0.040
1,3,5-Trimethylbenzene	0.080	U	0.080
1,2-Dichloroethene, Total	0.040	U	0.040
m-Xylene & p-Xylene	0.11		0.080
Xylenes, Total	0.15		0.040

Analyte	Result (ug/m3)	Qualifier	RL
Dichlorodifluoromethane	3.5	*	0.20

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Client Sample ID: 2-IA-121416

Lab Sample ID: 200-36706-1
Client Matrix: Air

Date Sampled: 12/14/2016 1402
Date Received: 12/19/2016 1030

TO15 LL Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analysis Method:	TO15 LL	Analysis Batch:	200-112819	Instrument ID:	CHE.i
Prep Method:	Summa Canister	Prep Batch:	N/A	Lab File ID:	23284-019.D
Dilution:	4.0			Initial Weight/Volume:	125 mL
Analysis Date:	12/30/2016 0252			Final Weight/Volume:	500 mL
Prep Date:	12/30/2016 0252			Injection Volume:	500 mL

Analyte	Result (ug/m3)	Qualifier	RL
1,2-Dichlorotetrafluoroethane	0.28	U *	0.28
Vinyl chloride	0.20	U *	0.20
1,3-Butadiene	0.18	U	0.18
Bromomethane	0.31	U	0.31
Chloroethane	0.21	U	0.21
Bromoethene(Vinyl Bromide)	0.35	U	0.35
Trichlorofluoromethane	1.5	*	0.22
1,1-Dichloroethene	0.16	U	0.16
3-Chloropropene	0.25	U	0.25
Methylene Chloride	2.8	U *	2.8
Methyl tert-butyl ether	0.14	U	0.14
trans-1,2-Dichloroethene	0.16	U	0.16
n-Hexane	0.51		0.28
1,1-Dichloroethane	0.16	U	0.16
cis-1,2-Dichloroethene	0.16	U	0.16
Chloroform	0.20	U	0.20
1,1,1-Trichloroethane	0.22	U	0.22
Cyclohexane	0.16		0.14
Carbon tetrachloride	0.46		0.25
2,2,4-Trimethylpentane	0.19	U	0.19
Benzene	0.46		0.13
1,2-Dichloroethane	0.32	U	0.32
n-Heptane	0.55		0.16
Trichloroethene	0.21	U	0.21
1,2-Dichloropropane	0.37	U	0.37
Bromodichloromethane	0.27	U	0.27
cis-1,3-Dichloropropene	0.18	U	0.18
Toluene	0.84		0.15
trans-1,3-Dichloropropene	0.18	U	0.18
1,1,2-Trichloroethane	0.22	U	0.22
Tetrachloroethene	0.27	U	0.27
Dibromochloromethane	0.34	U	0.34
1,2-Dibromoethane	0.31	U	0.31
Ethylbenzene	0.20		0.17
o-Xylene	0.17	U	0.17
Bromoform	0.41	U	0.41
1,1,2,2-Tetrachloroethane	0.27	U	0.27
4-Ethyltoluene	0.20	U	0.20
1,3,5-Trimethylbenzene	0.39	U	0.39
1,2-Dichloroethene, Total	0.16	U	0.16
m-Xylene & p-Xylene	0.49		0.35
Xylenes, Total	0.64		0.17

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Client Sample ID: 2-AA-121416

Lab Sample ID: 200-36706-3
Client Matrix: Air

Date Sampled: 12/14/2016 1420
Date Received: 12/19/2016 1030

TO15 LL Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analysis Method:	TO15 LL	Analysis Batch:	200-112819	Instrument ID:	CHE.i
Prep Method:	Summa Canister	Prep Batch:	N/A	Lab File ID:	23284-020.D
Dilution:	4.0			Initial Weight/Volume:	125 mL
Analysis Date:	12/30/2016 0353			Final Weight/Volume:	500 mL
Prep Date:	12/30/2016 0353			Injection Volume:	500 mL

Analyte	Result (ppb v/v)	Qualifier	RL
Dichlorodifluoromethane	0.75	*	0.040
1,2-Dichlorotetrafluoroethane	0.040	U *	0.040
Vinyl chloride	0.080	U *	0.080
1,3-Butadiene	0.080	U	0.080
Bromomethane	0.080	U	0.080
Chloroethane	0.080	U	0.080
Bromoethene(Vinyl Bromide)	0.080	U	0.080
Trichlorofluoromethane	0.30	*	0.040
1,1-Dichloroethene	0.040	U	0.040
3-Chloropropene	0.080	U	0.080
Methylene Chloride	0.80	U *	0.80
Methyl tert-butyl ether	0.040	U	0.040
trans-1,2-Dichloroethene	0.040	U	0.040
n-Hexane	0.091		0.080
1,1-Dichloroethane	0.040	U	0.040
cis-1,2-Dichloroethene	0.040	U	0.040
Chloroform	0.040	U	0.040
1,1,1-Trichloroethane	0.040	U	0.040
Cyclohexane	0.040	U	0.040
Carbon tetrachloride	0.081		0.040
2,2,4-Trimethylpentane	0.040	U	0.040
Benzene	0.13		0.040
1,2-Dichloroethane	0.080	U	0.080
n-Heptane	0.048		0.040
Trichloroethene	0.040	U	0.040
1,2-Dichloropropane	0.080	U	0.080
Bromodichloromethane	0.040	U	0.040
cis-1,3-Dichloropropene	0.040	U	0.040
Toluene	0.10		0.040
trans-1,3-Dichloropropene	0.040	U	0.040
1,1,2-Trichloroethane	0.040	U	0.040
Tetrachloroethene	0.040	U	0.040
Dibromochloromethane	0.040	U	0.040
1,2-Dibromoethane	0.040	U	0.040
Ethylbenzene	0.040	U	0.040
o-Xylene	0.040	U	0.040
Bromoform	0.040	U	0.040
1,1,2,2-Tetrachloroethane	0.040	U	0.040
4-Ethyltoluene	0.040	U	0.040
1,3,5-Trimethylbenzene	0.080	U	0.080
1,2-Dichloroethene, Total	0.040	U	0.040
m-Xylene & p-Xylene	0.080	U	0.080
Xylenes, Total	0.055		0.040

Analyte	Result (ug/m3)	Qualifier	RL
Dichlorodifluoromethane	3.7	*	0.20

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Client Sample ID: 2-AA-121416

Lab Sample ID: 200-36706-3
Client Matrix: Air

Date Sampled: 12/14/2016 1420
Date Received: 12/19/2016 1030

TO15 LL Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analysis Method:	TO15 LL	Analysis Batch:	200-112819	Instrument ID:	CHE.i
Prep Method:	Summa Canister	Prep Batch:	N/A	Lab File ID:	23284-020.D
Dilution:	4.0			Initial Weight/Volume:	125 mL
Analysis Date:	12/30/2016 0353			Final Weight/Volume:	500 mL
Prep Date:	12/30/2016 0353			Injection Volume:	500 mL

Analyte	Result (ug/m3)	Qualifier	RL
1,2-Dichlorotetrafluoroethane	0.28	U *	0.28
Vinyl chloride	0.20	U *	0.20
1,3-Butadiene	0.18	U	0.18
Bromomethane	0.31	U	0.31
Chloroethane	0.21	U	0.21
Bromoethene(Vinyl Bromide)	0.35	U	0.35
Trichlorofluoromethane	1.7	*	0.22
1,1-Dichloroethene	0.16	U	0.16
3-Chloropropene	0.25	U	0.25
Methylene Chloride	2.8	U *	2.8
Methyl tert-butyl ether	0.14	U	0.14
trans-1,2-Dichloroethene	0.16	U	0.16
n-Hexane	0.32		0.28
1,1-Dichloroethane	0.16	U	0.16
cis-1,2-Dichloroethene	0.16	U	0.16
Chloroform	0.20	U	0.20
1,1,1-Trichloroethane	0.22	U	0.22
Cyclohexane	0.14	U	0.14
Carbon tetrachloride	0.51		0.25
2,2,4-Trimethylpentane	0.19	U	0.19
Benzene	0.41		0.13
1,2-Dichloroethane	0.32	U	0.32
n-Heptane	0.20		0.16
Trichloroethene	0.21	U	0.21
1,2-Dichloropropane	0.37	U	0.37
Bromodichloromethane	0.27	U	0.27
cis-1,3-Dichloropropene	0.18	U	0.18
Toluene	0.38		0.15
trans-1,3-Dichloropropene	0.18	U	0.18
1,1,2-Trichloroethane	0.22	U	0.22
Tetrachloroethene	0.27	U	0.27
Dibromochloromethane	0.34	U	0.34
1,2-Dibromoethane	0.31	U	0.31
Ethylbenzene	0.17	U	0.17
o-Xylene	0.17	U	0.17
Bromoform	0.41	U	0.41
1,1,2,2-Tetrachloroethane	0.27	U	0.27
4-Ethyltoluene	0.20	U	0.20
1,3,5-Trimethylbenzene	0.39	U	0.39
1,2-Dichloroethene, Total	0.16	U	0.16
m-Xylene & p-Xylene	0.35	U	0.35
Xylenes, Total	0.24		0.17

DATA REPORTING QUALIFIERS

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Lab Section	Qualifier	Description
Air - GC/MS VOA		
	U	Indicates the analyte was analyzed for but not detected.
	*	LCS or LCSD is outside acceptance limits.

QUALITY CONTROL RESULTS

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Air - GC/MS VOA					
Analysis Batch:200-112711					
LCS 200-112711/4	Lab Control Sample	T	Air	TO-15	
MB 200-112711/5	Method Blank	T	Air	TO-15	
200-36706-2	2-SS-121416	T	Air	TO-15	
Analysis Batch:200-112819					
LCS 200-112819/4	Lab Control Sample	T	Air	TO15 LL	
MB 200-112819/5	Method Blank	T	Air	TO15 LL	
200-36706-1	2-IA-121416	T	Air	TO15 LL	
200-36706-3	2-AA-121416	T	Air	TO15 LL	

Report Basis
T = Total

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Method Blank - Batch: 200-112711

Method: TO-15
Preparation: Summa Canister

Lab Sample ID:	MB 200-112711/5	Analysis Batch:	200-112711	Instrument ID:	CHW.i
Client Matrix:	Air	Prep Batch:	N/A	Lab File ID:	23244_05.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	200 mL
Analysis Date:	12/23/2016 1410	Units:	ppb v/v	Final Weight/Volume:	200 mL
Prep Date:	12/23/2016 1410			Injection Volume:	200 mL
Leach Date:	N/A				

Analyte	Result	Qual	RL
Dichlorodifluoromethane	0.50	U	0.50
1,2-Dichlorotetrafluoroethane	0.20	U	0.20
Vinyl chloride	0.20	U	0.20
1,3-Butadiene	0.20	U	0.20
Bromomethane	0.20	U	0.20
Chloroethane	0.50	U	0.50
Bromoethene(Vinyl Bromide)	0.20	U	0.20
Trichlorofluoromethane	0.20	U	0.20
1,1-Dichloroethene	0.20	U	0.20
3-Chloropropene	0.50	U	0.50
Methylene Chloride	0.50	U	0.50
Methyl tert-butyl ether	0.20	U	0.20
trans-1,2-Dichloroethene	0.20	U	0.20
n-Hexane	0.20	U	0.20
1,1-Dichloroethane	0.20	U	0.20
cis-1,2-Dichloroethene	0.20	U	0.20
1,2-Dichloroethene, Total	0.40	U	0.40
Chloroform	0.20	U	0.20
1,1,1-Trichloroethane	0.20	U	0.20
Cyclohexane	0.20	U	0.20
Carbon tetrachloride	0.20	U	0.20
2,2,4-Trimethylpentane	0.20	U	0.20
Benzene	0.20	U	0.20
1,2-Dichloroethane	0.20	U	0.20
n-Heptane	0.20	U	0.20
Trichloroethene	0.20	U	0.20
1,2-Dichloropropane	0.20	U	0.20
Bromodichloromethane	0.20	U	0.20
cis-1,3-Dichloropropene	0.20	U	0.20
Toluene	0.20	U	0.20
trans-1,3-Dichloropropene	0.20	U	0.20
1,1,2-Trichloroethane	0.20	U	0.20
Tetrachloroethene	0.20	U	0.20
Dibromochloromethane	0.20	U	0.20
1,2-Dibromoethane	0.20	U	0.20
Ethylbenzene	0.20	U	0.20
m,p-Xylene	0.50	U	0.50
Xylene, o-	0.20	U	0.20
Xylene (total)	0.70	U	0.70
Bromoform	0.20	U	0.20
1,1,2,2-Tetrachloroethane	0.20	U	0.20
4-Ethyltoluene	0.20	U	0.20
1,3,5-Trimethylbenzene	0.20	U	0.20

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Method Blank - Batch: 200-112711

Method: TO-15
Preparation: Summa Canister

Lab Sample ID:	MB 200-112711/5	Analysis Batch:	200-112711	Instrument ID:	CHW.i
Client Matrix:	Air	Prep Batch:	N/A	Lab File ID:	23244_05.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	200 mL
Analysis Date:	12/23/2016 1410	Units:	ug/m3	Final Weight/Volume:	200 mL
Prep Date:	12/23/2016 1410			Injection Volume:	200 mL
Leach Date:	N/A				

Analyte	Result	Qual	RL
Dichlorodifluoromethane	2.5	U	2.5
1,2-Dichlorotetrafluoroethane	1.4	U	1.4
Vinyl chloride	0.51	U	0.51
1,3-Butadiene	0.44	U	0.44
Bromomethane	0.78	U	0.78
Chloroethane	1.3	U	1.3
Bromoethene(Vinyl Bromide)	0.87	U	0.87
Trichlorofluoromethane	1.1	U	1.1
1,1-Dichloroethene	0.79	U	0.79
3-Chloropropene	1.6	U	1.6
Methylene Chloride	1.7	U	1.7
Methyl tert-butyl ether	0.72	U	0.72
trans-1,2-Dichloroethene	0.79	U	0.79
n-Hexane	0.70	U	0.70
1,1-Dichloroethane	0.81	U	0.81
cis-1,2-Dichloroethene	0.79	U	0.79
1,2-Dichloroethene, Total	1.6	U	1.6
Chloroform	0.98	U	0.98
1,1,1-Trichloroethane	1.1	U	1.1
Cyclohexane	0.69	U	0.69
Carbon tetrachloride	1.3	U	1.3
2,2,4-Trimethylpentane	0.93	U	0.93
Benzene	0.64	U	0.64
1,2-Dichloroethane	0.81	U	0.81
n-Heptane	0.82	U	0.82
Trichloroethene	1.1	U	1.1
1,2-Dichloropropane	0.92	U	0.92
Bromodichloromethane	1.3	U	1.3
cis-1,3-Dichloropropene	0.91	U	0.91
Toluene	0.75	U	0.75
trans-1,3-Dichloropropene	0.91	U	0.91
1,1,2-Trichloroethane	1.1	U	1.1
Tetrachloroethene	1.4	U	1.4
Dibromochloromethane	1.7	U	1.7
1,2-Dibromoethane	1.5	U	1.5
Ethylbenzene	0.87	U	0.87
m,p-Xylene	2.2	U	2.2
Xylene, o-	0.87	U	0.87
Xylene (total)	3.0	U	3.0
Bromoform	2.1	U	2.1
1,1,2,2-Tetrachloroethane	1.4	U	1.4
4-Ethyltoluene	0.98	U	0.98
1,3,5-Trimethylbenzene	0.98	U	0.98

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Lab Control Sample - Batch: 200-112711

Method: TO-15
Preparation: Summa Canister

Lab Sample ID:	LCS 200-112711/4	Analysis Batch:	200-112711	Instrument ID:	CHW.i
Client Matrix:	Air	Prep Batch:	N/A	Lab File ID:	23244_04.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	200 mL
Analysis Date:	12/23/2016 1158	Units:	ppb v/v	Final Weight/Volume:	200 mL
Prep Date:	12/23/2016 1158			Injection Volume:	200 mL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dichlorodifluoromethane	10.0	10.6	106	68 - 128	
1,2-Dichlorotetrafluoroethane	10.0	12.2	122	78 - 138	
Vinyl chloride	10.0	10.8	108	62 - 125	
1,3-Butadiene	10.0	10.9	109	59 - 125	
Bromomethane	10.0	10.5	105	68 - 128	
Chloroethane	10.0	10.5	105	65 - 125	
Bromoethene(Vinyl Bromide)	10.0	10.4	104	67 - 127	
Trichlorofluoromethane	10.0	10.5	105	67 - 127	
1,1-Dichloroethene	10.0	10.3	103	67 - 127	
3-Chloropropene	10.0	9.83	98	53 - 133	
Methylene Chloride	10.0	10.2	102	62 - 122	
Methyl tert-butyl ether	10.0	10.9	109	67 - 127	
trans-1,2-Dichloroethene	10.0	11.2	112	72 - 132	
n-Hexane	10.0	11.6	116	71 - 131	
1,1-Dichloroethane	10.0	10.8	108	66 - 126	
cis-1,2-Dichloroethene	10.0	10.4	104	67 - 127	
Chloroform	10.0	10.5	105	69 - 129	
1,1,1-Trichloroethane	10.0	10.6	106	70 - 130	
Cyclohexane	10.0	10.9	109	69 - 129	
Carbon tetrachloride	10.0	9.02	90	62 - 143	
2,2,4-Trimethylpentane	10.0	10.8	108	67 - 127	
Benzene	10.0	10.3	103	67 - 127	
1,2-Dichloroethane	10.0	10.8	108	67 - 132	
n-Heptane	10.0	10.9	109	62 - 130	
Trichloroethene	10.0	11.0	110	68 - 128	
1,2-Dichloropropane	10.0	10.2	102	67 - 127	
Bromodichloromethane	10.0	10.3	103	69 - 129	
cis-1,3-Dichloropropene	10.0	10.8	108	70 - 130	
Toluene	10.0	10.6	106	67 - 127	
trans-1,3-Dichloropropene	10.0	11.0	110	69 - 129	
1,1,2-Trichloroethane	10.0	10.4	104	69 - 129	
Tetrachloroethene	10.0	10.7	107	70 - 130	
Dibromochloromethane	10.0	10.1	101	66 - 130	
1,2-Dibromoethane	10.0	10.5	105	70 - 130	
Ethylbenzene	10.0	10.5	105	68 - 128	
m,p-Xylene	20.0	20.9	105	68 - 128	
Xylene, o-	10.0	10.5	105	67 - 127	
Bromoform	10.0	10.2	102	34 - 170	
1,1,2,2-Tetrachloroethane	10.0	10.1	101	69 - 129	
4-Ethyltoluene	10.0	10.8	108	69 - 129	
1,3,5-Trimethylbenzene	10.0	10.6	106	65 - 125	

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Method Blank - Batch: 200-112819

Method: TO15 LL
Preparation: Summa Canister

Lab Sample ID:	MB 200-112819/5	Analysis Batch:	200-112819	Instrument ID:	CHE.i
Client Matrix:	Air	Prep Batch:	N/A	Lab File ID:	23284-005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	500 mL
Analysis Date:	12/29/2016 1257	Units:	ppb v/v	Final Weight/Volume:	500 mL
Prep Date:	12/29/2016 1257			Injection Volume:	500 mL
Leach Date:	N/A				

Analyte	Result	Qual	RL
Dichlorodifluoromethane	0.010	U	0.010
1,2-Dichlorotetrafluoroethane	0.010	U	0.010
Vinyl chloride	0.020	U	0.020
1,3-Butadiene	0.020	U	0.020
Bromomethane	0.020	U	0.020
Chloroethane	0.020	U	0.020
Bromoethene(Vinyl Bromide)	0.020	U	0.020
Trichlorofluoromethane	0.010	U	0.010
1,1-Dichloroethene	0.010	U	0.010
3-Chloropropene	0.020	U	0.020
Methylene Chloride	0.20	U	0.20
Methyl tert-butyl ether	0.010	U	0.010
trans-1,2-Dichloroethene	0.010	U	0.010
n-Hexane	0.020	U	0.020
1,1-Dichloroethane	0.010	U	0.010
cis-1,2-Dichloroethene	0.010	U	0.010
Chloroform	0.010	U	0.010
1,1,1-Trichloroethane	0.010	U	0.010
Cyclohexane	0.010	U	0.010
Carbon tetrachloride	0.010	U	0.010
2,2,4-Trimethylpentane	0.010	U	0.010
Benzene	0.010	U	0.010
1,2-Dichloroethane	0.020	U	0.020
n-Heptane	0.010	U	0.010
Trichloroethene	0.010	U	0.010
1,2-Dichloropropane	0.020	U	0.020
Bromodichloromethane	0.010	U	0.010
cis-1,3-Dichloropropene	0.010	U	0.010
Toluene	0.010	U	0.010
trans-1,3-Dichloropropene	0.010	U	0.010
1,1,2-Trichloroethane	0.010	U	0.010
Tetrachloroethene	0.010	U	0.010
Dibromochloromethane	0.010	U	0.010
1,2-Dibromoethane	0.010	U	0.010
Ethylbenzene	0.010	U	0.010
o-Xylene	0.010	U	0.010
Bromoform	0.010	U	0.010
1,1,2,2-Tetrachloroethane	0.010	U	0.010
4-Ethyltoluene	0.010	U	0.010
1,3,5-Trimethylbenzene	0.020	U	0.020
1,2-Dichloroethene, Total	0.010	U	0.010
m-Xylene & p-Xylene	0.020	U	0.020
Xylenes, Total	0.010	U	0.010

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Method Blank - Batch: 200-112819

Method: TO15 LL
Preparation: Summa Canister

Lab Sample ID:	MB 200-112819/5	Analysis Batch:	200-112819	Instrument ID:	CHE.i
Client Matrix:	Air	Prep Batch:	N/A	Lab File ID:	23284-005.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	500 mL
Analysis Date:	12/29/2016 1257	Units:	ug/m3	Final Weight/Volume:	500 mL
Prep Date:	12/29/2016 1257			Injection Volume:	500 mL
Leach Date:	N/A				

Analyte	Result	Qual	RL
Dichlorodifluoromethane	0.049	U	0.049
1,2-Dichlorotetrafluoroethane	0.070	U	0.070
Vinyl chloride	0.051	U	0.051
1,3-Butadiene	0.044	U	0.044
Bromomethane	0.078	U	0.078
Chloroethane	0.053	U	0.053
Bromoethene(Vinyl Bromide)	0.087	U	0.087
Trichlorofluoromethane	0.056	U	0.056
1,1-Dichloroethene	0.040	U	0.040
3-Chloropropene	0.063	U	0.063
Methylene Chloride	0.69	U	0.69
Methyl tert-butyl ether	0.036	U	0.036
trans-1,2-Dichloroethene	0.040	U	0.040
n-Hexane	0.070	U	0.070
1,1-Dichloroethane	0.040	U	0.040
cis-1,2-Dichloroethene	0.040	U	0.040
Chloroform	0.049	U	0.049
1,1,1-Trichloroethane	0.055	U	0.055
Cyclohexane	0.034	U	0.034
Carbon tetrachloride	0.063	U	0.063
2,2,4-Trimethylpentane	0.047	U	0.047
Benzene	0.032	U	0.032
1,2-Dichloroethane	0.081	U	0.081
n-Heptane	0.041	U	0.041
Trichloroethene	0.054	U	0.054
1,2-Dichloropropane	0.092	U	0.092
Bromodichloromethane	0.067	U	0.067
cis-1,3-Dichloropropene	0.045	U	0.045
Toluene	0.038	U	0.038
trans-1,3-Dichloropropene	0.045	U	0.045
1,1,2-Trichloroethane	0.055	U	0.055
Tetrachloroethene	0.068	U	0.068
Dibromochloromethane	0.085	U	0.085
1,2-Dibromoethane	0.077	U	0.077
Ethylbenzene	0.043	U	0.043
o-Xylene	0.043	U	0.043
Bromoform	0.10	U	0.10
1,1,2,2-Tetrachloroethane	0.069	U	0.069
4-Ethyltoluene	0.049	U	0.049
1,3,5-Trimethylbenzene	0.098	U	0.098
1,2-Dichloroethene, Total	0.040	U	0.040
m-Xylene & p-Xylene	0.087	U	0.087
Xylenes, Total	0.043	U	0.043

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
Sdg Number: 200-36706-1

Lab Control Sample - Batch: 200-112819

Method: TO15 LL
Preparation: Summa Canister

Lab Sample ID:	LCS 200-112819/4	Analysis Batch:	200-112819	Instrument ID:	CHE.i
Client Matrix:	Air	Prep Batch:	N/A	Lab File ID:	23284-004.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	500 mL
Analysis Date:	12/29/2016 1159	Units:	ppb v/v	Final Weight/Volume:	500 mL
Prep Date:	12/29/2016 1159			Injection Volume:	500 mL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Dichlorodifluoromethane	0.499	0.724	145	68 - 128	*
1,2-Dichlorotetrafluoroethane	0.499	0.782	157	78 - 138	*
Vinyl chloride	0.499	0.650	130	62 - 125	*
1,3-Butadiene	0.499	0.605	121	59 - 125	
Bromomethane	0.499	0.602	121	68 - 128	
Chloroethane	0.499	0.553	111	65 - 125	
Bromoethene(Vinyl Bromide)	0.499	0.546	110	67 - 127	
Trichlorofluoromethane	0.499	0.641	129	67 - 127	*
1,1-Dichloroethene	0.499	0.492	99	67 - 127	
3-Chloropropene	0.499	0.514	103	53 - 133	
Methylene Chloride	0.499	0.630	126	62 - 122	*
Methyl tert-butyl ether	0.499	0.570	114	67 - 127	
trans-1,2-Dichloroethene	0.499	0.602	121	72 - 132	
n-Hexane	0.499	0.532	107	71 - 131	
1,1-Dichloroethane	0.499	0.568	114	66 - 126	
cis-1,2-Dichloroethene	0.499	0.477	96	67 - 127	
Chloroform	0.499	0.539	108	69 - 129	
1,1,1-Trichloroethane	0.499	0.562	113	70 - 130	
Cyclohexane	0.499	0.487	98	69 - 129	
Carbon tetrachloride	0.499	0.577	116	62 - 143	
2,2,4-Trimethylpentane	0.499	0.522	105	67 - 127	
Benzene	0.499	0.477	96	67 - 127	
1,2-Dichloroethane	0.499	0.623	125	67 - 132	
n-Heptane	0.499	0.504	101	62 - 130	
Trichloroethene	0.499	0.503	101	68 - 128	
1,2-Dichloropropane	0.499	0.523	105	67 - 127	
Bromodichloromethane	0.499	0.562	113	69 - 129	
cis-1,3-Dichloropropene	0.499	0.538	108	70 - 130	
Toluene	0.499	0.473	95	67 - 127	
trans-1,3-Dichloropropene	0.499	0.556	111	69 - 129	
1,1,2-Trichloroethane	0.499	0.532	107	69 - 129	
Tetrachloroethene	0.499	0.458	92	70 - 130	
Dibromochloromethane	0.499	0.503	101	66 - 130	
1,2-Dibromoethane	0.499	0.493	99	70 - 130	
Ethylbenzene	0.499	0.506	101	68 - 128	
o-Xylene	0.499	0.459	92	67 - 127	
Bromoform	0.499	0.463	93	34 - 170	
1,1,2,2-Tetrachloroethane	0.499	0.505	101	69 - 129	
4-Ethyltoluene	0.499	0.481	96	69 - 129	
1,3,5-Trimethylbenzene	0.499	0.471	94	65 - 125	
m-Xylene & p-Xylene	0.998	0.940	94	68 - 128	

TestAmerica Burlington
30 Community Drive
Suite 11
South Burlington, VT 05403
phone 802-660-1990 fax 802-660-1919

Canister Samples Chain of Custody Record

TestAmerica Analytical Testing Corp. assumes no liability with respect to the collection and shipment of these samples.

Client Contact Information	Project Manager: Eric Alonzi	Samples Collected By: Eric Alonzi	1 of 1 COCs
Company: O'Brien + Gere	Phone: 315-956-6674		
Address: 7600 Morgan Rd	Email: eric.alonzi@obg.com		
City/State/Zip Liverpool NY			
Phone: 315-956-6674	Site Contact: Eric Alonzi		
FAX:	TA Contact: Don Dawicki		
Project Name: Fein Tool	Analysis Turnaround Time		
Site: White Plains NY	Standard (Specify)		
PO #	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	MA-APH	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
2-IA-121416	12/14/16	0636	1402	29.01	8.19	4743	2545	X							X				
2-SS-121416	12/14/16	0641	1416	29.05	6.02	4041	4573	X									X		
2-AA-121416	12/14/16	0643	1420	29.38	7.53	5343	5140	X								X			
				RE															
				12-16-16															

Temperature (Fahrenheit)	Interior	Ambient
Start	66	40
Stop	66	40

Pressure (inches of Hg)	Interior	Ambient
Start	—	30.00
Stop	—	30.00

200-36706 Chain of Custody

Special Instructions/QC Requirements & Comments:

FedEx # 7091 8417 2195-RE

Samples Shipped by:	Date/Time: 12/16/16 1005	Samples Received by: SyR
Samples Relinquished by: RELINQUISHED, SyR	Date/Time: 12-16-16, 14:00	Received by:
Relinquished by:	Date/Time:	Received by: Sabina Masic 12/19/16 10:30

Lab Use Only Shipper Name: Opened by: Condition:

483325 - Syracuse SC

ORIGIN ID:SYRA (315) 431-0171
SYR SERVICE CENTER
TESTAMERICA
118 BOSS RD

SYRACUSE, NY 13211
UNITED STATES US

SHIP DATE: 16DEC16
ACTWGT: 33.00 LB MAN
CAD: 251798/CAFE3009

BILL RECIPIENT

TO SAMPLE RECEIVING
TESTAMERICA BURLINGTON
30 COMMUNITY DRIVE SUITE 11

SOUTH BURLINGTON VT 05403
(802) 660-1990
REF: OBG 1BOX

FedEx Express

MON - 19 DEC 3:00P
STANDARD OVERNIGHT

TRK# 0201 7091 8417 2195

K9 BTVA

05403
VT-US BTV

Part # 154254-354 RIT2 EXP 07/17

Login Sample Receipt Checklist

Client: O'Brien & Gere Inc of North America

Job Number: 200-36706-1
SDG Number: 200-36706-1

Login Number: 36706
List Number: 1
Creator: Johnson, Eleanor E

List Source: TestAmerica Burlington

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	Not present
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	N/A	Thermal preservation not required.
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

Data Usability Summary Report

FROM: KA Storne

RE: Data Usability Summary Report for One Holland Avenue Development Site (BCP No. C360115), VI Sampling – Performed December 2016

FILE: 14206/63124.600.016

DATE: February 16, 2017

This Data Usability Summary Report (DUSR) presents the data validation results for indoor air, sub-slab and ambient air samples collected by O'Brien & Gere in December 2016 as part of the Media Monitoring Program, detailed in the Site Management Plan for the 2 Holland Avenue off-site property.

TestAmerica Burlington (TA Burlington) of Burlington, Vermont performed the laboratory analyses for the sampling event. The laboratory package generated by TA Burlington contained summary forms for quality control analysis and supportive raw data.

The analysis performed for this sampling event is summarized in Table 1 below.

Table 1. Analytical methods and references

Parameter	Method	Reference
Volatile Organic Compounds (VOCs)	USEPA Method TO-15 and TO-15LL	1

Note:

1. United States Environmental Protection Agency. 1999. Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Cincinnati, Ohio.

VOCs indicates volatile organic compounds.
LL indicates low level analysis.

The samples submitted for review are summarized in the attached Table 2. Table 3 presents the specific data validation approach applied to data generated for this investigation. Table 4 presents the Laboratory QA/QC analyses definitions.

Full validation was performed on the samples collected for this sampling event.

The analytical data generated for this investigation were evaluated by O'Brien & Gere using the quality assurance/quality control (QA/QC) information presented in the following documents:

- United States Environmental Protection Agency (USEPA), 1999. *Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air.* Cincinnati, Ohio.
- O'Brien & Gere 2011. *Quality Control Document, 1-5 Holland Avenue Site, White Plains, New York*. Syracuse, New York.

Data affected by excursions from the previously mentioned QA/QC criteria were qualified using the following USEPA data validation guidance and professional judgment:

- USEPA. 2014. *Analysis of Volatile Organic Compounds in Air Contained in Canisters by Method TO-15. SOP HW-31, Revision 6*. Albany, New York

Qualifiers were applied to data that failed to meet the quality control criteria presented previously.

In accordance with the USEPA guidance, and utilizing professional judgment, the following qualifiers are used in data validation:

"U" Indicates that the analyte was analyzed for, but was not detected. The associated value indicates the approximate sample concentration necessary to be detected.

"J" Indicates that the detected analyte is present but the reported value may not be accurate or precise. The result should be considered approximate based on excursions from QA/QC criteria.

"UJ" Indicates that the analyte was not detected and the quantitation limit (QL) may be inaccurate or imprecise. The result should be considered approximate based on excursions from QA/QC criteria.

"R" Indicates that the QL or sample result is unreliable and has been rejected due to a major excursion from QA/QC criteria. The analyte may or may not be present in the sample. The data should not be used for qualitative or quantitative purposes.

The validation included checking the following parameters:

- QCD compliance;
- Chain-of-custody records;
- Sample collection
- Canister filling evaluation
- Holding times;
- Calibrations;
- Blank analysis;
- Laboratory control sample (LCS) analysis;
- Internal standards performance;
- Gas chromatography/mass spectrometry (GC/MS) instrument performance check;
- Target analyte quantitation, identification, and quantitation limits (QLs); and
- Documentation completeness.

The following sections of this memorandum present the results of the comparison of the analytical data to the QA/QC criteria specified above. Based on the QA/QC information review, an overall evaluation of data usability is also presented in the final section.

VOLATILE ORGANIC COMPOUND DATA EVALUATION SUMMARY

The following QA/QC parameters were found to meet method and validation criteria or did not result in additional qualification of sample results:

- Sample collection;
- Canister filling evaluation
- Holding times;
- Blank analysis;
- Internal standards performance;
- GC/MS instrument performance check;
- Target analyte identification
- Documentation completeness.

Excursions from method or validation criteria were identified during the validation process. Additional observations are also described below.

I. QCD COMPLIANCE

The following target analytes were listed in the QCD, but were not reported by the laboratory: acetone, chlorobenzene, chloromethane, carbon disulfide, methyl isobutyl ketone, total 1,3-dichloropropene, styrene and 1,2,4-trimethylbenzene. However, according to the OBG Project Manager, these analytes are not considered to be site-related.

Although not listed in the QCD, additional target analytes were reported by the laboratory.

Field duplicate and field blank samples were not collected for this sampling event, although specified by the QCD.

II. CHAIN-OF-CUSTODY RECORDS

For the samples collected on 12/14/16, a gap was identified on the chain-of-custody record. Samples were relinquished from the field location and received by the TA representative at the TA Syracuse Service Center on 12/16/16 at 10:05. A different TA representative at the TA Syracuse Service Center relinquished the samples at 12/16/16 at 19:00 and the samples were received by the TA laboratory in Burlington, Vermont on 12/19/16 at 10:30. Federal Express was listed on the record as the courier along with the associated tracking number.

III. CALIBRATIONS

The following results were qualified as approximate (J) due to a minor calibration accuracy excursion:

- Results for dichlorodifluoromethane in samples 2-IA-121416 and 2-AA-121416.

IV. LCS ANALYSIS

The following results were qualified as approximate (J) due to minor LCS accuracy excursions:

- Results for dichlorodifluoromethane and trichlorofluoromethane in samples 2-IA-121416 and 2-AA-121416.

IV. TARGET ANALYTE QUANTITATION AND QLS

Dilutions were performed for samples 2-AA-121416 and 2-IA-121416 to meet the project required detection limits.

DATA USABILITY

Overall data usability with respect to completeness for the sample results reported is 100 percent for the VOC air data. The VOC air data were identified as usable for qualitative and quantitative purposes. Based on the validation performed, the completeness goal of 95 percent was met for these analyses.

Table 2. Sample Cross Reference Table

Laboratory Name	Laboratory SDG	Date Collected	Client Identification	Laboratory Identification	Matrix	Analysis Requested
TestAmerica Burlington	200-36706-1	12/14/2016	2-IA-121416	200-36706-1	Indoor Air	TO-15/Low Level TO-15
TestAmerica Burlington	200-36706-2	12/14/2016	2-SS-121416	200-36706-2	Sub-slab Air	TO-15/Low Level TO-15
TestAmerica Burlington	200-36706-3	12/14/2016	2-AA-121416	200-36706-3	Ambient Air	TO-15/Low Level TO-15

Note:
TA Burlington indicates TestAmerica of Burlington, Vermont.
SDG Indicates sample delivery group.
VOCs indicates volatile organic compounds.

Table 3. *Specific Data Validation Approach Applied*

O'Brien & Gere Data Validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical method: VOCs (8260C).	
Laboratory Methods and Data Validation Approach	The O'Brien & Gere data validation approach utilizes the methods applied by the laboratory to evaluate data. The USEPA Region II validation guidelines and professional judgment are then utilized to apply qualifiers to data if excursions from the method quality control requirements are identified.
General Validation Approach	For certain parameters, USEPA guidance for data validation indicates that professional judgment is to be utilized to identify the appropriate validation action. In these situations, the validation approach taken by O'Brien & Gere is a conservative one; qualifiers are applied to sample data to indicate both major and minor excursions. In this way, data associated with any type of excursion are identified to the data user. Major excursions will result in data being rejected, indicating that the data are considered unusable for either quantitative or qualitative purposes. Minor excursions will result in sample data being qualified as approximate that are otherwise usable for quantitative or qualitative purposes.
	Excursions are subdivided into excursions that are within the laboratory's control and those that are out of the laboratory's control. Excursions involving laboratory control sample recovery, calibration response, method blank excursions, low or high spike recovery due to inaccurate spiking solutions or poor instrument response, holding times, interpretation errors, and quantitation errors are within the control of the laboratory. An excursion resulting from internal standard performance due to matrix interference is an example of an excursion that is not within the laboratory's control if the laboratory has followed proper method control procedures.
	The data quality evaluation results in only one type of qualifier ("U", "J", "UJ" or "R") for each analyte; in a case when several qualifiers are applicable to the same analyte, the cumulative effect of the various QA/QC excursions is employed in assigning the final data qualifiers. For example, if a sample result is affected by low LCS recovery for which the "J" qualifier is applied to indicate a biased low result, but a major response factor excursion results in the rejection of the sample results (application of the "R" qualifier), the final data qualifier is the "R" qualifier, considering the overall impact of the two excursions.
Validation Guidelines	Validation qualifiers will be applied based on professional judgment and the guidance in USEPA. 2014. Analysis of Volatile Organic Compounds in Air Contained in Canisters by Method TO-15. SOP HW-31, Revision 6. New York, New York.
Validation Qualifiers	U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the quantitation limit (QL). J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the QL). J+ The result is an approximated quantity, but the result may be biased high. J- The result is an approximated quantity, but the result may be biased low. NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. UJ - The analyte was not detected at a level greater than or equal to the QL. However, the QL is approximate and may be inaccurate or imprecise. R - The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
Canister Pressure Excursions	The laboratory should evacuate the canister to approximately - 30 inches of mercury (" Hg) prior to shipping the canister to the sampling location.
	The difference between the initial canister pressure recorded at the laboratory and the pressure measured prior to sample collection must not be greater than 5" Hg.
	Difference between the canister pressure measured in the field after sample collection and the pressure measured upon receipt at laboratory must not be greater than 5" Hg.
	The canisters must be filled to a minimum of -15 in Hg. But the sample canister should be filled to approximately -5" Hg to -2" Hg when collection of the sample is completed. A canister with any negative pressure upon receipt at the laboratory is acceptable for analysis.

O'Brien & Gere Data Validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical method: VOCs (8260C).	
Canister Pressure Excursions	For samples impacted by pressure excursions, results are qualified as approximate (UJ, J).
Canister Leak Check	Hold vacuum/pressure within ±2psi for 24 hours before sampling. Difference in initial and 24 hour pressure greater than 5 is qualified approximate (J), UJ).
Evaluation of Holding Times	A holding time of 30 days from sample collection to analysis is used to evaluate holding times. Canisters should be returned to the laboratory within 15 days of shipment to the field location but are not qualified for this excursion. Results outside of holding time are qualified approximate (UJ, J).
Evaluation of Calibration Data	VOC target analytes are evaluated using the criteria of either 30 percent relative standard deviation (%RSD) for initial calibrations or calibration coefficient of greater than 0.990 for initial calibration curves. The calibration verifications are evaluated using the criteria of 30 percent difference (%D). Initial calibrations and calibration verifications are also evaluated using the response factor (RF) criteria of 0.05 for the target analytes. The second-source standard or low standard is evaluated using a 30% recovery or the laboratory control limits. The IC verification (ICV) are evaluated using the criteria of 30% D or 70 to 130%R. For Initial Calibration: Detected results for target analytes associated with RFs of less than 0.05 are qualified as approximate (J) and non-detected results are rejected (R). Detected results for target analytes associated with RSD greater than 30.0% are qualified as approximate (J). Non-detected results are qualified as approximate (UJ). Detected results for target analytes associated with RSD greater than 90% are qualified as approximate (J) and non-detected results are rejected (R). For Calibration Verifications: Detected and non-detected results for target analytes associated with %D greater than 30.0% are qualified as approximate (J) and non-detected results are qualified as approximate (UJ). Detected results for target analytes associated with RSD greater than 90% are qualified as approximate (J) and non-detected results are rejected (R). For Initial Calibration Verifications: Detected and non-detected results for target analytes associated outside of 30%D or 70 to 130 %R are qualified as approximate (J) and non-detected results are qualified as approximate (UJ).
Evaluation and Actions for Blank	Blanks are not qualified due to contamination of another blank. Sample results qualified as non-detected (U) are treated as hits when qualifying for calibration excursions. 1. For blank results less than the QL, samples with concentrations less than the QL are reported at the QL and qualified as non-detected (U). Samples with concentrations greater than the QL and less than two times the QL. 2. For blank results greater than the QL, samples with concentrations less than the QL are reported at the QL and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL and less than the blank contamination level are reported and qualified as non-detected (U 3. For blank results equal to the QL, sample concentrations less than the QL are reported at the QL value and qualified as non-detected (U). 4. For gross contamination in blanks (saturated peaks, interference peaks, poor baselines), all associated sample detected results are qualified as non-detected (U) using professional judgment. Allowance for twice the methylene chloride, 2-butanone and acetone.

O'Brien & Gere Data Validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical method: VOCs (8260C).	
Actions for Canister Blank	1. For results less than canister results or greater than canister result and less than twice the canister result, are qualified as non-detected (U).
Evaluation of LCS Data	Detected result associated with LCS recovery outside the control limit is qualified as approximate (J). Non-detected result associated with LCS recovery greater than the upper control limit is not qualified. Non-detected result associated with LCS recovery less than the lower control limit but greater than10% is qualified as approximate (UJ). Non-detected result associated with LCS recovery less than 10% is rejected (R). [Region II - non-detected result less than 50% is rejected (R).]
Evaluation of LCS/LCSD Data	Detected and non-detected result associated with LCS/LCSD precision outside the control limit is qualified as approximate (UJ, J).
Evaluation of Multi-results	When two results are reported, due to re-preparation or for dilution analyses, both sets of results are evaluated during the validation process. Based on the evaluation of the associated quality control data, the results reflecting the higher quality data are reported.
General Evaluation of Data	Laboratory established control limits are used to assess data.
	In the case that excursions are identified in more than one quality control sample of the same matrix within one sample delivery group, samples are batched according to sample analysis date and qualified accordingly.
	If percent recoveries are less than laboratory control limits but greater than ten percent, non-detected and detected results are qualified as approximate (UJ, J) to indicate minor excursions.
	If percent recoveries are greater than laboratory control limits, detected results are qualified as approximate, biased high (J) to indicate minor excursions.
	If percent recoveries are less than ten percent, detected results are qualified as approximate (J) and non-detected results are qualified as rejected (R) to indicate major excursions.
	If RPDs are outside of laboratory control limits, detected and non-detected results are qualified as approximate (J) to indicate minor excursions.
Evaluation of Field Duplicate Data	Field duplicate data are evaluated against relative percent difference (RPD) criteria of less than 25 percent for air when results are greater than five times the QL. When sample results for field duplicate pairs are less than five times the QL, the data are evaluated using control limits of plus or minus two times the QL. If RPDs for field duplicates are outside of laboratory control limits, detected and non-detected results are qualified as approximate (UJ, J) to indicate minor excursions.
Evaluation of Internal Standards	Internal standard recoveries are evaluated using control limits of from 60% of the lower standard area to 140% of the upper standard area of the associated calibration verification standard. The results associated with internal standard area recoveries less than 60%, detected results are qualified as approximate biased high (J+) and non-detected results are rejected (R). The results associated with internal standard area recoveries greater than 140%, detected results are qualified as approximate biased low (J-). Retention time difference of greater than 20 seconds between CCV -samples results are rejected (R).
Applying "J" qualifier	The "J" qualifier applied by the laboratory to organic results that are greater than the MDL but less than the QL is retained during the validation process.
Source: O'Brien & Gere	

Table 4. *Laboratory QA/QC Analysis Definitions*

QA/QC Term	Definition
Accuracy	The closeness or agreement of the observed value or test response to the true or acceptable reference value or the test response from a reference method. It is influenced by both random error (precision) and systematic error (bias). The terms "bias" and "precision" are often used in lieu of "accuracy".
Precision	A measure of mutual agreement between two or more individual measurements of the same property, obtained under similar conditions.
Representativeness	A measure of the degree to which data accurately and precisely characterize a population; the correspondence between the analytical result and the actual quality or condition experienced by a contaminant receptor.
Sensitivity	The capability of a method or instrument to discriminate between measurement responses representing different levels of a variable of interest.
Completeness	A measure of the amount of valid data obtained from a measurement system as compared to the planned amount, usually expressed as a percentage; also a measure of the degree to which the sampling scheme represents the available range in something, regardless of what was planned.
Detection limit	The lowest concentration or amount of the target analyte that can be determined to be different from zero by a single measurement at a stated level of probability.
Quantitation limit	The level above which numerical results may be obtained with a specified degree of confidence; the minimum concentration of an analyte in a specific matrix that can be identified and quantified above the method detection limit and within specified limits of precision and bias during routine analytical operating conditions.
Method detection limit	The minimum concentration of an analyte that undergoes preparation similar to the environmental samples and can be reported with a stated level of confidence that the analyte concentration is greater than zero.
Instrument detection limit	The lowest concentration of a metal target analyte that, when directly inputted and processed on a specific analytical instrument, produces a signal/response that is statistically distinct from the signal/response arising from equipment "noise" alone.
Gas chromatography/mass spectrometry (GC/MS) instrument performance check	Performed to verify mass resolution, identification, and to some degree, instrument sensitivity. These criteria are not sample specific; conformance is determined using standard materials.
Control limits	The variation in a process data set expressed as plus/minus standard deviations from the mean, generally placed on a chart to indicate the upper and lower acceptable ranges of process data and to judge whether the process is in or out of statistical limitations.
Calibration	Compliance requirements for satisfactory instrument calibration are established to verify that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of analysis and calibration verifications document satisfactory maintenance and adjustment of the instrument on a day-to-day basis.
Relative Response Factor	A measure of the relative mass spectral response of an analyte compared to its internal standard. Relative Response Factors are determined by analysis of standards and are used in the calculation of concentrations of analytes in samples.
Relative standard deviation	The standard deviation divided by the mean; a unit-free measure of variability.
Correlation coefficient	A measure of the strength of the relationship between two variables.
Relative Percent Difference	Used to compare two values; the relative percent difference is based on the mean of the two values, and is reported as an absolute value, i.e., always expressed as a positive number or zero.
Percent Difference	Used to compare two values; the percent difference indicates both the direction and the magnitude of the comparison, i.e., the percent difference may be either negative, positive, or zero.
Drift	The deviation in instrument response from its set or reference value over a period of time.
Percent Recovery	The act of determining whether or not the methodology measures all of the target analytes contained in a sample.

TABLE 4 | LABORATORY QUALITY ASSURANCE/QUALITY CONTROL ANALYSIS DEFINITIONS

QA/QC Term	Definition
Blanks	Several types of blanks are analyzed by the laboratory. Corrective action procedures are implemented for blank analyses if target compounds are detected at concentrations greater than the method criteria. The criteria for evaluation of blanks apply to any blank associated with a group of samples. If problems with a blank exist, data associated with the project are evaluated to determine whether or not there is an inherent variability in the data for the project or if the problem is an isolated occurrence not affecting other data.
Reagent blank	Consists of laboratory target analyte-free water and any reagents added to a sample during analysis. This type of blank is analyzed to evaluate whether contamination occurred during the analysis of the sample due to reagent contamination. A reagent blank is usually analyzed following highly contaminated samples to assess the potential for cross-contamination during analysis.
Instrument blank	Consists of clean solvent spiked with the surrogates and analyzed on each GC column and instrument used for sample analysis by GC. This type of blank is analyzed to evaluate whether contamination occurred during the analysis of the sample due to instrument contamination.
Calibration blank	Consists of acids and reagent water used to prepare metal samples for analysis. This type of blank is analyzed to evaluate whether contamination is occurring during the preparation and analysis of the sample.
Method blank	A water or soil blank that undergoes the preparation procedures applied to a sample (i.e., extraction, digestion, clean-up). These samples are analyzed to examine whether sample preparation, clean-up, and analysis techniques result in sample contamination.
Field/equipment	Collected and submitted for laboratory analysis, where appropriate. Field/equipment blanks are handled in the same manner as environmental samples. Equipment/field blanks are analyzed to assess contamination introduced during field sampling procedures.
Trip blank	Consist of samples of analyte-free water that have undergone shipment from the sampling site to the laboratory in coolers with the environmental samples submitted for volatile organic compound (VOC) analysis. Trip blanks will be analyzed for VOCs to determine if contamination has taken place during sample handling and/or shipment. Trip blanks will be utilized at a frequency of one each per cooler sent to the laboratory for VOC analysis.
Storage blank	Consists of sample vials filled with laboratory analyte-free water. The vials are stored at the laboratory with the samples collected for VOC analysis, under the same conditions as the samples. The storage blank is analyzed with the VOC samples to evaluate for contamination due to sample storage.
Internal standards performance	Compounds not found in environmental samples which are spiked into samples and quality control samples at the time of sample preparation for organic analyses. Internal standards must meet retention time and recovery criteria specified in the analytical method. Internal standards are used as the basis for quantitation of the target analytes.
Surrogate recovery	Compounds similar in nature to the target analytes but not expected to be detected in the environmental media which are spiked into environmental samples, blanks, and quality control samples prior to sample preparation for organic analyses. Surrogates are used to evaluate analytical efficiency by measuring recovery.
Laboratory control sample **Matrix spike blank analyses**	Standard solutions that consist of known concentrations of the target analytes spiked into laboratory analyte-free water or sand. They are prepared or purchased from a certified manufacturer from a source independent from the calibration standards to provide an independent verification of the calibration procedure. They are prepared and analyzed following the same procedures employed for environmental sample analysis to assess method accuracy independently of sample matrix effects.
Laboratory duplicate	Two or more representative portions taken from one homogeneous sample by the analyst and analyzed in the same laboratory.
Matrix	The material of which the sample is composed or the substrate containing the analyte of interest, such as drinking water, waste water, air, soil/sediment, biological material.
Matrix Spike (MS)	An aliquot of a matrix (water or soil) fortified (spiked) with known quantities of specific target analytes and subjected to the entire analytical procedure in order to indicate the appropriateness of the method for the matrix by measuring recovery.
Matrix spike duplicate (MSD)	A second aliquot of the same matrix as the matrix spike that is spiked in order to determine the precision of the method.

TABLE 4 | LABORATORY QUALITY ASSURANCE/QUALITY CONTROL ANALYSIS DEFINITIONS

QA/QC Term	Definition
Retention time	The time a target analyte is retained on a GC column before elution. The identification of a target analyte is dependent on a target compound's retention time falling within the specified retention time window established for that compound.
Relative retention time	The ratio of the retention time of a compound to that of a standard.
Resolution	The separation between peaks on a chromatogram.
Interference	An element, compound, or other matrix effect present in a sample which disturbs the detection of a target analyte leading to inaccurate concentration results for the target analyte.
Percent Moisture	An approximation of the amount of water in a soil/sediment sample made by drying an aliquot of the sample.
Raw data	The documentation generated during sampling and analysis which includes, but is not limited to, field notes, hardcopies of electronic data, disks, un-tabulated sample results, QC sample results, printouts of chromatograms, instrument outputs, and handwritten notes.

Source: O'Brien & Gere

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