Period Review Report

73 – 79 West Huron Street Site
Buffalo, New York
BCP Site No. C915282

April 28, 2023 to April 28, 2024 Certifying Period

January 2025

Prepared for:

Emerson Huron, LLC.

Prepared by:

Roux Environmental Engineering and Geology, D.P.C.

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Buffalo, New York 14218

Table of Contents

Figures

Appendices

1. Introduction

Roux Environmental Engineering & Geology, D.P.C. (Roux), formerly Benchmark Civil/Environmental Engineering and Geology, PLLC (Benchmark), has prepared this Periodic Review Report (PRR) on behalf of Emerson Huron, LLC to summarize the post-remedial status of New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site No. C915282, deemed the "73-79 West Huron Street Site", located in the City of Buffalo, Erie County, New York (hereinafter referred to as the "Site") (see Figure 1).

This PRR has been prepared in accordance with NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation (Ref 1). Appendix A includes the Institutional and Engineering Control (IC/EC) Certification Forms completed based on the Site inspection performed on April 24, 2024. This PRR and associated certifications have been completed to document post remedial activities at the Site for the April 28, 2023, to April 28, 2024 PRR reporting period.

1.1 Site Background

The Site is approximately 0.6-acres in size and comprised of three separate parcels identified as 73-79 West Huron Street in the City of Buffalo, Erie County, New York. The three parcels include Erie County Tax Map SBLs #111.37-4-10 (73 West Huron), #111.37-4-11 (77 West Huron), and #111.37-4-17.2 (79 West Huron) (see Figures 1 and 2). The subject site is located in a commercial district in the City of Buffalo and is bound to the north by another paved parking lot, to the south by West Huron Street, and to the east by 210 Franklin Street (Curtiss Hotel) and 220 Franklin Street (Capello Salon). The properties to the west include an auto repair shop (former Sunoco), as well as a mix of commercial and office buildings. The Site is currently improved with a renovated six-story brick building (73 West Huron) and a two-story gymnasium built on piers to accommodate parking below (77 and 79 West Huron) (see Figure 2). Building renovations and the gymnasium construction activities were completed in March 2020; the building is currently used as the Emerson School of Hospitality.

The original on-site building was constructed around 1892-94 as a three bay Romanesque-Style commercial building and horse stable with a flat roof by C.W. Miller Livery. The building was constructed with a steel frame used as structural support for the first floor with a supporting truss to suspend the remaining floors. The building was modified in 1924 with ramps to accommodate motor vehicle parking. The exterior of the building is constructed of brick and large stone blocks and consists of six floors, a roof top mechanical room, and subterranean basement. An automotive fueling station with underground storage tanks (USTs) once operated in the parking lot west of the building; however, on-site excavation confirmed that any associated tanks have since been removed. Historic operations impacted the on-Site soil, soil vapor, and groundwater with petroleum related volatile organic compounds (VOCs).

1.2 Remedial History

Hurondel I, Inc. entered into a Brownfield Cleanup Agreement (BCA), Index#C915282-07-14, with the NYSDEC on September 9, 2014, to investigate and remediate a 0.6-acre property located in the City of Buffalo, Erie County, New York. After acceptance into the BCP Site Investigation/Interim Remedial Measure field activities were primarily conducted by Iyer Environmental Group, PLLC (IEG) in accordance with the NYSDEC-approved SI/IRM Work Plan (Ref. 2) from February 2015 through December 2015 and included: a Geoprobe® investigation (February 2015); a sub-slab soil investigation (February 2015); sub-slab soil vapor, indoor, and outdoor air sampling (March 2015); sump water sampling (April and June 2015); and IRM oversight (March through December 2015). Subsequent to IEG's completion of these field activities, Benchmark (now Roux) was retained by Hurondel to complete the remaining SI Work Plan requirements: well installation (June 2016); wood floor wipe sampling (June 2016); IRM backfill soil material confirmation sampling (June 2016); and a groundwater quality/ hydrogeologic assessment. Benchmark was also tasked

with preparing and completing the Site Investigation/Interim Remedial Measures/Alternatives Analysis (SI/IRM/AA) Report (Ref. 3). The final remedial measures included placement of acceptable cover material in areas not otherwise covered by asphalt roadway, pavement, and building foundations and installation of an active subslab depressurization (ASD) system as detailed in the Site Management Plan (SMP) (Ref. 4) and Final Engineering Report (FER) (Ref. 5). BCP site activities were performed in accordance with the BCA and the property was remediated to a NYSDEC Part 375 Restricted- Residential Use Track 2 cleanup.

Emerson Huron, LLC completed redevelopment of the Site as the Emerson School of Hospitality in March 2020.

1.3 Compliance

At the time of the annual Site inspection (April 24, 2024), the Site was fully compliant with the NYSDEC-approved SMP (Ref 4). Signed IC/EC forms can be found in Appendix A, a photolog documenting site conditions during the April 24th, 2024, site visit can be found in Appendix B. System sheets documenting monthly ASD readings can be found in Appendix C. Field forms and analytical data package can be found in Appendix D. The 2020 Spill closure report for 181 Delaware Ave (Former Sunoco Station) is located in Appendix E and Historical trend analysis for monitoring wells HMW-2, HMW-3, HMW-4, MW-10 and GSW-1 can be located in Appendix F.

1.4 Recommendations

At the time of the annual Site inspection (April 24, 2024), the Site was compliant with the NYSDEC-approved SMP (Ref 4), However, the road box on monitoring well HWM-1 was damaged during winter snow plowing activities and will need to be repaired during the next reporting period.

2. Site Overview

Previous environmental investigations completed at the Site identified contamination from past uses of the Site that required remediation. Hurondel I, Inc. entered into the BCP to further investigate and remediate the Site for future redevelopment. The remedial activities were completed in 2015, including:

- Excavation and off-site disposal of 4,458.1 tons of petroleum-impacted soil at the Tonawanda Landfill.
- Treatment and sanitary sewer discharge of approximately 10,000 gallons of groundwater through granular activated carbon (GAC).
- Removal of approximately 150 linear feet (LF) of pipe insulation, 100 square feet (SF) of boiler insulation, and 2,500 SF of floor tiles and transportation off-Site by The Environmental Service Group (NY) Inc. to Waste Management's Chaffee Landfill for disposal.

The remedial program was successful in achieving the remedial objectives for the Site. An Environmental Easement restricting end use of the Site and enforcing adherence to the SMP was filed in November 2017 and approved in December 2017. The Final Engineering Report (FER) was approved in December 2017. Concurrently, a Certificate of Completion (COC) was issued for the Site by the NYSDEC in December 2017.

3. Remedy Performance

A post-remedial site inspection involving a walk-over of the Site covered by this PRR was performed on April 24, 2024 to visually observe and document the use of the Site for restricted residential use, confirm absence of site groundwater use, and verify performance of the SSDS system under the SMP. The Site inspection confirmed that the controls are in place and functioning as intended in accordance with the SMP.

4. Site Management Plan

A Site-wide SMP was prepared for the Site and approved by the Department in December 2017. Benchmark updated the SMP in October of 2021 to address the ASD system operation, maintenance and monitoring requirements. In December 2022, Benchmark prepared and submitted to the NYSDEC an errata sheet to document a change to the SMP. The errata documented changes to the reported magnehelic gauge readings incorrectly stated in previous versions of the SMP. Section 5.3 of the SMP was revised to state: "*Over the past two years, magnehelic gauge MAG-1 readings have ranged between 0.75 and 1-inches of water column (iwc) and magnehelic gauge MAG-2 readings have ranged between 1.25 and 1.9 iwc."* Key components of the SMP are described below. Roux notes that inches of water column (iwc) is a unit of pressure, Magnehelic gauge reads negative pressure differential between atmospheric pressure and vacuum caused by suction of ASD mechanism.

4.1 Institutional and Engineering Control (IC/EC) Plan

Since soil/fill containing constituents above Restricted Residential Soil Cleanup Objectives (SCOs) and residual groundwater impact exists beneath the Site, institutional and engineering controls are required to protect human health and the environment. The IC/EC Plan describes the procedures for the implementation and management of all IC/ECs at the Site.

4.1.1 Institutional Controls

The Site has a series of Institutional Controls (ICs) in the form of site restrictions. Adherence to these ICs is required by the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- The property may only be used for restricted-residential, commercial, and industrial use provided that the long-term Engineering and Institutional Controls included in the SMP are employed.
- All ECs must be operated and maintained as specified in the SMP.
- All ECs must be inspected at a frequency and in a manner defined in the SMP.
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Erie County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department.
- Groundwater and other environmental or public health monitoring must be performed as defined in the SMP.
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in the SMP.

- All future activities that will disturb remaining contaminated material must be conducted in accordance with the SMP.
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP.
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in the SMP.
- Access to the site must be provided to agents, employees, or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.
- The potential for vapor intrusion must be evaluated for any buildings developed on-site, and any potential impacts that are identified must be monitored or mitigated.
- Vegetable gardens and farming on the site are prohibited.
- An evaluation shall be performed to determine the need for further investigation and remediation should large scale redevelopment occur, if any of the existing structures are demolished, or if the subsurface is otherwise made accessible.

4.1.2 Engineering Controls

There are no Engineering Controls (ECs) associated with the Site under the implemented Track 2 cleanup except for an ASD system as described in Section 4.3, below. The Site is either covered with hardscape (asphalt) or the on-site building, with no green space cover. The ASD system was observed to be in working order at the time of site inspection, readings at magnehelic gauges Mag-1 and Mag-2 (see Figure 3) were measured at -0.9 and -1.95 inches of water column, respectively.

4.2 Excavation Work Plan

An Excavation Work Plan (EWP) was included in the approved SMP for the Site. The EWP provides guidelines for the management of soil/fill material during any future intrusive activities. Any intrusive work that may disturb remaining contamination during maintenance or redevelopment work on the Site must be performed in compliance with the EWP and must also be conducted in accordance with a site-specific Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) meeting the minimum requirements of the sample HASP and CAMP included with the SMP.

No intrusive activities were completed during the reporting period (April 28, 2023 to April 28, 2024).

4.3 Active Subslab Depressurization (ASD) System

The NYSDEC-approved Site Management Plan (SMP – Ref. 4) required that measures to address sub-slab vapor concerns be undertaken if a vadose zone developed beneath the basement floor slab. Prior to renovation work the groundwater table was in contact with the basement floor. However, the renovation work involved cracking the original basement floor to mitigate settlement and installing an overlying layer of stone and a new slab above the former floor, creating a vadose zone.

Accordingly, an active sub-slab depressurization (ASD) system was designed and approved by the NYSDEC for implementation in the existing building. The ASD system was installed concurrently with interior building renovations over a one-year period, from March 2019 through March 2020 in accordance with the May 2018 Work Plan for Active Sub-slab Depressurization System Installation (Ref. 6) and the NYSDEC-approved January 2019 design drawings and specifications.

The ASD system is comprised of six extraction legs constructed with 4-inch diameter sub-slab perforated PVC pipe and solid risers located within interior partition walls. The risers are connected to the above-grade extraction system comprised of vertical piping vent stacks manifolded to one of two exhaust fans. Six vacuum monitoring points were installed through the slab and two magnehelic gauges were installed on the manifold risers in the basement to measure the instantaneous negative pressure produced by the in-line fans. Magnehelic gauges read pressure differential between atmospheric pressure and the negative pressure caused by the in-line fans. As indicated in the Site Management Plan (SMP), magnehelic gauges are required to maintain a reading of -.25 inches of water column (iwc) to ensure sufficient vacuum pressure generation. The system began operation in February 2020 and has operated continuously since that time.

On March 18, 2020, post-installation confirmatory testing was performed by Benchmark. Magnehelic gauge readings and vacuum port measurements indicated that the ASD system was operating properly. During the vapor assessment, performed on February 3, 2021 (see below), Benchmark verified that the ASD system fans were operating properly, as indicated by the readings on the magnehelic gauges. Figure 3 illustrates magnehelic gauge locations and readings collected April 24, 2024. Appendix B provides photos of the April 24, 2024 annual magnehelic gauge pressure readings.

During April 24, 2024 PRR walk through it was observed that the magnehelic gauge 1 (MAG-1) reading was similar to those recorded during previous inspections. However, magnehelic gauge 2 (MAG -2) indicated a vacuum of nearly -2 inches of water column and records maintained by building facility staff indicated readings above previous readings for a majority of the reporting period. On May 16th, 2024 Roux personnel returned to verify the MAG-2 location with a portable magnehelic gauge that reads 0 to -5 inches of water column. At that time it was observed that vacuum at MAG-2 had dropped back to -1.25 inches of water column, which is more in line with previous readings. Nevertheless, the portable gauge was temporarily connected to the riser and confirmed the permanent meter vacuum. The probable cause for the higher readings is the fluctuation of water beneath the floor slab coming into contact with the ASD piping.

4.4 Vapor Assessment

In accordance with the May 2020 Periodic Review Report (revised June 2020), approved by the New York State Department of Environmental Conservation (NYSDEC) on June 30, 2020, indoor air and outdoor air samples were collected in February of 2021 to satisfy Site Management Plan (SMP) requirements for evaluating the efficacy of the ASD system installed in the existing building.

The vapor assessment sampling was performed on February 3, 2021. At that time, the basement of the building was in partial use by teaching staff; all student classes were on upper floors. The existing ASD and heating systems were active, and doors and windows were closed as typical for winter weather conditions. A report summarizing the sampling event was submitted to the Department under separate cover, dated March 23, 2021 (Ref. 7). Figure 3 shows the vapor assessment sample locations. Based on the findings of the assessment, no further ASD evaluation work is required for the existing building other than routine system vacuum gauge checks as indicated in the NYSDEC and NYSDOH acceptance letter dated March 29, 2021.

4.5 Annual Inspection and Certification Program

The Annual Inspection and Certification Program outlines requirements for certifying and attesting that the IC/ECs employed on the Sites are unchanged from the original design and/or previous certification. The Annual Certification includes a site inspection and completion of the NYSDEC's IC/EC Certification Form. The Site inspection is intended to verify that the IC/ECs:

- Are in place and effective.
- Are performing as designed.
- That nothing has occurred that would impair the ability of the controls to protect the public health and environment.
- That nothing has occurred that would constitute a violation or failure to comply with any operation and maintenance plan for such controls.
- Access is available to the Site to evaluate continued maintenance of such controls.

Formal inspection of the Site was conducted by Mr. Thomas Behrendt, P.G. of Roux on April 24, 2024. Mr. Behrendt meets the requirements of a Qualified Environmental Professional (QEP) per 6NYCRR Part 375.12. At the time of the inspection, the Site was fully compliant with the NYSDEC-approved SMP. No observable indication of intrusive activities was noted during the Site inspection, nor was any observable use of groundwater noted during the Site inspection. Signed IC/EC forms are located in Appendix A and a photolog documenting site conditions can be found in Appendix B.

During the inspection, minimal hairline cracks on the concrete slab were observed. However, the cracks appear superficial, and do not appear to affect the performance of the ASD system. Additionally, the concrete slab overlies a vapor barrier consisting of poly-sheeting. Magnehelic monitoring location 2 has been reading between -1.7 iwc and -1.90 iwc during this inspection period. At the time of the April 24th site inspection the magnehelic gauge read approximately -1.95 iwc. Recorded ASD system sheets can be found in Appendix C.

Elevated readings of the MAG-2 monitoring location are believed to be caused by fluctuating groundwater levels that, upon rising, partially restrict the ASD extraction piping system. The elevated water is levels are suspected to be attributable to maintenance issues associated with a submersible pump in an offsite utility vault located in the sidewalk along W. Huron St on the south side of the building.

Onsite monitoring well HWM-1 road box was damaged during plowing activities over the winter and will need to be replaced during the next reporting period.

4.6 Operation, Monitoring and Maintenance Plan

An addendum to the December 2017 SMP was prepared in October of 2021.and approved by the NYSDEC. The SMP addendum describes the functional ASD system and includes procedures for routine monitoring of the ASD manometers by school maintenance staff, who will perform the monitoring in concert with routine HVAC system checks. School maintenance staff should note if manometer reads below .25 on the

manometer gauge, and immediately contact Emerson Huron and Roux staff. A placard with contact names and numbers will be prepared and posted at the manometer locations. The placards will read:

James Mahoney
Senior Property Manager
McGuire Development Company, LLC
(716) 829-1564 Office
(716) 732-9705 Mobile

Thomas Forbes
Principal Engineer
Roux Environmental Engineering & Geology, DPC
(716) 856-0599 Office
(716) 864-1730 Mobile

5 Groundwater Monitoring

Per the SMP, two (2) years of groundwater monitoring were completed at the Site at monitoring wells HMW-1, HMW-2, HMW-3, HMW-4, HMW-5, HMW-6, and MW-10 and groundwater beneath the basement floor slab was sampled at groundwater sump GSW-1. The SMP required semi-annual groundwater monitoring and checks of groundwater levels beneath the basement floor slab for a period of approximately two years, then annually thereafter until the NYSDEC allows monitoring to be terminated. Sampling was not performed during the 2021 PRR reporting period as Benchmark believed the monitoring obligation was satisfied following the two (2) years of semi-annual monitoring that occurred in 2018-2020, however it was performed in 2021 and 2022. Note that in concert with building redevelopment activities GSW-1 was relocated approximately 25 feet east of its prior location.

- The NYSDECs approval letter for the PRR for the certifying period of April 28th, 2021, to April 28, 2022, included approval to remove sampling of alkalinity (as CaCO3) and perform the sampling via the use of diffusion bags (The passive diffusion bag [PDB] sampler is a semi-permeable, low-density polyethylene membrane designed to allow volatile organic compounds (VOCs) to flow into the PDB until equilibrium is reached between the formation and the PDB). However, sampling was delayed until mid-August 2022 and not enough time was allotted for diffusion bag deployment and the end of summer break. Monitoring for the August 2022 event was continued via low flow sampling.

- Upon NYSDEC approval of the PRR for the certifying period of April 28th, 2022, to April 28th, 2023, the Department agreed to allow discontinuance of monitoring at HWM-1 and HWM-6.

The Groundwater monitoring was performed during the subject reporting period in August 2023.

5.1 August 2023 Groundwater Monitoring Event

Roux personnel deployed the PDBs on July 27th, 2023. Retrieval and sampling of the PDBs was performed on August 17th, 2023. PDB deployment and retrieval logs are included in Appendix D. Monitoring well HMW-5 could not be sampled due to the presence of a waste dumpster that was situated over the flush mount well. Roux will contact Emerson Huron to make arrangements with building personnel to ensure there are no obstructions blocking well HMW-5 prior to future sampling events. Groundwater was analyzed for Target Compound List (TCL) plus Commissioners Policy -51 (CP-51) Volatile Organic Compounds (VOCs) per USEPA Method 8260C. Groundwater samples were transferred to laboratory supplied, pre-preserved sample vials and transported, under chain of custody control, to Alpha Laboratories, (Alpha) located in Westborough, Massachusetts for analysis. Appendix D includes analytical data packages and field data sheets for the August 2023 sampling event. Table 1 summarizes the results and post COC groundwater monitoring results completed in accordance with the SMP (May 2018, through August 2023) along with data collected in June 2016 and January 2017 (during the RI) and provides a comparison to Groundwater Quality Standards/Guidance Values (GWQS/GVs).

In general, VOC concentrations from the August 2023 monitoring event are lower compared to historical sampling events, and have dropped significantly in HMW-2, HMW-4, and MW-10, with results for HMW- 2 and HMW-4 reported non-detect for petroleum VOCs. Elevated concentrations above GWQS of petroleum VOCs are noted in MW-10 but fall well below one (1) part per million (ppm). HMW-3, though lower in VOC concentrations over the last two (2) sampling events, exhibits total VOCs in excess of one (1) ppm. This may be due to discontinuation of groundwater remediation efforts on the adjacent upgradient former Sunoco site (an inactive NYSDEC Spill site, no. 1106834), which has a long history of use as a petroleum service station with numerous storage tanks and dispensers. Appendix E provides a status report issued for the former Sunoco Site in 2020 which summarizes the relevant history of the property. Prior to 2020 active groundwater remediation on the former Sunoco site was undertaken. The site and spill area are hydraulically upgradient of HWM-3 and MW-10 (see Figure 4) and all onsite petroleum-impacted soils were removed from the BCP Site as part of the Track 2 Restricted Residential cleanup completed in 2015. It is possible that post-treatment rebound is contributing to elevated levels in HMW-3.

Monitoring wells HMW-1 and HMW-6 continue to be reported as either non-detect or with individual compound concentrations below NYSDEC Class GA ground water standards or guidance values. This has been consistent across several years of monitoring. Basement sump (GWS-1) sample shows chlorinated VOC levels are elevated compared to the August 2022 sampling event but are still lower than historic highs. The next round of groundwater monitoring will take place in July/August of 2024.

The electronic data delivery (EDD) format has been uploaded to NYSDEC's EQuIS database. The next sampling event is scheduled for August 2024.

5.1.1 Historical Analysis and comparisons

Attached in Appendix F are historical trend analysis for monitoring locations HWM-2, through HWM-4, MW-10 and GWS-1 for total VOC concentrations are discussed below:.

- HMW – 2, Total petroleum VOC concentrations have decreased significantly and are now at non-detect levels.

- HWM-3, Total VOC concentrations have declined to levels similar to those reported prior to 2022.
- HMW – 4, Total petroleum VOC concentrations have dropped significantly and are now at non-detect levels.
- MW-10, Although the trendline indicates an overall upward trend, VOC concentrations for the 2023 event were substantially lower than they have been since 2017.
- GWS - 1, Total VOC concentrations are generally similar to recent sampling events, with a continued neutral trend and no definitive increase or decrease of VOCs.

With only one round of groundwater monitoring performed using diffusion bags at this time, It's difficult to assess. the two sampling techniques (low flow versus diffusion bags) without having three to four monitoring events performed via diffusion bag, to show any fluctuations in VOC concentrations that could be the result of sampling methodology. However, diffusion bag sampling is a proven sampling technique that is approved by the Department.

5.2 Groundwater Flow Direction

In conjunction with the August 17th, 2023 groundwater monitoring event, a round of water levels (Table 2) was collected from each monitoring location (including GSW-1), with exemption of HMW-5 which was not accessible. The recorded water levels were used to develop an isopotential map (Figure 4). Ground water flow is in an easterly direction with a slight southern component.

6 Conclusions and Recommendations

Conclusions for this reporting period and recommendations for the next reporting period are as follows:

- At the time of the annual Site inspection (April 24, 2024), the Site was compliant with the NYSDEC-approved SMP (Ref 4),
- Petroleum VOC concentrations are lower in several wells. The site will continue to be monitored .

With an annual round of groundwater sampling performed in August of 2024.

7 Declaration/Limitations

This report has been prepared for the exclusive use of Emerson Huron, LLC. The contents of this report are limited to information available at the time of the site inspections. The findings herein may be relied upon only at the discretion of Emerson Huron, LLC. Use of or reliance upon this report or its findings by any other person or entity is prohibited without written permission of Roux.

References

1. New York State Department of Environmental Conservation. *DER-10/ Technical Guidance for Site Investigation and Remediation.* May 3, 2013.

2. Iyer Environmental Group, PLLC (IEG). *Site Investigation/Interim Remedial Measure (SI/IRM) Work Plan, 73-79 West Huron Street Site, Buffalo, New York. BCP Site #C915282*. June 2015.

3. Benchmark Environmental Engineering & Science, PLLC (Benchmark). *Final Site Investigation/Interim Remedial Measures/Alternatives Analysis Report, 75-77 West Huron Street Property, Buffalo, New York*. May 2017.

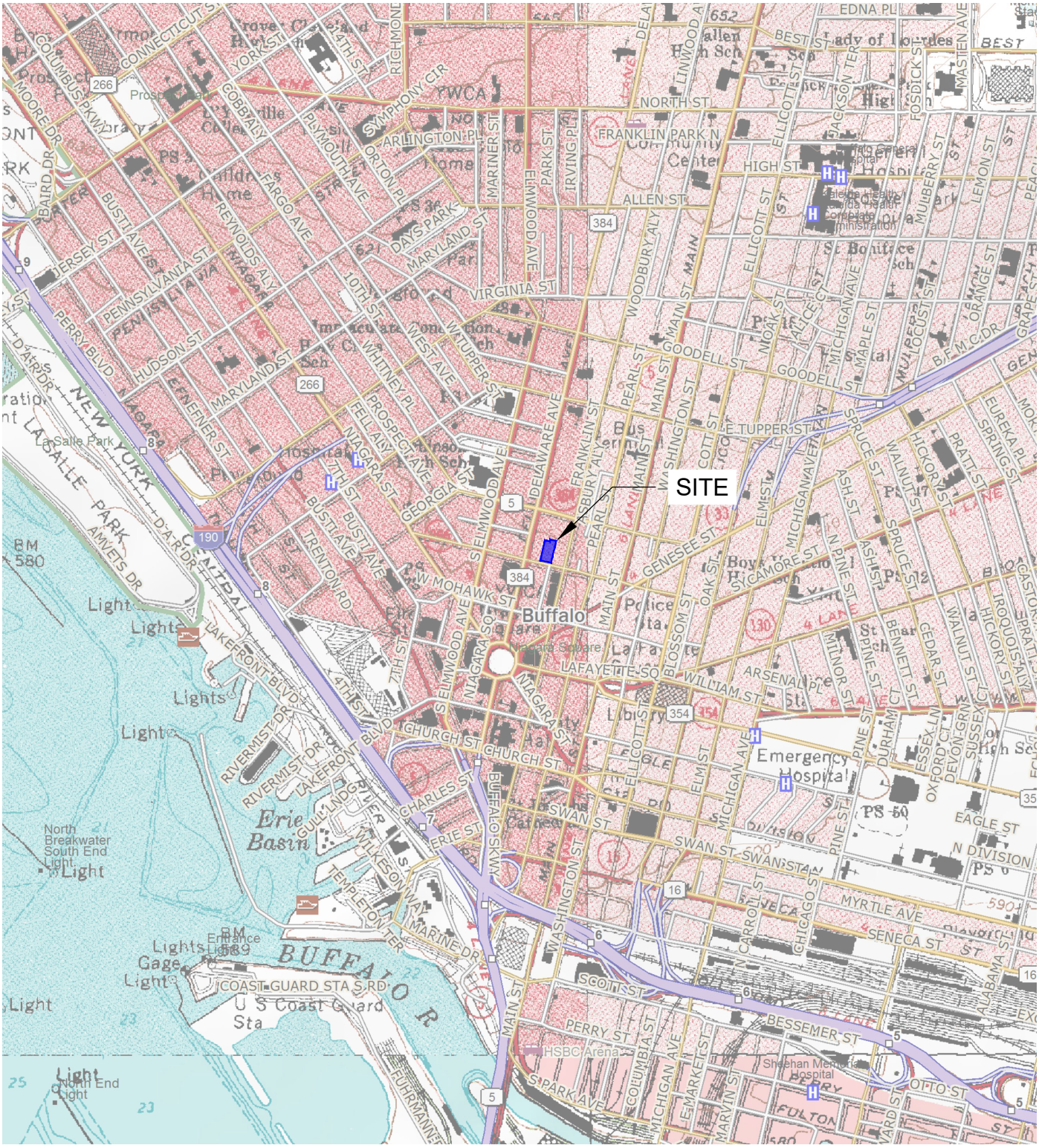
4. Benchmark Environmental Engineering & Science, PLLC (Benchmark). *Site Management Plan for 73-79 West Huron Street Site.* November 2017, Revised October 2021.

5. Benchmark Environmental Engineering & Science, PLLC (Benchmark). *Final Engineering Report for 73-79 West Huron Street Site.* November 2017.

6. Benchmark Environmental Engineering & Science, PLLC (Benchmark). *Work Plan for Active Subslab Depressurization System (ASD) Installation for 73-79 West Huron Street Site.* May 2018.

7. Benchmark Environmental Engineering & Science, PLLC (Benchmark). *Post-Remedial Vapor Assessment Report.* March

FIGURES



Title:

SITE LOCATION & VICINITY MAP

PERIODIC REVIEW REPORT

73-79 WEST HURON STREET SITE (BCP SITE NO. C915282)
BUFFALO, NEW YORK

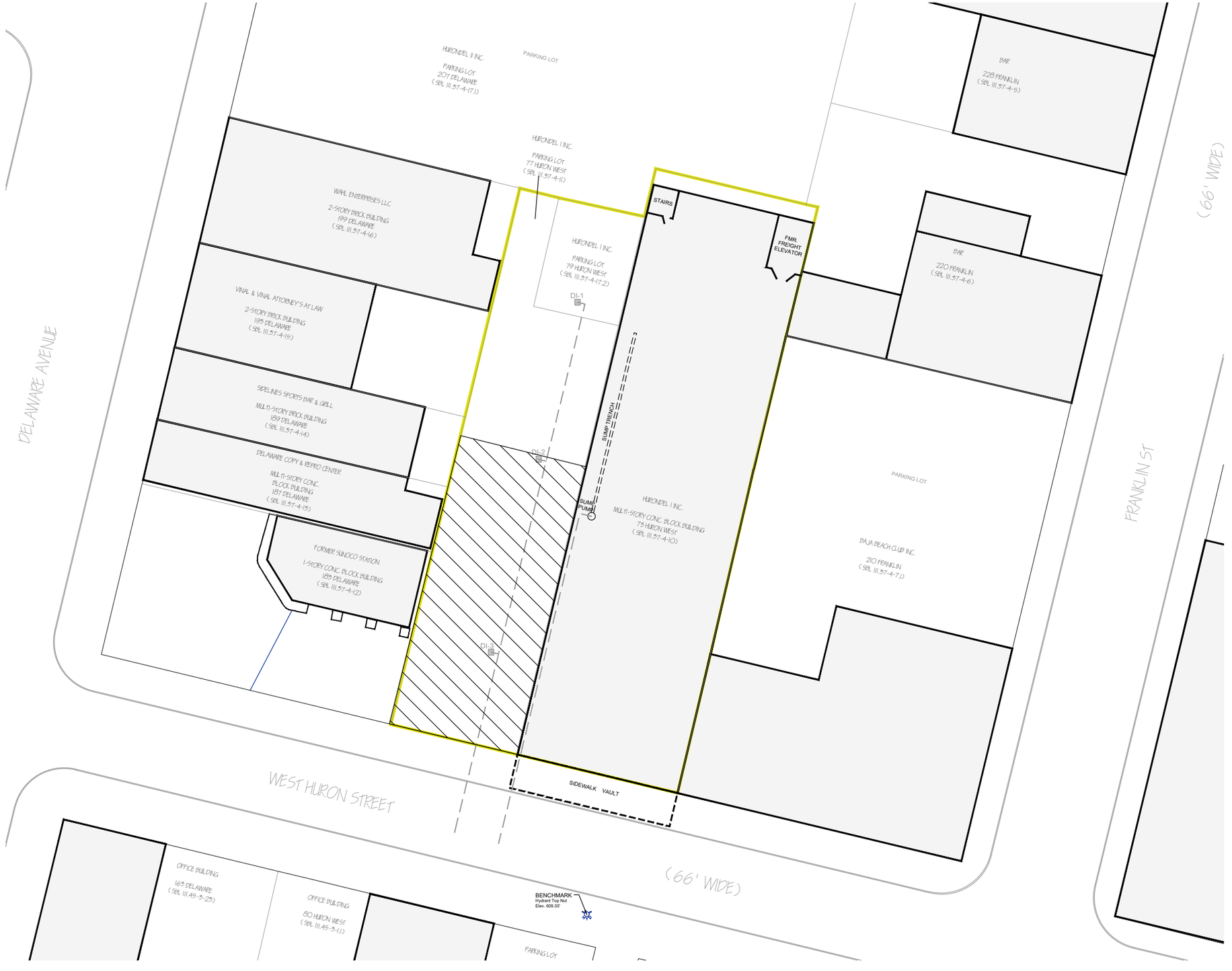
Prepared for:

EMERSON HURON, LLC

ROUX

Compiled by:	Date: MAY 2024	FIGURE
Prepared by: RFL-CMC	Scale: AS SHOWN	
Project Mgr: THF	Project:	1
File: FIGURE 1; SITE LOCATION & VICINITY MAP.DWG		

F:\CAD\BENCHMARK\EMERSON HURON, LLC\PRR\2024\FIGURE 1; SITE LOCATION & VICINITY MAP.DWG



LEGEND:

- BCP / PROPERTY BOUNDARY
- EXISTING BUILDING
- PARCEL BOUNDARY
- NAME — ROAD
- APPROXIMATE LOCATION OF GYMNASIUM WITH PARKING BELOW

N

40' 0 40'

Title:

SITE PLAN

PERIODIC REVIEW REPORT

73-79 WEST HURON STREET SITE (BCP SITE NO. C915282)
BUFFALO, NEW YORK

Prepared for:
EMERSON HURON, LLC

ROUX

Compiled by:	Date: MAY 2024	FIGURE
Prepared by: RFL-CMC	Scale: AS SHOWN	2
Project Mgr: THF	Project:	
File: FIGURE 2; SITE PLAN.DWG		

F:\CAD\BENCHMARK\EMERSON HURON, LLC\PRR\2022\FIGURE 2; SITE PLAN.DWG

LEGEND:

- BCP / PROPERTY BOUNDARY
- EXISTING BUILDING
- BASEMENT FLOOR PLAN
- APPROXIMATE LOCATION OF NEWLY CONSTRUCTED GYMNASIUM WITH PARKING BELOW
- PARCEL BOUNDARY
- NAME — ROAD
- MAG-1 (0.90) — MAGNEHELIC PRESSURE GAUGE LOCATION (PRESSURE READING IN INCHES OF WATER, SEE NOTE 1)
- IA-1 — INDOOR AIR SAMPLE LOCATION (SEE NOTE 2)
- OA-1 — OUT DOOR AIR SAMPLE LOCATION (SEE NOTE 2)
- 4-INCH PERFORATED ASD PIPING

NOTES:

1. MAGNEHELIC GAUGE READINGS TAKEN ON APRIL 17, 2024
2. VAPOR ASSESSMENT SAMPLING PERFORMED ON FEBRUARY 3, 2021.

N

30' 0 30'

Title:

ASD SYSTEM AND VAPOR ASSESSMENT LOCATIONS

PERIODIC REVIEW REPORT

73-79 WEST HURON STREET SITE (BCP SITE NO. C915282)
BUFFALO, NEW YORK

Prepared for:
EMERSON HURON, LLC

ROUX

Compiled by:	Date: MAY 2024	FIGURE
Prepared by: RFL-CMC	Scale: AS SHOWN	3
Project Mgr: THF	Project:	
File: FIGURE 3; ASD AND VAPOR ASSESSMENT LOCATIONS.DWG		

F:\CAD\BENCHMARK\EMERSON HURON, LLC\PRR\2024\FIGURE 3; ASD AND VAPOR ASSESSMENT LOCATIONS.DWG

LEGEND:

- BCP / PROPERTY BOUNDARY
- EXISTING BUILDING
- PARCEL BOUNDARY
- NAME — ROAD
- GSW-1 — SUMP WATER SAMPLE (IEG, 2015)
- MW-8 — DECOMMISSIONED MONITORING WELL (BY OTHERS)
- MW-10 — MONITORING WELL (METI, 2004-2010)
- HMW-1 — MONITORING WELL (BM, 2016)
- 597.3 — GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION
- 597.66 — GROUNDWATER ELEVATION

Title:

GROUNDWATER ISOPOTENTIAL MAP (AUGUST 2023)

PERIODIC REVIEW REPORT

73-79 WEST HURON STREET SITE (BCP SITE NO. C915282)
BUFFALO, NEW YORK

Prepared for:
EMERSON HURON, LLC

ROUX

Compiled by:	Date: MAY 2024	FIGURE
Prepared by: CMC	Scale: AS SHOWN	4
Project Mgr: THF	Project:	
File: FIGURE 5; SHALLOW GROUNDWATER ISOPOTENTIAL MAP - AUG 2023.DWG		

F:\CAD\BENCHMARK\EMERSON HURON, LLC\PRR\2024\FIGURE 5; SHALLOW GROUNDWATER ISOPOTENTIAL MAP - AUG 2023.DWG

Tables

ROUX

TABLE 2

SUMMARY OF GROUNDWATER ELEVATIONS

August 2023 Post Remedial Monitoring Event
73-79 West Huron Street Site (C915282)
Buffalo, New York

Location	TOR Elevation (fmsl)	08/17/22	
		DTW (fbTOR)	GWE (fmsl)
HMW-1	609.52	11.17	598.35
HMW-2	606.75	8.99	597.76
HMW-3	606.45	8.79	597.66
HMW-4	606.75	9.18	597.57
HMW-5	606.31	(6)	(6)
HMW-6	606.20	9.15	597.05
MW-10	606.44	8.79	597.65
GSW - 1	600.02	2.56	597.46

Notes:

1. DTW = depth to water
2. fbTOR = feet below top of riser
3. fmsl = feet above mean sea level
4. GWE = groundwater elevation
5. TOR = top of riser
6. No water level measurement obtained, well was not accessible.

TABLE 1

SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS

Post Remedial Monitoring
73-79 West Huron Street Site (C915282)
Buffalo, New York

Parameter	GWQS/GV	MW-10									HMW-1									HMW-2								HMW-3							
		06/23/16	01/11/17	05/17/18	10/24/18	08/20/19	02/13/20	07/15/21	08/17/22	08/17/23	06/16/16	01/11/17	05/17/18	10/24/18	08/20/19	02/13/20	07/15/21	08/17/22	08/17/23	06/16/16	01/11/17	05/17/18	10/24/18	08/20/19	02/13/20	7/1521	08/17/22	08/17/23	06/16/16	01/11/17	05/17/18	10/24/18	08/20/19	02/13/20	07/15/21	08/17/22	08/17/23
VOLATILE ORGANICS (VOCs, ug/L)																																				
1,2,4-Trimethylbenzene	5	1.5	ND	ND	**51**	**62**	1.9 J	**42**	**14**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**880**	**760 D**	ND	**540 D**	**5.2**	**520**	**710**	**380**	ND	**380**	**30**	ND	**5.9**	4.3	**33**	**140**	**91**	**12**
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	**7.3**	**340**	**110**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**51**	**33**	ND	ND	3.4 J	**15**	4 J	ND	ND	**35 J**	ND	ND	**53**	ND	**59**	**140**	**190**	**73**
2-Butanone	50	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	4.9 J	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND
Acetone	50	--	--	**27**	ND	ND	ND	ND	18 J	21 J	ND	--	ND	ND	ND	ND	ND	ND	12	ND	--	ND	ND	ND	ND	ND	ND	**10**	ND	--	ND	ND	ND	ND	ND	20 J	13 J
Benzene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	--	--	--	50	180	95	76	200	190	20	ND	--	ND	ND	ND	ND	ND	ND	ND	290	--	140	69	ND	97	110	37	ND	460	--	190 D	96	12	130	140	180	140
Ethylbenzene	5	**66.2**	ND	**72**	**500**	**160**	**150**	**25**	**250**	**8.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**19 J**	**31**	**17**	**10**	**30**	ND	ND	ND	ND	**1800**	**840**	**490 D**	**31**	ND	**100**	**230**	**670**	**320**
2-Hexanone	50	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	**ND**	--	ND	ND	ND	ND	ND	ND	ND	**ND**	--	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	5	**13.6**	2.6	**20**	**61**	**33**	**18**	**15**	**6.8 J**	0.81 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	**74**	**71**	**58**	**73**	**12**	ND	**48**	**39**	ND	**110**	**17 J**	**54**	**18**	**8.3**	**12**	**6 J**	**15 J**	**11 J**
Methylcyclohexane	--	--	--	ND	8 J	48 J	8.7 J	140 J	61	3.8 J	ND	--	ND	ND	ND	ND	ND	ND	ND	59 J	--	38	13	ND	32 J	42	15 J	ND	160 J	--	94	64	12	45	62	70 J	12 J
n-Butylbenzene	5	ND	ND	ND	1.9 J	**5.4**	ND	3.5 J	**5.3 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**13 J**	**13**	ND	**9.3 J**	ND	**5.1 J**	4.7 J	4.8 J	ND	**16 J**	**34 J**	ND	**12**	**7.3**	**11**	ND	ND	ND
n-Propylbenzene	5	**38.1**	4	ND	**110**	**65**	**84**	**53**	4.8 J	1.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	**170**	**180**	ND	**140 J**	3.1 J	**120**	**130**	**100**	ND	**210**	ND	ND	**110**	**66**	**21**	**6 J**	**23 J**	4.1 J
p-Isopropyltoluene	5	ND	ND	ND	ND	1.3 J	ND	**6 J**	**6.9 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**14**	ND	2.9 J	ND	ND	ND	ND	ND	ND	ND	ND	**5.7 J**	2.6 J	3 J	ND	ND	ND
sec-Butylbenzene	5	1.8	ND	ND	**9.2**	**5.7**	4.8 J	**7.2**	3.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**8.2 J**	ND	ND	ND	ND	**6.1 J**	ND	**6.1**	ND	ND	ND	ND	**9.1**	**6**	**5.1 J**	ND	ND	ND
Tetrachloroethene	5	--	--	ND	ND	ND	ND	ND	ND	ND	0.24 J	--	0.18 J	0.3 J	0.21 J	ND	ND	ND	ND	1.8 J	--	ND	ND	ND	ND	2.4	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND
Toluene	5	1.2	ND	**39**	**12**	**4.6**	**18**	**120**	**900**	**1.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.8**	ND	ND	ND	ND	**490**	**350**	**7.6**	**9**	ND	**59**	**1000 D**	**410**	**110**
Total Xylenes	5	**6**	ND	**371**	**319**	**87**	**255**	**1260 D**	**1037**	**9.4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.2 J	0.95 J	ND	**107**	ND	ND	ND	ND	**2900**	**427 J**	**555 D**	**92**	**8.9**	**550**	**2150**	**3300**	**970**
Trichloroethene	5	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	5	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND
TOTAL VOCs	--	**128.4**	**6.6**	**502**	**1252.1 J**	**567 J**	**623.7 J**	**2211.7 J**	**2607.3 J**	**66.01 J**	**0.24**	**0**	**0.18**	**0.3 J**	**0.21 J**	**0**	**0**	**0**	**12**	**1566 J**	**1105.2 J**	**253.95 J**	**857.2 J**	**173.4 J**	**795.2 J**	**1000.7 J**	**581.9 J**	**10**	**6101 J**	**1698**	**1390.6 J**	**505.7 J**	**115.4 J**	**1028.1 J**	**3874 J**	**4969 J**	**1665.1 J**
TOTAL pVOCs	--	**128.4**	**6.6**	**502**	**1064.1 J**	**424 J**	**539 J**	**1871.7 J**	**2338.3 J**	**21.21 J**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1215.2 J**	**1105.2 J**	**75.95 J**	**775.2 J**	**168.5 J**	**666.2 J**	**896.7 J**	**529.9 J**	**0**	**5941 J**	**1698 J**	**1106.6**	**345.7 J**	**95.1 J**	**853.1 J**	**3672 J**	**4699 J**	**1500.1 J**
TOTAL cVOCs	--	**0**	--	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.48**	--	**0.18**	**0.3 J**	**0.21 J**	**0**	**0**	**0**	**0**	**1.8 J**	--	**0**	**0**	**0**	**0**	**2.4**	**0**	**0**	**0**	--	**0**	**0**	**0**	**0**	**0**	**0**	**0**
General Chemistry (mg/L)																																				
T. Alkalinity (as $CaCO_3$)[6]	--	--	--	518	476	467	733	312	NA	NA	--	--	320	329	319	339	286	NA	NA	--	--	305	320	239	258	246	NA	NA	--	--	470	396	394	538	311	NA	NA

Notes:
1. ND - Not Detected
2. Only those compounds detected at a minimum of one location are presented.
3. Values exceeding NYS Ambient Water Quality Class GA Groundwater Quality Standards/Guidance Values; NYSDEC June 1998 Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 are highlighted in yellow.
4. Data presented has been validated by a third party data validator; data and qualifiers modified by the validator are in RED.
5. MW-5 was not accessable and could not be sampled for the 2022 event.
6. Total Alkalinity was dropped from monitoring for 2022 and monitoring events moving forward.

Qualifiers:
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
D = Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

TABLE 1

SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS

Post Remedial Monitoring
73-79 West Huron Street Site (C915282)
Buffalo, New York

Parameter	GWQS/GV	HMW-4									HMW-5									HMW-6									GSW-1 (SUMP - 1)									
		06/16/16	01/11/17	05/17/18	10/24/18	08/20/19	02/13/20	07/15/21	08/17/22	08/17/23	06/16/16	01/11/17	05/17/18	10/24/18	08/20/19	02/13/20	07/15/21	08/17/22	08/17/22	06/16/16	01/11/17	05/17/18	10/24/18	8/20/2019	2/13/2020	7/15/2021	8/17/2022	8/17/2023	04/24/15	06/05/15	05/17/18	06/05/18	10/24/18	08/20/19	02/13/20	07/15/21	08/17/22	08/17/23
VOLATILE ORGANICS (VOCs, ug/L)																																						
1,2,4-Trimethylbenzene	5	ND	ND	ND	1 J	**280 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No access to monitoring well [5]	No access to monitoring well [5]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.7**	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	**24**	**5**	ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone	50	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND			ND	--	ND	ND	ND	ND	ND	ND	ND	ND	5.7	ND	ND	ND	**85**	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND			ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17 J	ND
Acetone	50	ND	--	ND	ND	ND	ND	ND	18	11	ND	--	ND	ND	ND	ND	ND			ND	--	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	**170**	ND	ND	ND	ND
Benzene	1	0.17 J	ND	ND	ND	ND	ND	ND	ND	ND	0.23 J	ND	ND	ND	ND	ND	ND			0.22 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7	ND	--	ND	ND	ND	ND	ND	ND	ND	3.8	--	2.3 J	ND	ND	3.1	11			2.7	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND			ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**	**24**	**31**	28	6	26	59	9.5
Cyclohexane	--	ND	--	ND	ND	90 J	7.7 J	95	46	ND	0.59 J	--	ND	ND	ND	ND	ND			0.49 J	--	ND	ND	ND	ND	ND	ND	ND	ND	4.8 J	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5	0.77 J	ND	ND	ND	ND	4.9	**11**	**24**	ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone	50	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND			ND	--	1.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	ND	ND	ND	**14**	2.6	ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane	--	0.48 J	--	ND	ND	13 J	ND	29	34	ND	0.44	--	ND	ND	ND	ND	ND			0.56 J	--	ND	ND	ND	ND	ND	ND	ND	ND	0.49 J	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND	3.9 J	ND	ND	1.6 J	ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	5	0.9 J	ND	ND	ND	**98 J**	1 J	**19**	**15**	ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.8	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	5	ND	ND	ND	ND	ND	ND	0.82 J	2.1 J	ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	5	0.7 J	ND	ND	ND	**6.8 J**	ND	1.6 J	4.3	ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	--	ND	ND	0.29 J	ND	ND	ND	ND	0.54	--	0.35 J	0.43 J	0.29 J	0.25 J	0.36 J			0.91	--	0.44 J	0.53	0.34 J	0.38 J	0.44 J	0.33 J	ND	3.4	4.9	**550**	**480**	**680**	**300**	**110**	**190**	**17**	**99**
Toluene	5	ND	ND	ND	ND	ND	1.7 J	4.5 J	2.5	ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	5	0.84 J	ND	ND	ND	ND	**29.5**	**31.4**	**12.8 J**	ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.91 J	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND			ND	--	ND	ND	ND	ND	ND	ND	ND	ND	0.52 J	**13 J**	**12**	**16**	**14**	4	**7.4 J**	4.2	3.6
trans-1,2-Dichloroethene	5	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND			ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2 J	2.1 J	ND
Vinyl chloride	2	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND			ND	--	ND	ND	ND	ND	ND	ND	ND	ND	0.52 J	ND	ND	ND	ND	ND	**3**	**4**	ND
TOTAL VOCs	--	**3.86**	**0**	**0**	**1 J**	**491.99 J**	**44.8 J**	**230.32 J**	**167.9 J**	**11**	**5.6**	**0**	**2.65**	**0.43 J**	**0.29 J**	**3.35 J**	**11.36 J**	**NA**	**NA**	**4.88**	**0**	**1.64**	**0.53**	**0.34 J**	**0.38 J**	**0.44 J**	**0.33 J**	**14**	**3.4**	**29.72 J**	**588 J**	**516**	**727**	**597**	**120 J**	**227.6 J**	**86.47 J**	**112.1 J**
TOTAL pVOCs	--	**3.38**	**0**	**0**	**1 J**	**388.7 J**	**37.1 J**	**92.32 J**	**69.9 J**	**0**	**0.23**	**0**	**0**	**0**	**0**	**0**	**0**	**NA**	**NA**	**0.22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13.31 J**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL cVOCs	--	**0**	--	**0**	**0**	**0.29 J**	**0 J**	**0 J**	**0 J**	**0**	**0.54**	--	**0.35**	**0.43 J**	**0.29 J**	**0.25 J**	**0.36 J**	**NA**	**NA**	**0.91**	--	**0**	**0.53**	**0.34 J**	**0.38 J**	**0.44 J**	**0.33 J**	**0**	**3.4**	**11.12 J**	**588 J**	**516**	**727**	**597**	**120 J**	**227.6 J**	**86.47 J**	**112.1 J**
General Chemistry (mg/L)																																						
T. Alkalinity (asCaCO$_3$)[6]	--	--	--	108	196	466	450	282	NA	NA	--	--	237	336	245	356	255	NA	NA	--	--	289	418	317	371	316	NA	NA	--	--	331	--	338	334	327	316	NA	NA

Notes:
1. ND - Not Detected
2. Only those compounds detected at a minimum of one location are presented.
3. Values exceeding NYS Ambient Water Quality Class GA Groundwater Quality Standards/Guidance Values; NYSDEC June 1998 Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 are highlighted in yellow.
4. Data presented has been validated by a third party data validator; data and qualifiers modified by the validator are in RED.
5. MW-5 was not accessable and could not be sampled for the 2022 event.
6. Total Alkalinity was dropped from monitoring for 2022 and monitoring events moving forward.

Qualifiers:
J = The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
D = Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

APPENDIX A

SITE INSPECTION (IC/EC) FORM
INSTITUTIONAL & ENGINEERING CONTROLS 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. **C915282**

Site Name 73-79 W. Huron St.

Site Address: 73-79 W. Huron St. Zip Code: 14202
City/Town: Buffalo
County: Erie
Site Acreage: 0.609

Reporting Period: April 28, 2020 to April 28, 2021

	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? Restricted-Residential, Commercial, and Industrial	☒	☐
7. Are all ICs 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?	☐	☒
9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	☒	☐

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

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. C915282 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
111.37-4-10	Emerson Huron, LLC	Soil Management Plan Landuse Restriction Monitoring Plan Site Management Plan IC/EC Plan Ground Water Use Restriction

- Site use is limited to Restricted Residential, Commercial and Industrial uses as described in 6 NYCRR Part 375;
- Prohibition against use of groundwater without treatment
- Provision for SVI evaluation of occupied buildings on site
- Annual monitoring of groundwater
- Compliance with excavation plan
- Monitoring to assess the performance and effectiveness of the remedy

111.37-4-11	Emerson Huron, LLC	IC/EC Plan Ground Water Use Restriction Soil Management Plan Landuse Restriction Monitoring Plan Site Management Plan

- Site use is limited to Restricted Residential, Commercial and Industrial uses as described in 6 NYCRR Part 375;
- Prohibition against use of groundwater without treatment;
- Provision for SVI evaluation of occupied buildings on site;
- Annual monitoring of groundwater;
- Compliance with excavation plan and
- Monitoring to assess the performance and effectiveness of the remedy.

111.37-4-17.2	Emerson Huron, LLC	Monitoring Plan Landuse Restriction Site Management Plan IC/EC Plan Ground Water Use Restriction Soil Management Plan

- Site use is limited to Restricted Residential, Commercial and Industrial uses as described in 6 NYCRR Part 375;
- Prohibition against use of groundwater without treatment;
- Provision for SVI evaluation of occupied buildings on site;
- Annual monitoring of groundwater;
- Compliance with excavation plan and
- Monitoring to assess the performance and effectiveness of the remedy.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
111.37-4-10	Vapor Mitigation

Active SSDS

None Required

Not Applicable/No EC's

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 Engineering Control 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
X	☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

   (a) The 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
X	☐

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. C915282

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 James Mahoney at 455 Cayuga rd,
print name print business address

am certifying as Remedial Party (Owner or Remedial Party)

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

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

1/16/24
Date

EC CERTIFICATIONS

Box 7

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 Thomas Forbes at Rock Environmental 2558 Hamburg TPK, Buffalo, NY 14218,
print name print business address

am certifying as a PE for the Remedial Party
(Owner or Remedial Party)

STATE OF NEW YORK THOMAS H. FORBES 070950-1 LICENSED PROFESSIONAL ENGINEER (Required for PE)

12-30-24

Signature of , for the Owner or Remedial Party, Rendering Certification — Date

APPENDIX B

SITE PHOTOLOG

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Emerson Huron, LLC	73-79 W. Huron Street Site (C915282)	

Photo No.	Date
1	04/24/24

Direction Photo Taken:
Interior

Description:
Vapor Assessment ASD System Monitoring:
Magnehelic Gauge Pressure Reading MAG-1 (0.90 inches of water)

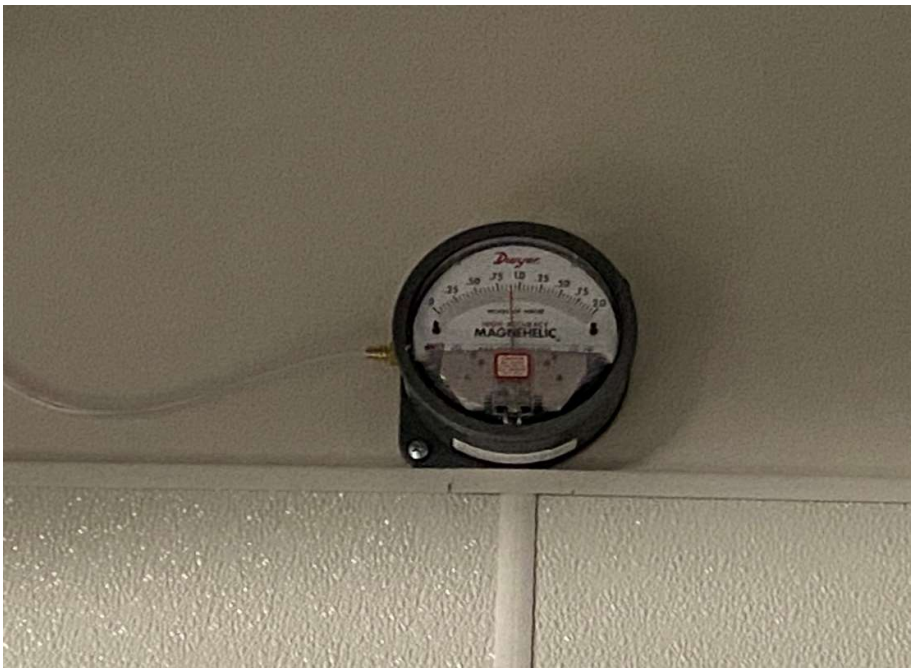
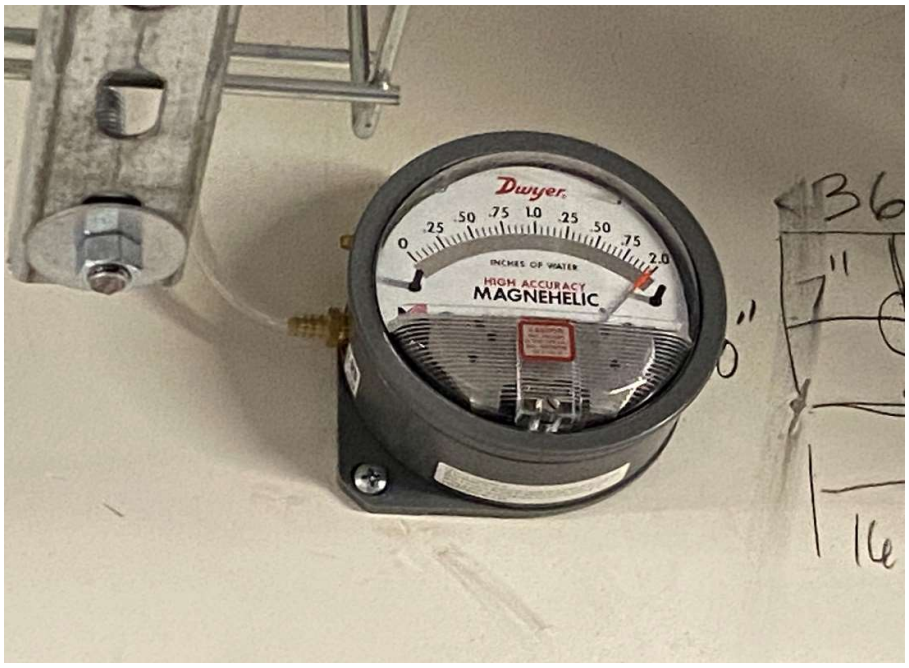


Photo No.	Date
2	04/24/24

Direction Photo Taken:
Interior

Description:
Vapor Assessment ASD System Monitoring:
Magnehelic Gauge Pressure Reading MAG-2 (1.95 inches of water)



Prepared By: TAB

ROUX

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Emerson Huron, LLC	73-79 W. Huron Street Site (C915282)	

Photo No.	Date
3	04/04/23

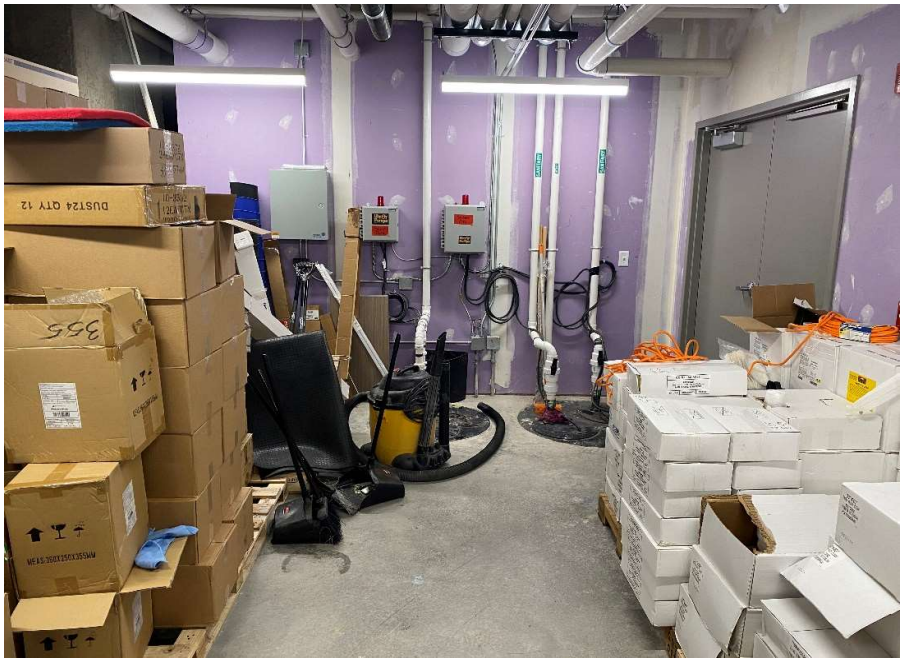
Direction Photo Taken:
South

Description:
Annual Site Inspection:
Exterior Elevated Gymnasium Addition.

Photo No.	Date
4	04/04/23

Direction Photo Taken:
Interior

Description:
Annual Site Inspection:
Sealed sumps in northside of basement.



Prepared By: TAB

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Emerson Huron, LLC	73-79 W. Huron Street Site (C915282)	

Photo No.	Date
5	04/24/24

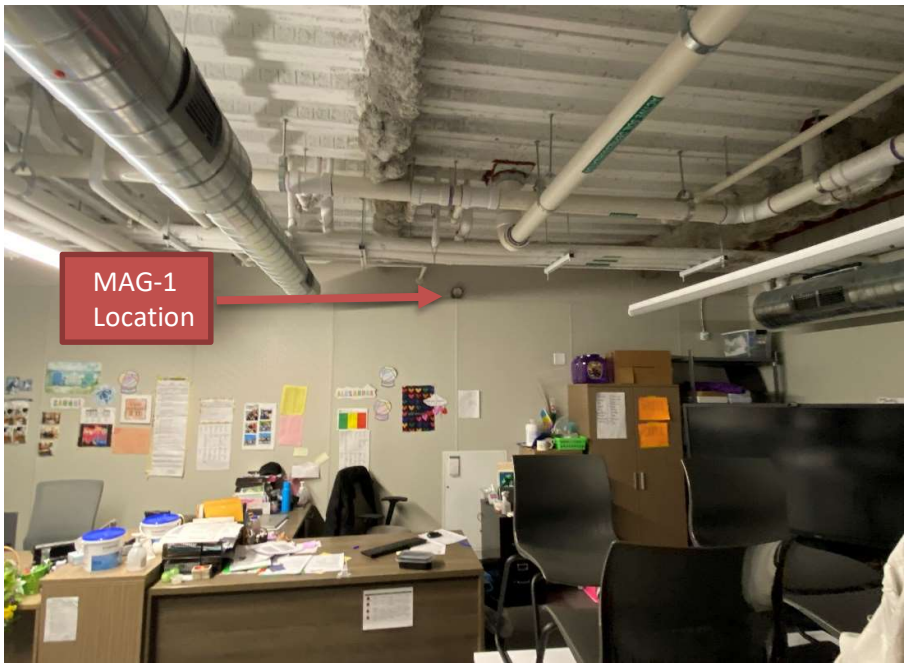
Direction Photo Taken:
Interior

Description:
Annual Site Inspection:
Sealed sumps on southeast side of basement. GSW-1 sample location is noted in this picture.

Photo No.	Date
6	04/24/23

Direction Photo Taken:
Interior

Description:
Annual Site Inspection:
Classroom location of MAG-1



Prepared By: TAB

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Emerson Huron, LLC	73-79 W. Huron Street Site (C915282)	

Photo No.	Date
7	04/24/24

Direction Photo Taken:
Interior

Description:
Annual Site Inspection
Telecommunications Room
location of MAG-2

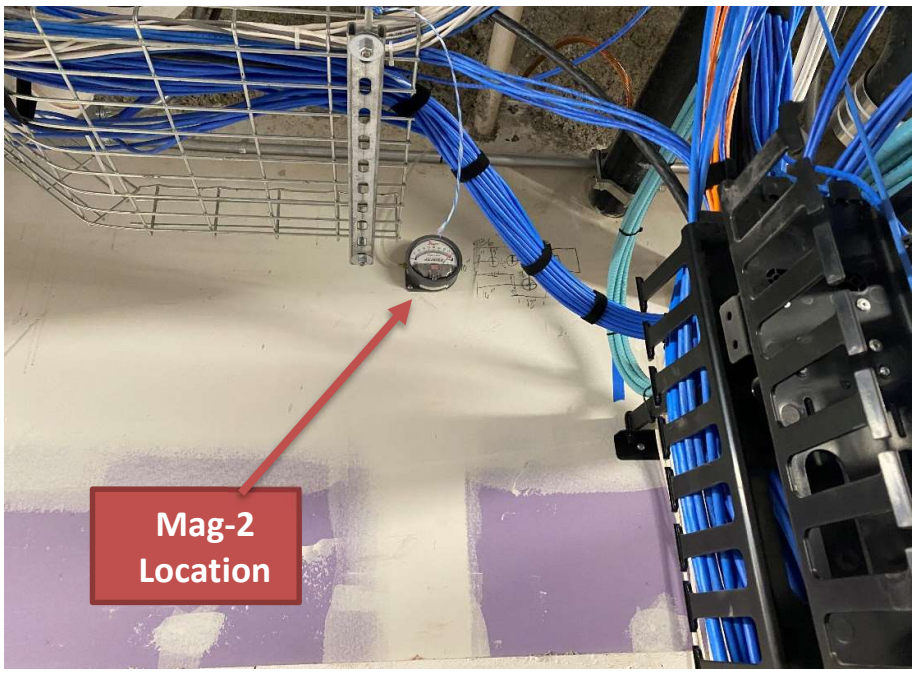
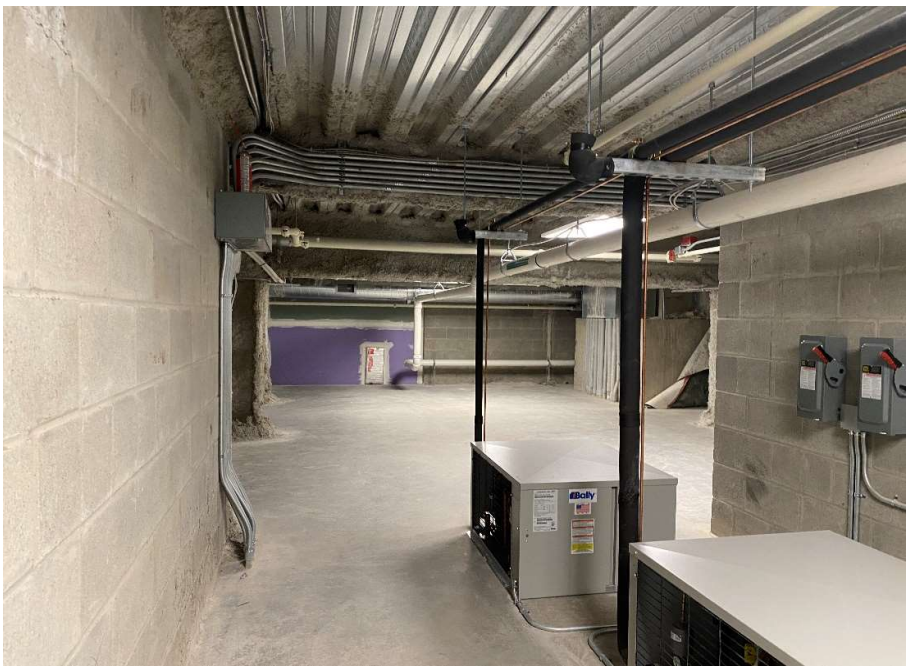


Photo No.	Date
8	04/24/24

Direction Photo Taken:
Interior

Description:
Annual Site Inspection:
Basement crawl space west side of the building.



Prepared By: TAB

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Emerson Huron, LLC	73-79 W. Huron Street Site (C915282)	B0441-022-001

Photo No.	Date
9	04/24/24

Direction Photo Taken:
Interior

Description:
Annual Site Inspection:
Electrical room north end of building

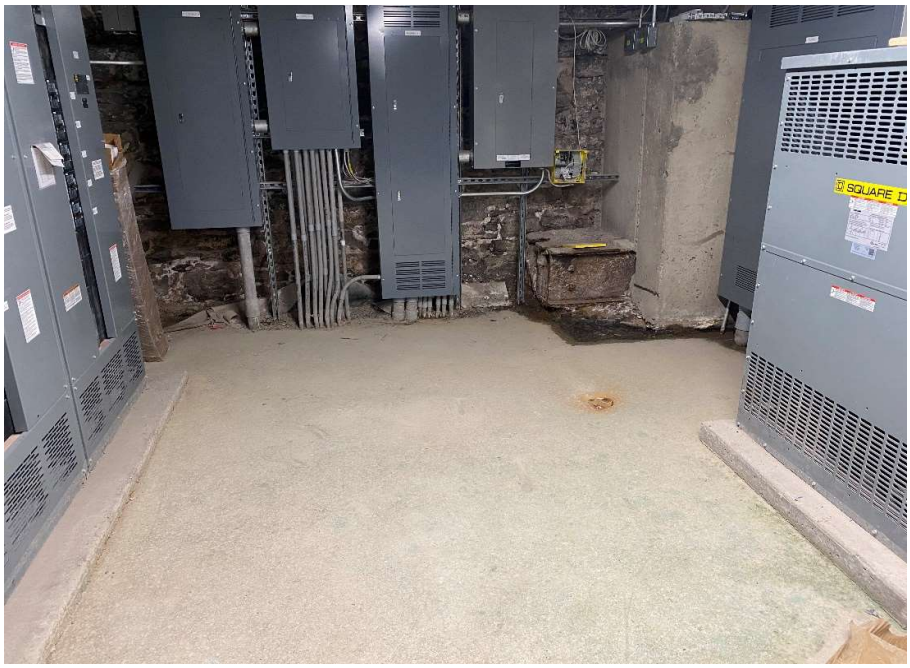


Photo No.	Date
10	04/24/24

Direction Photo Taken:
Interior

Description:
Annual Site Inspection:
Main hallway in basement.

Prepared By: TAB

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Emerson Huron, LLC	73-79 W. Huron Street Site (C915282)	B0441-022-001

Photo No.	Date
11	04/14/23

Direction Photo Taken:
West/Northwest

Description:
Annual Site Inspection:
Exterior elevated gymnasium addition façade on West Huron Street.

Photo No.	Date
12	04/04/23

Direction Photo Taken:
West

Description:
Annual Site Inspection:
Sidewalk along West Huron Street.

Prepared By: TAB

APPENDIX C

ASD System Inspection Sheets

ROUX

Monthly Log Sheet
Active Sub-Slab Depressurization System
MAG - 1

Emerson School,
73 - 79 West Huron Street Site,
Buffalo NY

Room B14

Date	Initials	Pressure Reading (inches of WC)	Time of Reading	Notes/Information
8/17/23	TAB	0.90	944	gave Penetrom to James + Kyle
9/18/23	G.C.	0.85	9:25	
10/18/23	G.C.	0.90	10:20	
11/22/23	G.C.	0.90	7:27	
12/18/23	G.C.	0.85	1:15	
1/23/24	G.C.	0.90	7:45	
2/16/24	G.C.	0.90	9:04 AM	
3/18/24	G.C.	0.90	1:14 PM	
4/17/24	G.C.	0.90	9:20 AM	
5/16/24	G.C.	0.90	9:08 AM	

ROUX

Monthly Log Sheet
Active Sub-Slab Depressurization System
MAG - ~~1~~ 2

Emerson School,
73 - 79 West Huron Street Site,
Buffalo NY

B7

Date	Initials	Pressure Reading (inches of WC)	Time of Reading	Notes/Information
10/18/23	[illegible]	1.90	10:20 AM	
11/22/23	[illegible]	1.90	7:29 AM	
12/15/23	[illegible]	1.90	1:15 pm	
1/23/24	[illegible]	1.90	7:40 AM	
2/16/24	[illegible]	1.90	9:01 AM	
3/18/24	[illegible]	1.70	1:12 PM	
4/17/24	[illegible]	1.85	9:22 AM	
5/16/24	[illegible]	1.25	9:05 AM	

APPENDIX D

GROUNDWATER ANALYTICAL DATA PACKAGE
&
FIELD SHEETS

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER WELL
PDB COLLECTION & RECOVERY LOG
(PASSIVE DIFFUSION BAG)

Project Name: Emerson School GWM
WELL NUMBER: HMW-1
Project Number:
Sample Matrix: ☒ GROUNDWATER ☐
Client:
Weather: Overcast mid 70's

WELL DATA:

Casing Diameter (inches):	2"	Casing Material:	PVC
Screened interval (fbTOR):	18'-8'	Screen Material:	PVC
Static Water Level (fbTOR):	11.17	Bottom Depth (fbTOR):	591.52
Elevation Top of Well Riser (fmsl):	609.52	Ground Surface Elevation (fmsl):	
Elevation Top of Screen (fmsl):	601.52	Stick-up (feet):	Flush mt

PDB DATA:

Depth of PDB in well (fbTOR):	594.52	Is PDB harness and line dedicated to sample location?	(yes) no
Condition of Well:	good	Is PDB located at center of screen?	yes (no)
Field Personnel:	TAB	~ 3.0' off of Bottom	

Installation:

Date of PDB placement.	7/27/23
Time of PDB placement:	907

Retrieval:

Date of PDB retrieval.	8/17/23
Time of PDB retrieval:	1023
Condition of PDB:	good

Disposal:

Remaining groundwater disposal method:

☐ GROUND SURFACE ☒ MOBILE CARBON UNIT
☐ CONTAINERIZED ☐ OTHER

If PDB contains visible sediment, check PDB integrity and re-sample.

COMMENTS:

PREPARED BY: TAB

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

GROUNDWATER WELL
PDB COLLECTION & RECOVERY LOG
(PASSIVE DIFFUSION BAG)

Project Name: Emerson School GWM
WELL NUMBER: HMW-2
Project Number:
Sample Matrix: ☐ GROUNDWATER ☐
Client:
Weather: Overcast mid 70's

WELL DATA:

Casing Diameter (inches):	2"	Casing Material:	PVC
Screened interval (fbTOR):	20-10'	Screen Material:	PVC
Static Water Level (fbTOR):	8.99	Bottom Depth (fbTOR):	586.75
Elevation Top of Well Riser (fmsl):	606.75	Ground Surface Elevation (fmsl):	
Elevation Top of Screen (fmsl):	596.75	Stick-up (feet):	Flushmount

PDB DATA:

Depth of PDB in well (fbTOR):	588.75	Is PDB harness and line dedicated to sample location?	(yes)	no
Condition of Well:	good	Is PDB located at center of screen?	yes	(no)
Field Personnel:	TAS	~ 3.0' off of B. Hose		

Installation:

Date of PDB placement.	7/27/23
Time of PDB placement:	935

Retrieval:

Date of PDB retrieval.	8/17/23
Time of PDB retrieval:	1039
Condition of PDB:	good

Disposal:

Remaining groundwater disposal method:

☐ GROUND SURFACE	☒ MOBILE CARBON UNIT
☐ CONTAINERIZED	☐ OTHER

If PDB contains visible sediment, check PDB integrity and re-sample.

COMMENTS:

PREPARED BY: TAS

BENCHMARK
ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER WELL
PDB COLLECTION & RECOVERY LOG
(PASSIVE DIFFUSION BAG)

Project Name: Emerson School
WELL NUMBER: HMW-3
Project Number:
Sample Matrix: ☐ GROUNDWATER ☐
Client:
Weather: Partly cloudy mid 70's

WELL DATA:

Casing Diameter (inches):	2"	Casing Material:	PVC
Screened interval (fbTOR):	18' - 8'	Screen Material:	PVC
Static Water Level (fbTOR):	8.79	Bottom Depth (fbTOR):	588.45
Elevation Top of Well Riser (fmsl):	606.43	Ground Surface Elevation (fmsl):	
Elevation Top of Screen (fmsl):	598.45	Stick-up (feet):	Flushmount

PDB DATA:

Depth of PDB in well (fbTOR):	592.45	Is PDB harness and line dedicated to sample location?	(yes)	no
Condition of Well:	good	Is PDB located at center of screen?	yes	(no)
Field Personnel:	TAB	~3.0' off C. of Bottom		

Installation:

Date of PDB placement.	7/22/23
Time of PDB placement:	1003

Retrieval:

Date of PDB retrieval.	8/17/23
Time of PDB retrieval:	1101
Condition of PDB:	good

Disposal:

Remaining groundwater disposal method:

☐ GROUND SURFACE ☒ MOBILE CARBON UNIT
☐ CONTAINERIZED ☐ OTHER

If PDB contains visible sediment, check PDB integrity and re-sample.

COMMENTS:

PREPARED BY: TAB

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

GROUNDWATER WELL
PDB COLLECTION & RECOVERY LOG
(PASSIVE DIFFUSION BAG)

Project Name: Emerson school
WELL NUMBER: HMW-4
Project Number:
~~Sample Matrix:~~ ☐ GROUNDWATER ☐
Client:
Weather: overcast low 70's

WELL DATA:

Casing Diameter (inches):	2"	Casing Material:	PVC
Screened interval (fbTOR):	18' - 8'	Screen Material:	PVC
Static Water Level (fbTOR):	9.18	Bottom Depth (fbTOR):	588.75
Elevation Top of Well Riser (fmsl):	606.75	Ground Surface Elevation (fmsl):	
Elevation Top of Screen (fmsl):	598.75	Stick-up (feet):	Flush mt

PDB DATA:

Depth of PDB in well (fbTOR):	592.75	Is PDB harness and line dedicated to sample location?	(yes)	no
Condition of Well:	Good	Is PDB located at center of screen?	yes	(no)
Field Personnel:	~~Good~~ TAB	~3.0' off Bottom		

Installation:

Date of PDB placement.	~~9/22/23~~ 7/22/23
Time of PDB placement:	945

Retrieval:

Date of PDB retrieval.	8/17/23 ~~8/17/27~~
Time of PDB retrieval:	1125
Condition of PDB:	good

Disposal:

Remaining groundwater disposal method:

☐ GROUND SURFACE ☑ MOBILE CARBON UNIT
☐ CONTAINERIZED ☐ OTHER

If PDB contains visible sediment, check PDB integrity and re-sample.

COMMENTS:

PREPARED BY: TAB

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER WELL
PDB COLLECTION & RECOVERY LOG
(PASSIVE DIFFUSION BAG)

Project Name: Emerson School GWM WELL NUMBER: MW-10

Project Number: Sample Matrix: ☒ GROUNDWATER ☐

Client: Weather: Overcast low 70's

WELL DATA:

Casing Diameter (inches):	4"	Casing Material:	PVC
Screened interval (fbTOR):	15' - 5'	Screen Material:	PVC
Static Water Level (fbTOR):	8.79	Bottom Depth (fbTOR):	591.44
Elevation Top of Well Riser (fmsl):	606.44	Ground Surface Elevation (fmsl):	
Elevation Top of Screen (fmsl):	601.44	Stick-up (feet):	Flush mt

PDB DATA:

Depth of PDB in well (fbTOR):	595.44	Is PDB harness and line dedicated to sample location?	yes	no
Condition of Well:	good	Is PDB located at center of screen?	yes	no
Field Personnel:	TAB	Bag is ~3.0' From Bottom		

Installation:

Date of PDB placement.	7/26/23
Time of PDB placement:	1616

Retrieval:

Date of PDB retrieval.	8/17/23
Time of PDB retrieval:	1085
Condition of PDB:	good

Disposal:

Remaining groundwater disposal method:

☐ GROUND SURFACE ☒ MOBILE CARBON UNIT

☐ CONTAINERIZED ☐ OTHER

If PDB contains visible sediment, check PDB integrity and re-sample.

COMMENTS:

PREPARED BY: TAB

BENCHMARK
ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER WELL
PDB COLLECTION & RECOVERY LOG
(PASSIVE DIFFUSION BAG)

Project Name: Emerson School
WELL NUMBER: HMW-6
Project Number:
Sample Matrix: ☐ GROUNDWATER ☐
Client:
Weather: Overcast Low 70's

WELL DATA:

Casing Diameter (inches):	2"	Casing Material:	PVC
Screened interval (fbTOR):	~~9.15~~ 18.-8	Screen Material:	PVC
Static Water Level (fbTOR):	9.15	Bottom Depth (fbTOR):	588.2
Elevation Top of Well Riser (fmsl):	606.20	Ground Surface Elevation (fmsl):	
Elevation Top of Screen (fmsl):	598.20	Stick-up (feet):	Flushmount

PDB DATA:

Depth of PDB in well (fbTOR):	592.20	Is PDB harness and line dedicated to sample location?	(yes) no
Condition of Well:	Good	Is PDB located at center of screen?	yes (no)
Field Personnel:	TAB	~3.0' off ~~of~~ of Bottom	

Installation:

Date of PDB placement.	7/27/23
Time of PDB placement:	1044

Retrieval:

Date of PDB retrieval.	8/17/23
Time of PDB retrieval:	1116
Condition of PDB:	Good

Disposal:

Remaining groundwater disposal method:

☐ GROUND SURFACE ☒ MOBILE CARBON UNIT
☐ CONTAINERIZED ☐ OTHER

If PDB contains visible sediment, check PDB integrity and re-sample.

COMMENTS:

PREPARED BY: TAB

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

SAMPLE COLLECTION LOG

PROJECT INFORMATION

Project Name: Emerdon School GWM
Project No.: B0441-023-001-001
Client: 73-79 W. Huron Street
Location: Buffalo, NY

SAMPLE DESCRIPTION

I.D.: **GSW-1**

Matrix: ☐ SURFACE WATER ☐ STORM ☐ SEEP ☑ GROUNDWATER ☑ INFLUENT ☐ EFFLUENT

SAMPLE INFORMATION

Date Collected: 8/17/23
Time Collected: 1015
Date Shipped to Lab:
Collected By: TAB

Sample Type: ☑ POINT ☐ GRAB ☐ COMPOSITE

Sample Collection Method: ☑ DIRECT DIP ☐ SS / POLY. DIPPER ☐ PERISTALTIC PUMP ☐ POLY. DISP. BAILER ☐ ISCO SAMPLER ☐ HYDROSLEEVE

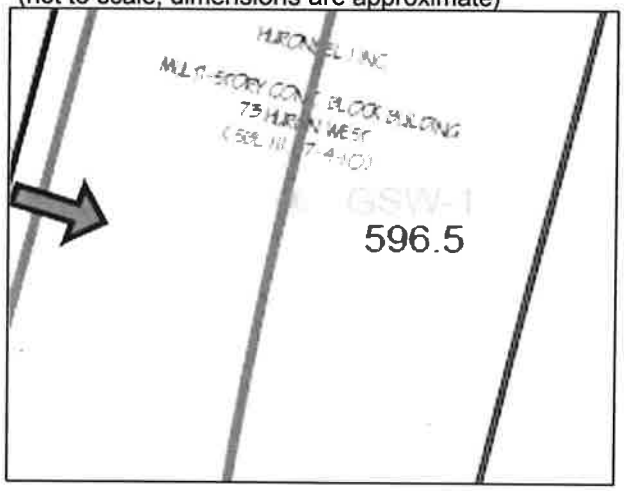
SAMPLING INFORMATION

Depth to Water:

Parameter	First	Last	Units
pH	7.37		units
Temp.	20.7		°C
Cond.	3186		mS
Turbidity	—		NTU
Eh / ORP	157		mV
D.O.	—		ppm
Odor	None		olfactory
Appearance	clear		visual

LOCATION SKETCH

(not to scale, dimensions are approximate)



SAMPLE DESCRIPTION (appearance, olfactory):

SAMPLE ANALYSIS (depth, laboratory analysis required):

ADDITIONAL REMARKS:

PREPARED BY: TAB **DATE:** 8/17/23

ANALYTICAL REPORT

Lab Number:	L2347872
Client:	Benchmark & Turnkey Companies 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Tom Forbes
Phone:	(716) 856-0599
Project Name:	EMERSON SCHOOL GWM
Project Number:	B0441-023-001-001-
Report Date:	08/31/23

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-023-001-001-

Lab Number: L2347872
Report Date: 08/31/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2347872-01	HMW-1	WATER	BUFFALO NY	08/17/23 10:23	08/17/23
L2347872-02	HMW-2	WATER	BUFFALO NY	08/17/23 10:39	08/17/23
L2347872-03	HMW-3	WATER	BUFFALO NY	08/17/23 11:01	08/17/23
L2347872-04	HMW-4	WATER	BUFFALO NY	08/17/23 11:25	08/17/23
L2347872-05	HMW-6	WATER	BUFFALO NY	08/17/23 11:16	08/17/23
L2347872-06	MW-10	WATER	BUFFALO NY	08/17/23 11:08	08/17/23
L2347872-07	GSW-1	WATER	BUFFALO NY	08/17/23 10:15	08/17/23

Project Name:	EMERSON SCHOOL GWM	**Lab Number:**	L2347872
Project Number:	B0441-023-001-001-	**Report Date:**	08/31/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	EMERSON SCHOOL GWM	**Lab Number:**	L2347872
Project Number:	B0441-023-001-001-	**Report Date:**	08/31/23

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Tiffani Morrissey - Tiffani Morrissey

Title: Technical Director/Representative Date: 08/31/23

ORGANICS

VOLATILES

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2347872

Project Number: B0441-023-001-001- **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347872-01
Client ID: HMW-1
Sample Location: BUFFALO NY

Date Collected: 08/17/23 10:23
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/23/23 09:42
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2347872

Project Number: B0441-023-001-001- **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347872-01 Date Collected: 08/17/23 10:23

Client ID: HMW-1 Date Received: 08/17/23

Sample Location: BUFFALO NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	12		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	84		70-130
Dibromofluoromethane	109		70-130

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2347872

Project Number: B0441-023-001-001- **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347872-02
Client ID: HMW-2
Sample Location: BUFFALO NY

Date Collected: 08/17/23 10:39
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/23/23 10:08
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2347872

Project Number: B0441-023-001-001- **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347872-02 Date Collected: 08/17/23 10:39

Client ID: HMW-2 Date Received: 08/17/23

Sample Location: BUFFALO NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	10		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	85		70-130
Dibromofluoromethane	109		70-130

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2347872

Project Number: B0441-023-001-001- **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347872-03 D
Client ID: HMW-3
Sample Location: BUFFALO NY

Date Collected: 08/17/23 11:01
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/23/23 10:33
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	12	3.5	5
1,1-Dichloroethane	ND		ug/l	12	3.5	5
Chloroform	ND		ug/l	12	3.5	5
Carbon tetrachloride	ND		ug/l	2.5	0.67	5
1,2-Dichloropropane	ND		ug/l	5.0	0.68	5
Dibromochloromethane	ND		ug/l	2.5	0.74	5
1,1,2-Trichloroethane	ND		ug/l	7.5	2.5	5
Tetrachloroethene	ND		ug/l	2.5	0.90	5
Chlorobenzene	ND		ug/l	12	3.5	5
Trichlorofluoromethane	ND		ug/l	12	3.5	5
1,2-Dichloroethane	ND		ug/l	2.5	0.66	5
1,1,1-Trichloroethane	ND		ug/l	12	3.5	5
Bromodichloromethane	ND		ug/l	2.5	0.96	5
trans-1,3-Dichloropropene	ND		ug/l	2.5	0.82	5
cis-1,3-Dichloropropene	ND		ug/l	2.5	0.72	5
Bromoform	ND		ug/l	10	3.2	5
1,1,2,2-Tetrachloroethane	ND		ug/l	2.5	0.84	5
Benzene	ND		ug/l	2.5	0.80	5
Toluene	110		ug/l	12	3.5	5
Ethylbenzene	320		ug/l	12	3.5	5
Chloromethane	ND		ug/l	12	3.5	5
Bromomethane	ND		ug/l	12	3.5	5
Vinyl chloride	ND		ug/l	5.0	0.36	5
Chloroethane	ND		ug/l	12	3.5	5
1,1-Dichloroethene	ND		ug/l	2.5	0.84	5
trans-1,2-Dichloroethene	ND		ug/l	12	3.5	5
Trichloroethene	ND		ug/l	2.5	0.88	5
1,2-Dichlorobenzene	ND		ug/l	12	3.5	5

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2347872

Project Number: B0441-023-001-001- **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347872-03 D Date Collected: 08/17/23 11:01

Client ID: HMW-3 Date Received: 08/17/23

Sample Location: BUFFALO NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	12	3.5	5
1,4-Dichlorobenzene	ND		ug/l	12	3.5	5
Methyl tert butyl ether	ND		ug/l	12	3.5	5
p/m-Xylene	960		ug/l	12	3.5	5
o-Xylene	10	J	ug/l	12	3.5	5
cis-1,2-Dichloroethene	ND		ug/l	12	3.5	5
Styrene	ND		ug/l	12	3.5	5
Dichlorodifluoromethane	ND		ug/l	25	5.0	5
Acetone	13	J	ug/l	25	7.3	5
Carbon disulfide	ND		ug/l	25	5.0	5
2-Butanone	ND		ug/l	25	9.7	5
4-Methyl-2-pentanone	ND		ug/l	25	5.0	5
2-Hexanone	ND		ug/l	25	5.0	5
Bromochloromethane	ND		ug/l	12	3.5	5
1,2-Dibromoethane	ND		ug/l	10	3.2	5
n-Butylbenzene	ND		ug/l	12	3.5	5
sec-Butylbenzene	ND		ug/l	12	3.5	5
1,2-Dibromo-3-chloropropane	ND		ug/l	12	3.5	5
Isopropylbenzene	11	J	ug/l	12	3.5	5
p-Isopropyltoluene	ND		ug/l	12	3.5	5
n-Propylbenzene	4.1	J	ug/l	12	3.5	5
1,2,3-Trichlorobenzene	ND		ug/l	12	3.5	5
1,2,4-Trichlorobenzene	ND		ug/l	12	3.5	5
1,3,5-Trimethylbenzene	73		ug/l	12	3.5	5
1,2,4-Trimethylbenzene	12		ug/l	12	3.5	5
Methyl Acetate	ND		ug/l	10	1.2	5
Cyclohexane	140		ug/l	50	1.4	5
1,4-Dioxane	ND		ug/l	1200	300	5
Freon-113	ND		ug/l	12	3.5	5
Methyl cyclohexane	12	J	ug/l	50	2.0	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	85		70-130
Dibromofluoromethane	97		70-130

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2347872

Project Number: B0441-023-001-001- **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347872-04
Client ID: HMW-4
Sample Location: BUFFALO NY

Date Collected: 08/17/23 11:25
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/23/23 10:57
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2347872

Project Number: B0441-023-001-001- **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347872-04 Date Collected: 08/17/23 11:25

Client ID: HMW-4 Date Received: 08/17/23

Sample Location: BUFFALO NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	11		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	87		70-130
Dibromofluoromethane	106		70-130

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2347872

Project Number: B0441-023-001-001- **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347872-05
Client ID: HMW-6
Sample Location: BUFFALO NY

Date Collected: 08/17/23 11:16
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/23/23 11:22
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2347872

Project Number: B0441-023-001-001- **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347872-05 Date Collected: 08/17/23 11:16

Client ID: HMW-6 Date Received: 08/17/23

Sample Location: BUFFALO NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	14		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	88		70-130
Dibromofluoromethane	111		70-130

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-023-001-001-
Lab Number: L2347872
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347872-06
Client ID: MW-10
Sample Location: BUFFALO NY

Date Collected: 08/17/23 11:08
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/23/23 11:47
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	1.1	J	ug/l	2.5	0.70	1
Ethylbenzene	8.4		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2347872

Project Number: B0441-023-001-001- **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347872-06 Date Collected: 08/17/23 11:08

Client ID: MW-10 Date Received: 08/17/23

Sample Location: BUFFALO NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	9.4		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	21		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	0.81	J	ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	1.5	J	ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	20		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	3.8	J	ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	84		70-130
Dibromofluoromethane	97		70-130

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-023-001-001-
Lab Number: L2347872
Report Date: 08/31/23

SAMPLE RESULTS

Lab ID: L2347872-07
Client ID: GSW-1
Sample Location: BUFFALO NY
Date Collected: 08/17/23 10:15
Date Received: 08/17/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 08/23/23 12:11
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	99		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	3.6		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2347872

Project Number: B0441-023-001-001- **Report Date:** 08/31/23

SAMPLE RESULTS

Lab ID: L2347872-07 Date Collected: 08/17/23 10:15

Client ID: GSW-1 Date Received: 08/17/23

Sample Location: BUFFALO NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	9.5		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	86		70-130
Dibromofluoromethane	107		70-130

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2347872

Project Number: B0441-023-001-001- **Report Date:** 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/23/23 09:18
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG1819403-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2347872

Project Number: B0441-023-001-001- **Report Date:** 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/23/23 09:18
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG1819403-5					
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Cyclohexane	ND		ug/l	10	0.27
1,4-Dioxane	ND		ug/l	250	61.
Freon-113	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.40

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-023-001-001-
Lab Number: L2347872
Report Date: 08/31/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/23/23 09:18
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG1819403-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	88		70-130
Dibromofluoromethane	109		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-023-001-001-

Lab Number: L2347872
Report Date: 08/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG1819403-3 WG1819403-4								
Methylene chloride	100		100		70-130	0		20
1,1-Dichloroethane	95		96		70-130	1		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	100		100		63-132	0		20
1,2-Dichloropropane	100		97		70-130	3		20
Dibromochloromethane	98		100		63-130	2		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	110		110		70-130	0		20
Chlorobenzene	110		100		75-130	10		20
Trichlorofluoromethane	110		110		62-150	0		20
1,2-Dichloroethane	89		94		70-130	5		20
1,1,1-Trichloroethane	100		100		67-130	0		20
Bromodichloromethane	100		100		67-130	0		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	100		110		70-130	10		20
Bromoform	93		96		54-136	3		20
1,1,2,2-Tetrachloroethane	110		110		67-130	0		20
Benzene	110		110		70-130	0		20
Toluene	110		110		70-130	0		20
Ethylbenzene	110		100		70-130	10		20
Chloromethane	120		120		64-130	0		20
Bromomethane	74		71		39-139	4		20
Vinyl chloride	100		100		55-140	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EMERSON SCHOOL GWM

Project Number: B0441-023-001-001-

Lab Number: L2347872

Report Date: 08/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG1819403-3 WG1819403-4								
Chloroethane	110		110		55-138	0		20
1,1-Dichloroethene	100		100		61-145	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	99		100		70-130	1		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	100		110		63-130	10		20
p/m-Xylene	110		105		70-130	5		20
o-Xylene	105		105		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Styrene	105		105		70-130	0		20
Dichlorodifluoromethane	110		110		36-147	0		20
Acetone	130		140		58-148	7		20
Carbon disulfide	110		100		51-130	10		20
2-Butanone	110		120		63-138	9		20
4-Methyl-2-pentanone	100		100		59-130	0		20
2-Hexanone	120		120		57-130	0		20
Bromochloromethane	110		110		70-130	0		20
1,2-Dibromoethane	100		100		70-130	0		20
n-Butylbenzene	96		97		53-136	1		20
sec-Butylbenzene	94		94		70-130	0		20
1,2-Dibromo-3-chloropropane	100		100		41-144	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EMERSON SCHOOL GWM

Project Number: B0441-023-001-001-

Lab Number: L2347872

Report Date: 08/31/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG1819403-3 WG1819403-4								
Isopropylbenzene	95		92		70-130	3		20
p-Isopropyltoluene	93		93		70-130	0		20
n-Propylbenzene	97		95		69-130	2		20
1,2,3-Trichlorobenzene	87		89		70-130	2		20
1,2,4-Trichlorobenzene	91		91		70-130	0		20
1,3,5-Trimethylbenzene	96		94		64-130	2		20
1,2,4-Trimethylbenzene	96		94		70-130	2		20
Methyl Acetate	130		**140**	Q	70-130	7		20
Cyclohexane	100		100		70-130	0		20
1,4-Dioxane	140		156		56-162	11		20
Freon-113	100		110		70-130	10		20
Methyl cyclohexane	110		100		70-130	10		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	91		98		70-130
Toluene-d8	104		105		70-130
4-Bromofluorobenzene	86		84		70-130
Dibromofluoromethane	103		104		70-130

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-023-001-001-

Lab Number: L2347872
Report Date: 08/31/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2347872-01A	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-01B	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-01C	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-02A	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-02B	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-02C	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-03A	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-03B	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-03C	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-04A	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-04B	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-04C	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-05A	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-05B	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-05C	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-06A	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-06B	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-06C	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-07A	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-07B	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)
L2347872-07C	Vial HCl preserved	A	NA		2.1	Y	Absent		NYTCL-8260-R2(14)

*Values in parentheses indicate holding time in days

Project Name:	EMERSON SCHOOL GWM	**Lab Number:**	L2347872
Project Number:	B0441-023-001-001-	**Report Date:**	08/31/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	EMERSON SCHOOL GWM	**Lab Number:**	L2347872
Project Number:	B0441-023-001-001-	**Report Date:**	08/31/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	EMERSON SCHOOL GWM	**Lab Number:**	L2347872
Project Number:	B0441-023-001-001-	**Report Date:**	08/31/23

Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	EMERSON SCHOOL GWM	**Lab Number:**	L2347872
Project Number:	B0441-023-001-001-	**Report Date:**	08/31/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 8/18/23

ALPHA Job #: L2347872

Client Information
Client: Roux Associates
Address: 2558 Hamburg Turnpike
Lackawanna NY 14218
Phone: (716) 818-8358
Fax:
Email:

Project Information
Project Name: Emerson School GWM
Project Location: Buffalo NY
Project # B0441-023-001-001-
(Use Project name as Project #)
Project Manager: Tom Forbes
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

8260 TCL+CP-51 VOC

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	8260	Sample Specific Comments	Total Bottle
47872-01	HMW-1	8/17/23	1023	Water	TAB	X		3
-02	HMW-2		1039			X		3
-03	HMW-3		1101			X		3
-04	HMW-4		1125			X		3
-05	HMW-8		1116			X		3
-06	MW-10		1108			X		3
-07	CSW-1		1015			X		3

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	V								
Preservative	B								

Relinquished By:	Date/Time	Received By:	Date/Time
	8/17/23 1300	Motley	8/17/23 1547
	8/17/23 1602		8/18/23 900

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

APPENDIX E

JUNE 2020 STATUS REPORT
FORMER SUNOCO SITE

MATRIX
ENVIRONMENTAL TECHNOLOGIES INC.
Remediation, Water Treatment and Environmental Engineering
716.662.0745 | www.matrixbiotech.com

June 26, 2020

Ms. Francine Gallego
NYSDEC Region 9
Division of Environmental Remediation
270 Michigan Avenue
Buffalo, New York 14203

Re: 2nd Quarter 2020 Site Status Report
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York 14202
DUNS #0000-1289
NYSDEC Spill #11-06834
Matrix Project #10-043

Dear Ms. Gallego:

Enclosed is the 2nd Quarter 2020 Site Status Report for the above-referenced site ("Site"). This report includes results of the groundwater sampling event performed on June 8, 2020.

With NYSDEC approval, the oxygen injection system was deactivated on September 4, 2019. Results of the 2nd quarter 2020 and fourth post-remediation sampling event indicate that groundwater volatile organic compound ("VOC") concentrations are non-detect or below the closure goal of 1 mg/L in all Site monitoring wells. Based on four consecutive quarters of groundwater samples below the closure goal, "no further action" status for Spill #11-06834 is requested.

Pending your approval of spill closure, the remediation infrastructure will be removed from the Site and all wells (monitoring, injection and vapor) will be decommissioned in accordance with NYSDEC guidelines. Should you have any questions or require further information, please contact the undersigned.

Sincerely,
Matrix Environmental Technologies Inc.

Steven L. Marchetti
Sr. Project Manager

Sean R. Carter, P.E.
Principal Engineer

Enclosure

cc: Amanda Kistler, Evergreen Resources Group, LLC
Kevin Dunleavy, Esq., Evergreen Resources Management Operations, a series of Evergreen Resources Group, LLC
Robert Knoer, Esq., The Knoer Group
Richard A. Moore, Esq.

QUARTERLY STATUS REPORT

2nd Quarter 2020
June 2020

Former Sunoco DUNS #0000-1289
181 Delaware Avenue
Buffalo, New York

Matrix Env. Project #10-043
Matrix Env. Project Manager: Steven L. Marchetti
NYSDEC Spill #11-06834
NYSDEC Contact: Francine Gallego

REMEDIATION INFORMATION: *Matrix Oxygen Injection System*

Equipment specifications: 80 SCFH, 32-point manifold
Injection point specifications: IP1-IP27: 1-inch ID SCH40 PVC
System Activated: October 14, 2011
System Deactivated: September 4, 2019

REMEDIATION DESCRIPTION

As a result of oxygen injection system operation and injection of sodium persulfate (Oxygen BioChem; "OBC") for *in situ* chemical oxidation (ISCO), groundwater VOC concentrations in the monitoring wells have decreased significantly in recent quarters. Approximately six months following system deactivation, dissolved oxygen (DO) and oxidation-reduction potential (ORP) levels in the monitoring wells have declined to background levels, averaging 4.2 mg/L and -32 mV respectively.

Based on four consecutive quarters of groundwater samples below the closure VOC goal of 1 mg/L, "no further action" status for Spill #11-06834 is requested.

SITE ACTIVITIES COMPLETED DURING PERIOD:

Date	Activities Completed
6/8/20	Quarterly groundwater sampling event. Groundwater monitoring included the measurement of DO, ORP, pH and temperature, and collection of groundwater samples for laboratory analysis of CP-51 List VOCs from all accessible monitoring wells.

SITE and ADJACENT PROPERTIES HISTORY:

(The 1st quarter report annually will include a complete Site History. The Site History is replaced with an abbreviated version in the 2nd, 3rd, and 4th quarter Site Status Report)

- 1889 – As indicated on an 1889 Sanborn Map, the Site, identified as 183 Delaware Avenue, was utilized as a dwelling. The properties listed as 73, 75, 79, 85, and 87 West Huron Street were also utilized as dwellings.

- 1899 – As indicated on an 1899 Sanborn Map, the Site, identified as 183 Delaware Avenue, remained a dwelling. The C.W. Miller Livery occupied 73-75 West Huron Street; 79, 85, and 87 West Huron remained dwellings.

- 1925 – As indicated on a 1925 Sanborn Map, the Site, identified as 183 Delaware Avenue, was utilized as a dwelling. 73-75 West Huron Street is identified as the Huron Garage and included one (1) gas tank (GT) near West Huron Street. 79 West Huron Street is identified as a gas station and included one (1) GT. 85 and 87 West Huron Street remained dwellings.

- May 2, 1931 (approx.) – A survey completed by the City of Buffalo Fire Department indicates the presence of one (1) 7,000-gallon, one (1) 1,000-gallon, two (2) unknown-volume tanks (all for gasoline storage), and six (6) pumps on the adjacent 77-79 West Huron Street property for the Huron Street Garage Corp. The tanks were installed in 1931. Notes on the survey indicate that the application for an additional 1,100-gallon capacity tank was disapproved on May 2, 1931.

- March 9, 1945 – A survey completed by the City of Buffalo Fire Department indicates the presence of four (4) tanks on the 75 West Huron Street property; one (1) 8,400-gallon, two (2) 1,000-gallon, and one (1) 550-gallon. The tanks were installed between 1930 and 1935, contained gasoline and alcohol, had a total capacity of 11,000 gallons, and were used for a commercial filling station. Six (6) pumps were located on the site; three inside the building. A hand drawn sketch on the back of the survey sheet identifies the location of 3 pumps inside the building, tank vents, tanks, and fill ports on the 75 West Huron Street property.

- 1951 – As indicated on a 1951 Sanborn Map, the Site, identified as 181 Delaware Avenue, was utilized as a filling station and contained four (4) GTs. 79 West Huron Street is identified as a gas station and included three (3) GTs. 73-75 West Huron Street was occupied by the Huron Garage with a capacity for 350 cars. Filling stations are identified south of the Site at 169 Delaware Avenue and southwest of the Site at 170 Delaware Avenue (with three GTs).

- January 3, 1955 – A Notice of Violations was issued from the Buffalo Fire Department Bureau of Fire Prevention to the Huron Street Garage at 75 West Huron Street to "provide mechanical ventilation for a grease pit 3rd floor, provide underground tank for waste oil, provide explosion proof bulbs for grease pit."

- July 17, 1963 – Buffalo Fire Department records indicate that one (1) 1,000-gallon tank for waste oil storage was replaced on the 73-77 West Huron Street property for the 75 West Huron Corp. The tank was for private use. A hand-drawn sketch on the back of the document identifies the location of the tank on the West Huron Street property.

- September 15, 1965 – Buffalo Fire Department records indicate the installation of one (1) 4,000-gallon capacity tank for diesel storage on the 75 West Huron Street property. The tank was installed for Hertz U Drive It and included one (1) pump. A hand-drawn sketch on the back of the document identifies the location of one (1) 4,000-gallon tank, pump island, shack, and existing waste oil tank.

- August 18, 1967 – A City of Buffalo Inter Departmental Correspondence states that there is a 1,000-gallon underground tank out of service on the 75 West Huron Street property. The correspondence states that the property owner will contact Mobil Gas for instructions and compliance.

- September 1, 1967 – the Buffalo Fire Department investigated the 75 West Huron Street property (Huron U-Drive It Corp) and determined instead that a 500-gallon gas tank was out

of use. The site assistant manager, Harry Sedler, will call Mobil Oil to inquire about replacing the tank.

- September 20, 1967 – Mobil Oil intends to replace the 500-gallon tank with a new 500-gallon tank at 75 West Huron Street.

- December 27, 1967 – Harry Sedler (misspelled "Settler") stated that Socony Oil (a.k.a. Mobil) has contracted a local contractor to complete the tank removal at 75 west Huron street according to contractor's availability.

- January 23, 1968 - Buffalo Fire Department Bureau of Fire Prevention records indicate that at 75 West Huron Street, one (1) 550-gallon capacity gasoline tank was installed and connected to one (1) pump. Permit #A39695 was issued for the work. Mobil Oil Co. is listed as the supplier. The words "Replace Leaker" are written on the bottom of the document. A hand-drawn sketch on the back of the document identifies the location of the tank.

- March 8, 1974 – Correspondence from Alvin Hyman, President of Huron U-Drive-It Corp. located at 75 West Huron Street to The Buffalo Sewer Authority states that "spillage of diesel fuel…will not occur in the future as our method of obtaining fuel has been altered. In the meantime, we have cleaned up the area in the street in front of our lot and are consulting with various paving companies concerning covering the affected area that might have presented a problem due to the spillage."

- March 13, 1974 – Buffalo Fire Department record indicates that four (4) USTs were removed from the 181 Delaware Ave. property. One (1) 4,000-gallon capacity, two (2) 3,000-gallon capacity, and one (1) 550-gallon capacity USTs were removed by Izzo Tank and Pump Co. A hand drawn sketch on the back of the document identifies the approximate locations of the USTs.

- 1980 - Stuart Gellman purchased the 181 Delaware Avenue Site from Sun Oil, Inc.

- February 6, 1980 – Correspondence from Joseph E. Hynes, Chief, Bureau of Fire Prevention, to Mr. Alvin Hyman, President of Huron U-Drive-It Corp., states that upon inspection of 75 West Huron Street, evidence of two abandoned gasoline tanks was found on the 75 West Huron Street property; one (1) 1,000-gallon capacity and one (1) 550-gallon capacity. Chief Hynes requested that the tanks be removed if they are out of service.

- February 29, 1980 – A document from the Bureau of Fire Prevention indicates that a Mr. Ray Duffy will decide whether he will remove two tanks on the 75 West Huron Street property or have them filled with concrete. The tanks in questions were reported "located in busy driveway and also under at least 10 inches of concrete and blacktop, so this office (Buffalo Fire Department Bureau of Fire Prevention) would consider allowing Mr. Duffy to have them filled with concrete if he so desires."

- October 2, 1980 – A City of Buffalo Fire Department document indicates the removal of two (2) tanks on the 75 West Huron property; one (1) 1,000-gallon capacity and one (1) 550-gallon capacity. The contractor performing the work is listed as Fleischmann Service Corp. of 74 Skillen Street, Buffalo, NY.

- 1981 – As indicated on the 1981 Sanborn Map, The Site and neighboring property to the east, 79 West Huron Street are no longer identified as filling stations.

- November 12, 1985 – Correspondence from C.A. Batt Construction Corp to Lt. Russ Knox, Buffalo Fire Department, indicates that three (3) underground petroleum storage tanks at the 75 West Huron Street property were removed by the Niagara Pump and Tank Division. The tanks capacities and contents were as follows; one (1) 8,000-gallon (unleaded gasoline); one (1) 4,000-gallon (diesel fuel); and one (1) 1,000-gallon (waste oil).

- June 28, 1993 – Enasco Inc. Environmental Services completed a Level I Environmental Report of the 75 West Huron Street property for Mr. Peter Burke, co-owner (at that time) of the property. Two (2), 275-gallon ASTs were observed on the first floor and 10 empty 55-gallon metal drums were observed on the fifth floor. The tanks were out of service and identified as "possibly empty and in good condition with no apparent leakage." Although City directories, which identified historical property use as a garage, and a 1925 Sanborn Map were reviewed, it was the opinion of Enasco that the "site carries a low probability of environmental risk."

- May 26, 1999 – Maxim Technologies Inc ("Maxim") completed a Phase I Environmental Site Assessment ("ESA") of the 75-77 West Huron Street property for Gautieri Development. The ESA included a summary of permits for the property obtained from the City of Buffalo Permit Department, which included permits for the installation of a 1,000-gallon waste oil tank, 4,000-gallon diesel tank, 550-gallon gasoline tank, and replacement of two (2) gasoline pumps. A summary of the City of Buffalo Fire Prevention Department UST records was also included and revealed nine records between 1931 and 1985 associated with the survey, installation, inspection, or removal of multiple USTs. It was the opinion of Maxim that recognized environmental concerns were present at the property; specifically, possible UST leakage and possible historic petroleum spillage. Maxim recommended that a Phase II ESA be completed.

- August 2001 – For use in a potential real estate transaction, Benchmark Environmental Engineering & Science, PLLC ("Benchmark") reviewed Sanborn Maps and excavated six (6) test pits in the parking lot of 75-77 West Huron Street property for the then-owner Huron Parking Services, Inc. No underground storage tanks or impacts to shallow soils were identified.

- June 10, 2003 – A Memo from Chief Robert J. Stasio, Fire Prevention Bureau, to Gary Ziolkowski, Director of Housing, indicated that, among other violations, gasoline is being illegally stored on the first floor of the 75 West Huron Street building.

- June 2003 - GeoEnvironmental, Inc. (GZA) performed a subsurface investigation at 75-79 West Huron on behalf of a prospective purchaser of the property via 10 soil borings throughout the parking lot. Multiple VOCs and SVOCs were detected in soil and groundwater at concentrations above NYSDEC guidance values/standards and resulted in the NYSDEC Spill #03-75208. The findings of the August 2001 Benchmark investigation and June 2003 GZA investigation were summarized by Benchmark in a document dated August 2003.

- September 2003 – Between September 17 and 29, 2003, Nature's Way Environmental Consultants (NWEC), at the request of NYSDEC, conducted a subsurface investigation at 181 Delaware via ten soil borings. Multiple VOCs were detected above guidance values in five of seven soil samples submitted for laboratory analysis.

- December 17, 2003 – Sunoco was notified by the NYSDEC that they have been identified as a potentially responsible party for the impacts discovered on 181 Delaware Avenue and 75-77 West Huron Street properties.

- May 2004 – March 2006 – GES, for Sunoco, supervised the installation of groundwater monitoring wells, completed soil and groundwater sampling and results analysis, and completed pilot testing for soil vapor extraction (SVE) and combined air sparging (AS)-SVE on the 181 Delaware Avenue property.

- January 2007 – GES collected three indoor ambient air samples from the basement of the Huron Garage building located at 73-79 West Huron Street and one outdoor air sample immediately adjacent to the garage building. Laboratory analysis of the air samples did not identify any impacts at the Huron Garage building.

- June 2007 - GES submitted a Remedial Action Plan (RAP) to the NYSDEC proposing the installation of an air-sparge (AS) and soil vapor extraction (SVE) system to address petroleum impacts. The main focus of the RAP was to remediate hydrocarbon impacts sourced from the 181 Delaware Avenue property. The footprint of the remedial system design included 181 Delaware Avenue and was extended onto a portion of the 75-77 West Huron Street property.

- August 13, 2007 – In correspondence from the NYSDEC to the Knoer Group, the NYSDEC stated that the 75-77 West Huron property "utilized underground storage tanks (USTs) to dispense fuel" and that "the former USTs contained gasoline which is the contamination of concern on both your client's (Hurondel) and the adjacent property at 181 Delaware. Given its past uses, the 75-77 West Huron property may have contributed to the contamination to be addressed by the RAP. As such, your client (Hurondel) could be considered a potentially responsible party for the spill."

- October 10, 2007 - NYSDEC approved the June 2007 RAP submitted by GES on behalf of Sunoco (to remediate impacts sourced from the 181 Delaware Avenue property).

- May-June 2008 - GES supervised the installation of air sparge wells SP-2 through SP-10, soil vapor extraction wells V-l and V-2, and installation of AS/SVE process piping. While trenching, two 1,500-gallon steel underground storage tanks (USTs) were encountered and, subsequently, closed in place at 181 Delaware Avenue. Ground-penetrating radar (GPR) and apparent conductivity surveys were also completed.

- July 14, 2008 - The SVE system was activated.

- August 28, 2008 - The AS system was activated.

- September 23, 2008 – Hydrocarbon vapors were detected in the 181 Delaware Avenue building as well as three neighboring buildings. The AS system was deactivated, and vapor mitigation activities were conducted at all affected buildings until ambient air PID readings in the buildings reduced to non-detect.

- November 30, 2009 - Following testing of the AS/SVE system, GES determined that the SVE system could not provide adequate vapor recovery while the AS was operating.

- December 7, 2009 – Since the SVE could not be used in conjunction with the AS and operating only the SVE resulted in little to no vapor recovery, the NYSDEC approved the deactivation of the SVE system. The SVE was deactivated.

- March 2010 – GES supervised the installation of groundwater monitoring well MW-12, horizontal soil vapor extraction laterals HSVE-l and HSVE-2, and completed a pilot test of in-situ technologies on the 181 Delaware Avenue property.

- March 2011 – METI supervised a Subsurface Investigation including the advancement of 18 soil borings, the installation of one (1) piezometer, and two (2) oxygen injection points. Details of the subsurface investigation were summarized in the Subsurface Investigation Results report[1].

- March 16, 2011 to April 19, 2011 – Bio-Trap® samplers from Microbial Insights, Inc. were deployed in monitoring wells MW2, MW7 and MW10 for an assessment of biodegradation potential.

- May 31, 2011 to June 20, 2011 – An oxygen injection pilot test was completed at injection points on the 181 Delaware Avenue property. Pilot test and Bio-Trap® results were summarized and presented in the 2011 RAP by METI. Also presented in the RAP was a summary of the historical use of the Site and neighboring properties to the east (73 & 77 West Huron Street) as filling stations, summary of tank permits issued for the properties, NYSDEC spill history summaries for the properties, and an evaluation of historical and recent soil and groundwater data for the properties with respect to potential plume sources. The evaluation suggested the existence of three plume sources; one on the 181 Delaware Avenue property, and two on the 77 West Huron Street property.

- July 1, 2011 to August 31, 2011 – A bioaugmentation and oxygen injection pilot test was completed in the vicinity of injection points IP1 and IP2 and monitoring well MW11. Details of the pilot test were summarized in the Remedial Action Plan Addendum.

- September 2, 2011 – Based on the data presented in the August 2011 RAP, the NYSDEC assigned a new spill number (11-06834) to impacts associated with 181 Delaware Avenue. The 75-77 West Huron property retained NYSDEC Spill #03-75208.

- October 3, 2011 to October 14, 2011 – Installation of a 32-point oxygen injection system and decommissioning of historical sparge and SVE wells on Site.

- October 14, 2011 – A full scale oxygen injection system was activated at the Site.

- October 19, 2011 to October 20, 2011 – Full scale bioaugmentation consisting of 13 biomass injections across the Site.

- December 20, 2012 – Approximately 60 pounds of concentrated diammonium phosphate was hydrated and applied to injection points across the Site. This process will continue on a monthly basis to stimulate bioremediation.

[1] "Subsurface Investigation Results, Former Sunoco Station, 181 Delaware Avenue, Buffalo, New York" prepared for Sunoco, Inc. (R&M) by METI, dated May 5, 2011.

- October 16, 2013 – The NYSDEC received a Brownfield Cleanup Program (BCP) application and a Site Investigation/Interim Remedial Measure Work Plan (SI/IRM WP) from Hurondel I, Inc. ("Hurondel") for 73-79 West Huron Street which is located directly east of the Site. The Hurondel property was assigned BCP ID #C915282.

- May 13, 2014 to June 23, 2014 – A source area dissolved oxygen (DO) drop test was conducted at the Site to evaluate the distribution of DO in the subsurface and the effects of altering current system operation parameters on groundwater contaminant concentrations.

- October 2, 2014 – The Hurondel site at 73-79 West Huron Street was accepted into the BCP as a "participant" after initially being denied as a "volunteer."

- November 3, 2014 – Sparge wells SP8, SP9, and SP10, vent wells V1, and V2, and groundwater monitoring wells MW8 and MW9, all located on the 77-79 West Huron Avenue property, were decommissioned. METI supervised Nothnagle Drilling Inc. for the over-drilling, removal of casing and grouting at each well location.

- March 9, 2015 – The excavation of soil at the Hurondel site began as part of their BCP activities; however, the site SI/IRM WP had not received NYSDEC approval at that time. Therefore, Hurondel performed the work at risk. The excavation was backfilled with clay and, for the most part, was completed on May 8, 2015. METI personnel observed the soil excavation activities on Sunoco's behalf.

- July 30, 2015 – Following four revisions, the Hurondel SI/IRM WP was approved by the NYSDEC; however, the majority of the IRM work had already been completed earlier in the year.

- April 4, 2016 – METI, on behalf of Sunoco, submitted a work plan to the NYSDEC to remove two (2) 1,500-gallon capacity USTs, and one (1) 500-gallon capacity unregistered UST at the Site. The work plan was approved by the NYSDEC on April 4, 2016 via email correspondence.

- April 6, 2016 – In accordance with the NYSDEC-approved work plan, METI deactivated injection points IP1-IP24 and began collecting groundwater samples from wells MW1R, MW3 (when accessible), MW5, and MW12 on a monthly basis to evaluate for matrix diffusion and monitor groundwater quality under static conditions.

- September 14, 2016 – The oxygen injection system was deactivated and removed from the Site in preparation of the removal of three (3) USTs.

- October 24 through November 3, 2016 – A total of five (5) USTs were removed from three areas of the Site; four (4) 1,000-gallon capacity and one (1) 550-gallon capacity. The 1,000-gallon USTs were single-walled steel construction and filled with concrete. The 550-gallon UST was single-walled construction and contained approximately 3-inches of fluid. A total of 707 tons of impacted soil was excavated from the vicinity of the USTs and disposed of at the Town of Tonawanda Landfill. Injection points IP2-4, IP7-8, IP14, and IP17, and the oxygen delivery piping to points IP5-6 and IP18 were destroyed during the remedial excavations. Well MW1R was also destroyed. A total of 1,200 pounds of powdered OBC (sodium persulfate and calcium peroxide) was applied to saturated soil in two excavations to oxidize and biodegrade residual VOCs.

- November 4, 2016 – The oxygen injection system was returned to the Site and injection points IP16, 19, 20, and 21-27 were reactivated.

- December 5, 2018 – Injection of OBC (sodium persulfate and calcium peroxide) was completed for *in situ* chemical oxidation.

- September 4, 2019 – The oxygen injection system was deactivated.

FUTURE ACTIVITIES

- Remove remediation system infrastructure and decommission groundwater monitoring wells, injection points and vapor monitoring points

CLOSURE GOALS & OBJECTIVES

The primary remedial goal is to reduce VOC concentrations in groundwater and saturated soils to within acceptable limits for spill inactive status associated with the release at 181 Delaware Avenue.

The specific objectives to meet the remedial goal include:

1. Reduce total STARS list VOC concentrations in groundwater to within 1 mg/L.

2. Reduce total STARS list VOC concentrations in soil to levels that no longer contribute to groundwater VOCs exceeding 1 mg/L.

EXPOSURE ASSESSMENT:

Potential Receptors:

- The monitoring program includes monthly vapor readings from the headspace of monitoring wells and vapor monitoring points near the onsite building. There have been no reported or detected vapor intrusion issues under the current remediation program.

Water Supply:

- Municipal source.

GENERAL GEOLOGY:

Based on subsurface investigations completed by METI, native soils at the Site consist of mostly fine-to-medium-grained sand with less than 20% silt and clay to at least 20 feet below grade; however, construction debris and fill material has been encountered at shallower depths in areas of the site. Bedrock was not encountered during subsurface investigations. The water table is present at approximately 7.5 to 10 feet below grade and historically slopes to the south-southeast. Hydrocarbon impacts in soil and groundwater have been identified and are greatest in the vicinity of monitoring well MW12.

MONITORING:

Well Specifications:	MW2 through MW-7, MW-9, MW-11, MW12: 4 -inch ID SCH40 PVC MW8: 2-inch SCH40 PVC
Gauging Frequency:	Quarterly
Groundwater Sampling Frequency and Analytical Method:	Quarterly, EPA Method 8260 CP-51 List
Laboratory Used:	VOC samples were submitted to Pace Laboratories, NYS TNI #10888. Samples for the evaluation of nutrient dosing were submitted to Test America, NYSDEC ELAP #10026.

PERMIT/LEGAL INFORMATION

- None.

LIST OF ATTACHMENTS

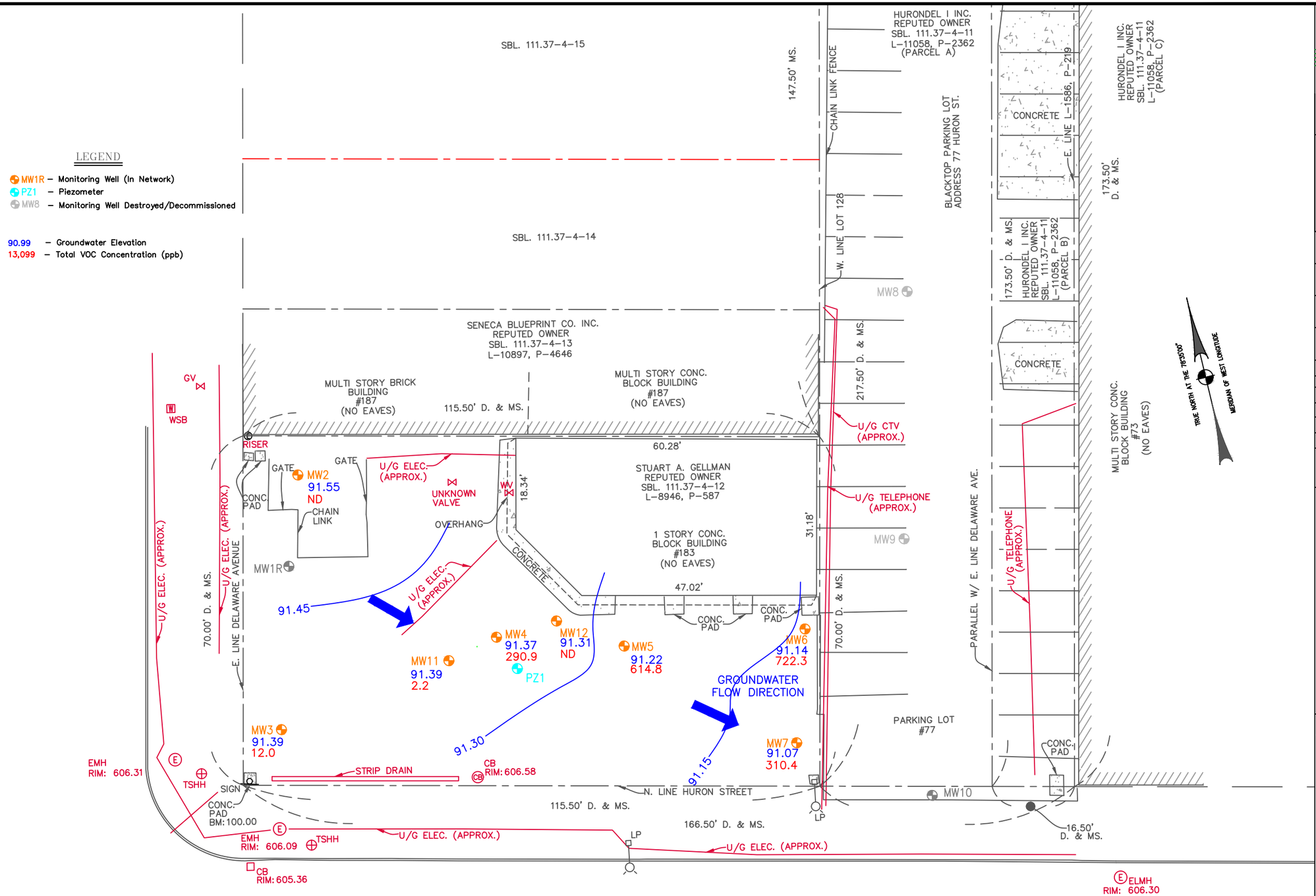
- Figure 1: Groundwater Elevations & Quality Summary

- Table 1: Historical Groundwater Data Summary
- Table 2: Groundwater Elevations
- Table 3: Groundwater VOC Data Summary
- Table 4: Dissolved Oxygen Concentrations in Monitoring Wells
- Table 5: Oxidation Reduction Potential in Monitoring Wells
- Table 6: Organic Vapor Meter Reading Summary
- Table 7: Post-Injection pH Data Summary

- Chart 1: Site Source Area Monitoring Wells
- Chart 2: Upgradient Monitoring Wells
- Chart 3: Downgradient Monitoring Wells
- Chart 4: Average Site DO
- Chart 5: Average Site ORP
- Chart 6: DO v. Groundwater Quality

- Appendix A: Laboratory Analytical Reports

FIGURES



Note: Site survey, "Boundary and Topographic Survey, 183 Delaware Avenue, Buffalo, New York", prepared by TVGA Consultants and dated May 16, 2011. **Unless specifically stated in writing, this drawing and the data presented is proprietary and the sole property of Matrix Environmental Technologies Inc (METI) and is for the expressed use of its client, or their designated representative, for the specific project/location identified on the drawing. All data and locations are for reference only and are not a guarantee of site conditions. This drawing may not be transferred, copied, or altered in any way, other than specified on the drawing, without written permission from METI. Any violation of this declaration will be at the user's risk entirely and without any risk or liability to METI.**

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PROJECT MGR: SLM

DESIGNED BY: HAA

REVIEWED BY: SLM

DRAWN BY: HAA

REVISION

DATE	BY
4/1/20	CMC
6/25/20	NSM

SCALE IN FEET: 1"=20'

0 20

PROJECT NAME / LOCATION

FORMER SUNOCO STATION
181 DELAWARE AVENUE
BUFFALO, NY

NYSDEC Spill #11-06834

TITLE

GROUNDWATER ELEVATIONS
& QUALITY SUMMARY

DATE: June 8, 2020

PROJECT NO.: 10-043

FIGURE: 1

25 years dedicated to a CLEANER ENVIRONMENT 1991-2016

TABLES

Table 1

Historical Groundwater Data Summary
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (µg/L)
MW1	06/19/2004	8.40	0.00	91.03	ND	148	583	2,936	3,667	ND	
99.43	10/31/2005	8.48	0.00	90.95	ND	12	64	400	476	ND	
	01/30/2006	8.19	0.00	91.24	ND	93	290	2,200	2,583	ND	
4-inch PVC	04/18/2006	8.52	0.00	90.91	ND	140	660	4,500	5,300	66	
Total Depth:	10/02/2006	8.31	0.00	91.12	1.0	180	610	3,900	4,691	ND	
18'	03/13/2007	8.47	0.00	90.96	ND	19	120	940	1,079	ND	
Screen Interval:	06/25/2007	8.68	0.00	90.75	ND	44	210	1,700	1,954	ND	
3-18'	11/30/2007	8.40	0.00	91.03	ND	18	150	660	828	ND	
	02/19/2008	8.41	0.00	91.02	ND	96	230	1,200	1,526	ND	
	05/27/2008	8.63	0.00	90.80	ND	130	220	1,900	2,250	ND	
	08/28/2008	5.50	0.00	93.93	ND	44	220	1,100	1,364	ND	
	11/24/2008	8.34	0.00	91.09	ND	ND	5.8	96.7	102.5	ND	
	02/11/2009	8.28	0.00	91.15	ND	19	102	506	627	ND	
Well removed on 10/26/09, replaced with MW-1R.	05/13/2009	8.33	0.00	91.10	ND	10.3	69.4	343	422.7	ND	
	08/19/2009	7.82	0.00	91.61	ND	15.3	48.1	363	426.4	ND	
MW1R	11/17/2009	8.76	0.00	90.36	ND	ND	165	2,020	2,185	ND	
99.12	02/23/2010	8.61	0.00	90.51	ND	ND	105	923	1,028	ND	
4-inch PVC	05/17/2010	8.55	0.00	90.57	ND	ND	48.3	617	665.3	ND	
Total Depth:	09/22/2010	8.78	0.00	90.34	ND	ND	83.9	671	754.9	ND	
15'	12/07/2010	8.42	0.00	90.70	ND	ND	9.5	184	193.5	ND	
Depth to Screen:	03/16/2011	7.95	0.00	91.17	ND<0.5	ND<0.7	5.0	48	53	ND<0.5	275
4.28'	06/22/2011	8.43	0.00	90.69	ND<0.50	ND<1.0	29.8	176.2	206	ND<1.0	596.5
99.52	09/08/2011	8.45	0.00	91.07	ND<2.5	ND<5.0	9.6	165	174.6	ND<5.0	978.3
100.18	12/01/2011	8.28	0.00	91.90	ND<0.50	ND<1.0	29.5	294	323.5	ND<1.0	1,235.1
	03/26/2012	8.33	0.00	91.85	ND<0.50	ND<1.0	12.2	67.9	80.1	ND<1.0	199.9
	06/25/2012	7.38	0.00	92.80	ND<0.50	ND<1.0	14.2	160.0	174.2	ND<1.0	848.0
	09/11/2012	8.43	0.00	91.75	ND<0.50	ND<1.0	17.6	193	210.6	ND<1.0	1,063.9
	12/13/2012	8.51	0.00	91.67	ND<0.50	ND<1.0	12.6	122	134.6	ND<1.0	459.2
	03/11/2013	8.16	0.00	92.02	ND<0.50	4.4	3.5	63.5	72.0	ND<1.0	240.8
	06/07/2013	7.57	0.00	92.61	ND<0.50	ND<1.0	42.0	139	181	ND<1.0	679.4
	09/16/2013	8.45	0.00	91.73	ND<0.50	ND<1.0	68.3	352	420	ND<1.0	1,680
	12/13/2013	7.88	0.00	92.30	ND<0.50	ND<1.0	1.7	26.3	28.0	ND<1.0	187
	03/24/2014	8.25	0.00	91.93	ND<0.50	ND<1.0	1.2	4.0	5.2	ND<1.0	33.1
	06/09/2014	8.45	0.00	91.73	ND<0.50	ND<1.0	51.6	164	216	ND<1.0	1,060
	09/12/2014	8.61	0.00	91.57	ND<2.5	ND<5.0	128.0	417	545	ND<5.0	1,386
	12/08/2014	8.46	0.00	91.72	ND<0.50	ND<1.0	ND<1.0	7.6	7.6	ND<1.0	47.0
	03/24/2015	9.42	0.00	90.76	ND<0.50	ND<1.0	47.5	191	239	ND<1.0	1,019
	06/25/2015	8.86	0.00	91.32	ND<2.0	ND<4.0	53.2	365	418	ND<4.0	1,717
	09/11/2015	9.26	0.00	90.92	ND<2.0	ND<4.0	91.6	467	559	ND<4.0	2,276
	12/04/2015	9.34	0.00	90.84	ND<2.5	ND<5.0	63.0	417	480	ND<5.0	1,803
	03/11/2016	8.73	0.00	91.45	ND<1.0	ND<1.0	108	204	312	ND<1.0	1,508
	06/23/2016	9.22	0.00	90.96	ND<1.0	ND<1.0	35.4	170	206	ND<1.0	1,040
	09/28/2016	8.93	0.00	91.25	ND<1.0	ND<1.0	67.7	380	448	ND<1.0	1,730
	Well Destroyed										

Table 1 (Continued)

Historical Groundwater Data Summary
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (µg/L)
MW2	06/19/2004	8.67	0.00	91.17	32	ND	ND	ND	32	ND	
99.84	10/31/2005	8.74	0.00	91.10	ND	ND	ND	ND	ND	ND	
	01/30/2006	8.46	0.00	91.38	ND	ND	ND	ND	ND	ND	
4-inch PVC	04/18/2006	8.77	0.00	91.07	ND	9.1	ND	7.7	16.8	25	
Total Depth:	10/02/2006	8.60	0.00	91.24	ND	ND	ND	ND	ND	ND	
20'	03/13/2007	8.73	0.00	91.11	ND	ND	ND	ND	ND	ND	
Depth to Screen:	06/25/2007	8.91	0.00	90.93	ND	ND	ND	ND	ND	ND	
7.38'	11/30/2007	8.70	0.00	91.14	ND	ND	ND	ND	ND	ND	
	02/19/2008	8.60	0.00	91.24	ND	ND	ND	5.7	5.7	ND	
	05/27/2008	8.89	0.00	90.95	ND	ND	ND	ND	ND	ND	
	08/28/2008	6.01	0.00	93.83	ND	ND	ND	ND	ND	ND	
	11/24/2008	9.18	0.00	90.66	ND	ND	ND	ND	ND	ND	
	02/11/2009	8.70	0.00	91.14	ND	ND	ND	ND	ND	ND	
	05/13/2009	8.80	0.00	91.04	ND	ND	ND	ND	ND	ND	
	08/19/2009	8.37	0.00	91.47	ND	ND	ND	ND	ND	ND	
	11/17/2009	8.98	0.00	90.86	ND	ND	ND	ND	ND	ND	
	02/23/2010	8.87	0.00	90.97	ND	ND	ND	ND	ND	ND	
	05/17/2010	8.75	0.00	91.09	ND	ND	ND	ND	ND	ND	
	09/22/2010	8.99	0.00	90.85	ND	ND	ND	ND	ND	ND	
	12/07/2010	8.64	0.00	91.20	ND	ND	ND	ND	ND	ND	
	03/16/2011	8.26	0.00	91.58	ND<0.5	ND<0.7	ND<0.8	ND<1.6	ND	ND<0.5	ND
	06/22/2011	8.70	0.00	91.14	ND<0.5	ND<1..0	ND<1.0	ND<1.0	ND	ND<1.0	ND
	09/08/2011	8.71	0.00	91.13	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND	ND<1.0	ND
100.74	12/01/2011	8.70	0.00	92.04	ND<0.5	ND<1.0	ND<1.0	3.0	3	ND<1.0	44
	03/26/2012	8.83	0.00	91.91	ND<0.50	ND<1.0	ND<1.0	ND<1.0	ND	ND<1.0	5.9
	06/25/2012	8.91	0.00	91.83	ND<0.50	ND<1.0	ND<1.0	ND<1.0	ND	3	ND
	09/11/2012	8.88	0.00	91.86	ND<0.50	ND<1.0	ND<1.0	3.2	3.2	ND<1.0	34.3
	12/13/2012	9.02	0.00	91.72	ND<0.50	ND<1.0	ND<1.0	13.7	13.7	ND<1.0	130.5
	03/11/2013	8.75	0.00	91.99	ND<0.50	2	1	12.9	15.9	ND<1.0	87.4
	06/07/2013	8.52	0.00	92.22	ND<0.50	ND<1.0	ND<1.0	5.1	7.6	ND<1.0	26.8
	09/16/2013	8.94	0.00	91.80	ND<0.50	ND<1.0	ND<1.0	4.5	4.5	ND<1.0	40.3
	12/13/2013	8.89	0.00	91.85	ND<0.50	ND<1.0	ND<1.0	7.1	7.1	ND<1.0	30.6
	03/24/2014	8.75	0.00	91.99	ND<0.50	ND<1.0	ND<1.0	4.1	4.1	ND<1.0	38.3
	06/09/2014	8.86	0.00	91.88	ND<0.50	ND<1.0	ND<1.0	4.0	4.0	ND<1.0	9.0
	09/12/2014	9.10	0.00	91.64	ND<0.50	ND<1.0	ND<1.0	2.3	2.3	ND<1.0	2.3
	12/08/2014	9.02	0.00	91.72	ND<0.50	ND<1.0	ND<1.0	1.3	1.3	ND<1.0	1.3
	03/24/2015	9.95	0.00	90.79	ND<0.50	ND<1.0	ND<1.0	1.4	1.4	ND<1.0	8.0
	06/25/2015	9.40	0.00	91.34	ND<0.50	ND<1.0	0.38	4.8	5.2	ND<1.0	16.0
	09/11/2015	9.74	0.00	91.00	ND<0.50	ND<1.0	ND<1.0	1.6	1.6	ND<1.0	10.8
	12/04/2015	9.85	0.00	90.89	ND<0.50	ND<1.0	ND<1.0	2.4	2.4	ND<1.0	5.5
	03/11/2016	9.28	0.00	91.46	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	4.1
	06/23/2016	9.74	0.00	91.00	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	5.2
	09/28/2016	9.40	0.00	91.34	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	7.1
	12/01/2016	9.48	0.00	91.26	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	1.1
	03/23/2017	9.40	0.00	91.34	ND<1.0	ND<1.0	ND<1.0	6.2	6.2	ND<1.0	7.5
	06/23/2017	9.28	0.00	91.46	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	09/22/2017	9.65	0.00	91.09	ND<1.0	ND<1.0	ND<1.0	11.9	11.9	ND<1.0	15.0
	12/08/2017	9.48	0.00	91.26	ND<1.0	ND<1.0	ND<1.0	6.7	6.7	ND<1.0	13.1
	03/26/2018	9.39	0.00	91.35	ND<1.0	ND<1.0	ND<1.0	28.7	28.7	ND<1.0	45.5
	06/22/2018	9.49	0.00	91.25	ND<1.0	ND<1.0	ND<1.0	8.7	8.7	ND<1.0	14.9
	09/25/2018	9.63	0.00	91.11	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	5.2
	12/13/2018	9.19	0.00	91.55	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	03/21/2019	9.47	0.00	91.27	ND<1.0	ND<1.0	ND<1.0	5.2	5.2	ND<1.0	7.6
	06/07/2019	9.56	0.00	91.18	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	5.8
	09/18/2019	9.40	0.00	91.34	ND<1.0	ND<1.0	ND<1.0	1.2	1.2	ND<1.0	5.3
	12/31/2019	9.13	0.00	91.61	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	03/25/2020	9.36	0.00	91.38	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	06/08/2020	**9.19**	**0.00**	**91.55**	**ND<1.0**	**ND<1.0**	**ND<1.0**	**ND<2.0**	**ND**	**ND<1.0**	**ND**

Table 1 (Continued)

Historical Groundwater Data Summary
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (µg/L)
MW3	06/19/2004	7.81	0.00	90.97	ND	ND	ND	7,250	7,250	ND	
98.78	10/31/2005	NG	0.00	NG	NS	NS	NS	NS	NS	NS	
	01/30/2006	7.63	0.00	91.15	ND	3.9	220	470	693.9	ND	
4-inch PVC	04/18/2006	7.91	0.00	90.87	ND	9.4	750	3,400	4,159	ND	
Total Depth:	10/02/2006	7.75	0.00	91.03	ND	4.4	390	1,500	1,894	ND	
20'	03/13/2007	7.98	0.00	90.80	ND	17	980	4,500	5,497	ND	
Depth to Screen:	06/25/2007	8.18	0.00	90.60	ND	8.6	780	3,100	3,889	ND	
8.06'	11/30/2007	7.86	0.00	90.92	ND	18	1,200	3,400	4,618	ND	
	02/19/2008	7.71	0.00	91.07	ND	ND	36	61	97	ND	
	05/27/2008	8.11	0.00	90.67	ND	ND	13	22	35	ND	
	08/28/2008	7.97	0.00	90.81	29	97	930	6,500	7,556	ND	
	11/24/2008	8.28	0.00	90.50	5.7	5.0	16.1	240	267	ND	
	02/11/2009	7.73	0.00	91.05	ND	12	307	529	848	ND	
	05/13/2009	8.89	0.00	89.89	ND	ND	333	424	757	ND	
	08/19/2009	7.87	0.00	90.91	ND	10.5	1,520	3,330	4,861	ND	
	11/17/2009	8.19	0.00	90.59	ND	9.3	1,070	2,880	3,959	ND	
	02/23/2010	8.01	0.00	90.77	ND	13.2	1,370	4,940	6,323	ND	
	05/17/2010	7.95	0.00	90.83	ND	9.0	1,070	3,690	4,769	ND	
	09/22/2010	8.17	0.00	90.61	ND	6.6	373	978	1,358	ND	
	12/07/2010	7.79	0.00	90.99	ND	28.9	1,480	3,780	5,289	ND	
	03/16/2011	7.28	0.00	91.50	1.0	12.0	1,000	1,340	2,353	ND<1.0	3,806
	06/22/2011	7.80	0.00	90.98	1.2	10.5	786	1,810	2,608	ND<1.0	3,611
	09/08/2011	7.85	0.00	90.93	ND<10	92.7	1,880	7,360	9,333	ND<20	11,291
99.39	12/01/2011	7.29	0.00	92.10	ND<0.50	26.3	831	5,690	6,547	ND<1.0	8,655
	03/26/2012	7.25	0.00	92.14	ND<5.0	27.0	1,010	6,540	7,577	ND<10	9,405
	06/25/2012	7.66	0.00	91.73	ND<5.0	19.8	1,170	6,740	7,930	ND<10	10,711
	09/11/2012	7.71	0.00	91.68	ND<5.0	ND<10	487	3,560	4,047	ND<10	6,068
	12/13/2012	7.82	0.00	91.57	ND<0.50	5.0	670	4,070	4,745	ND<1.0	6,840
	03/11/2003	7.38	0.00	92.01	ND<0.10	ND<0.20	573	3,560	4,133	ND<2.0	5,394
	06/07/2013	7.29	0.00	92.10	ND<2.0	4.3	1,220	3,760	4,984	ND<4.0	7,058
	09/16/2013	NG	0.00	NG	NSI	NSI	NSI	NSI	NSI	NSI	NSI
	12/13/2013	7.87	0.00	91.52	ND<1.0	ND<2.0	244	973	1,217	ND<2.0	2,098
	03/24/2014	7.50	0.00	91.89	ND<0.50	ND<1.0	123	616	739	ND<1.0	1,181
	06/09/2014	NG	0.00	NG	NSI	NSI	NSI	NSI	NSI	NSI	NSI
	09/12/2014	7.81	0.00	91.58	ND<0.50	ND<1.0	124	339	463	ND<1.0	648
	12/08/2014	7.70	0.00	91.69	ND<0.50	1.2	244	765	1,010	ND<1.0	1,408
	03/24/2015	8.70	0.00	90.69	ND<0.50	ND<1.0	309	971	1,280	ND<1.0	1,792
	06/25/2015	NG	0.00	NG	NSI	NSI	NSI	NSI	NSI	NSI	NSI
	09/11/2015	7.98	0.00	91.41	ND<2.5	ND<5.0	274	463	737	ND<5.0	835
	12/04/2015	8.69	0.00	90.70	ND<1.0	ND<2.0	194	837	1,031	ND<2.0	1,398
	03/11/2016	7.99	0.00	91.40	ND<1.0	ND<1.0	1.5	8.1	9.6	ND<1.0	13.4
	06/23/2016	8.53	0.00	90.86	ND<1.0	ND<1.0	528	1,709	2,237	ND<1.0	2,876
	09/28/2016	8.24	0.00	91.15	ND<1.0	ND<1.0	464	580	1,044	ND<1.0	1,651
	12/01/2016	8.30	0.00	91.09	ND<1.0	ND<1.0	294	262	556	ND<1.0	923
	03/23/2017	NG	0.00	NG	NSI	NSI	NSI	NSI	NSI	NSI	NSI
	06/23/2017	8.09	0.00	91.30	ND<1.0	ND<1.0	316	597	913	ND<1.0	1,205
	09/22/2017	NG	0.00	NG	NSI	NSI	NSI	NSI	NSI	NSI	NSI
	12/08/2017	NG	0.00	NG	NSI	NSI	NSI	NSI	NSI	NSI	NSI
	03/26/2018	NG	0.00	NG	NSI	NSI	NSI	NSI	NSI	NSI	NSI
	07/26/2018	NG	0.00	NG	ND<1.0	ND<1.0	314	649	963	ND<1.0	1,381
	09/25/2018	8.44	0.00	90.95	ND<1.0	ND<1.0	529	1,403	1,932	ND<1.0	2,883
	12/19/2018	8.15	0.00	91.24	6.2	ND<1.0	ND<1.0	ND<2.0	6.2	ND<1.0	6.2
	04/18/2019	7.99	0.00	91.40	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND	ND
	07/11/2019	NG	0.00	NG	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND	ND
	10/10/2019	NG	0.00	NG	1.6	ND<1.0	ND<1.0	ND<2.0	1.6	ND<1.0	1.6
	12/31/2019	8.11	0.00	91.28	ND<1.0	ND<1.0	2.2	2.6	4.8	ND<1.0	6.1
	03/25/2020	8.15	0.00	91.24	ND<1.0	ND<1.0	3.4	33.8	37.2	ND<1.0	48.0
	06/08/2020	**8.00**	**0.00**	**91.39**	**ND<1.0**	**ND<1.0**	**2.6**	**9.4**	**12.0**	**ND<1.0**	**12.0**

Table 1 (Continued)

Historical Groundwater Data Summary
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (µg/L)
MW4	06/19/2004	8.47	0.00	90.93	286	4,630	2,120	8,920	15,956	ND	
99.40	10/31/2005	8.52	0.00	90.88	300	1,600	1,100	8,600	11,600	ND	
	01/30/2006	8.31	0.01	91.10	NSP	NSP	NSP	NSP	NSP	NSP	
4-inch PVC	04/18/2006	8.57	0.00	90.83	390	1,900	1,800	7,900	11,990	ND	
Total Depth:	10/02/2006	8.33	0.02	91.09	NSP	NSP	NSP	NSP	NSP	NSP	
20'	03/13/2007	8.39	0.24	91.20	NSP	NSP	NSP	NSP	NSP	NSP	
Depth to Screen:	06/25/2007	9.00	0.31	90.65	NSP	NSP	NSP	NSP	NSP	NSP	
8.63'	11/30/2007	8.23	0.18	91.31	NSP	NSP	NSP	NSP	NSP	NSP	
	02/19/2008	8.43	0.02	90.99	NSP	NSP	NSP	NSP	NSP	NSP	
	05/27/2008	8.61	0.00	90.79	120	1,300	3,300	16,000	20,720	ND	
	08/28/2008	4.73	0.00	94.67	390	2,600	3,100	14,000	20,090	ND	
	11/24/2008	8.90	0.00	90.50	29.4	640	2,540	10,900	14,109	ND	
	02/11/2009	8.40	0.00	91.00	22.5	275	1,820	5,490	7,608	ND	
	05/13/2009	8.58	0.00	90.82	25.6	212	1,920	4,660	6,818	ND	
	08/19/2009	8.57	0.00	90.83	23.9	372	2,280	6,870	9,546	ND	
	11/17/2009	8.96	0.00	90.44	ND	304	1,060	2,650	4,014	ND	
	02/23/2010	8.83	0.00	90.57	ND	277	984	2,860	4,121	ND	
	05/17/2010	8.60	0.00	90.80	7.9	489	1,180	4,010	5,687	ND	
	09/22/2010	8.80	0.00	90.60	7.6	294	1,220	3,550	5,072	ND	
	12/07/2010	8.53	0.00	90.87	34.6	677	1,510	4,030	6,252	ND	
	03/16/2011	8.03	0.00	91.37	35.0	770	2,600	6,400	9,805	ND<3.0	12,895
	06/22/2011	8.46	0.00	90.94	22.7	766	2,280	5,990	9,059	ND<1.0	12,711
99.45	09/08/2011	8.52	0.00	90.88	29.7	764	1,670	4,980	7,444	ND<10	9,404
100.21	12/01/2011	8.37	0.02	91.84	16.1	801	1,280	9,040	11,137	ND<1.0	17,336
	03/26/2012	8.49	0.00	91.72	ND<10	848	839	8,490	10,177	ND<20	14,201
	06/25/2012	8.63	0.00	91.58	ND<10	915	1,280	8,630	10,825	ND<20	14,593
	09/11/2012	7.85	0.00	92.36	ND<5.0	332	666	5,900	6,898	ND<10	10,806
	12/13/2012	8.64	0.00	91.57	ND<0.50	98.5	54.2	4,970	5,123	ND<1.0	11,286
	03/11/2013	8.40	0.00	91.81	ND<0.25	108.0	403.0	5,510	6,021	ND<50	11,695
	06/07/2013	8.19	0.00	92.02	ND<10	54.4	658.0	7,560	8,272	ND<20	11,326
	09/16/2013	8.64	0.00	91.57	ND<0.50	7.7	167	1,140	1,315	ND<1.0	2,015
	12/13/2013	8.49	0.00	91.72	ND<0.50	1.3	7.4	41.9	50.6	ND<1.0	66.7
	03/24/2014	8.45	0.00	91.76	ND<0.50	4.2	65.4	631	701	ND<1.0	1,077
	06/09/2014	8.42	0.00	91.79	ND<0.50	2.7	27.8	342	373	ND<1.0	584
	09/12/2014	8.79	0.00	91.42	ND<0.50	ND<1.0	15.7	236	252	ND<1.0	468
	12/08/2014	8.69	0.00	91.52	ND<0.50	2.7	27.4	329	359	ND<1.0	646
	03/24/2015	9.69	0.00	90.52	ND<0.50	ND<1.0	5.0	67	72	ND<1.0	157
	06/25/2015	9.08	0.00	91.13	ND<0.50	2.5	15.7	162	180	ND<1.0	383
	09/11/2015	9.35	0.00	90.86	ND<0.50	0.56	12.3	105	118	ND<1.0	435
	12/04/2015	9.54	0.00	90.67	ND<0.50	ND<1.0	12.8	152	165	ND<1.0	718
	03/11/2016	8.94	0.00	91.27	ND<1.0	ND<1.0	2.5	69	71	ND<1.0	193
	06/23/2016	9.36	0.00	90.85	ND<1.0	31.5	108	81.1	221	ND<1.0	721
	09/28/2016	9.08	0.00	91.13	ND<1.0	23.4	53.1	44.3	121	ND<1.0	455
	12/01/2016	9.51	0.00	90.70	ND<1.0	1.1	2.1	93.0	96.2	ND<1.0	363
	03/23/2017	9.05	0.00	91.16	ND<1.0	ND<1.0	ND<1.0	5.9	5.9	ND<1.0	16.5
	06/23/2017	8.88	0.00	91.33	ND<1.0	7.1	31.7	92.8	131.6	ND<1.0	283
	09/22/2017	9.28	0.00	90.93	ND<1.0	ND<1.0	ND<1.0	7.4	7.4	ND<1.0	79.7
	12/08/2017	9.15	0.00	91.06	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	2.3
	03/26/2018	9.06	0.00	91.15	ND<1.0	ND<1.0	ND<1.0	19.8	19.8	ND<1.0	46.0
	06/22/2018	9.17	0.00	91.04	ND<1.0	20.6	21.4	64.9	106.9	ND<1.0	134.2
	09/25/2018	9.30	0.00	90.91	ND<1.0	ND<1.0	9.4	1.0	10.4	ND<1.0	69.3
	12/13/2018	8.78	0.00	91.43	ND<1.0	ND<1.0	1.8	5.1	6.9	ND<1.0	13.3
	03/21/2019	9.18	0.00	91.03	ND<1.0	ND<1.0	ND<1.0	7.8	7.8	ND<1.0	17.1
	06/07/2019	9.16	0.00	91.05	ND<1.0	10.0	20.9	48.2	79.1	ND<1.0	162.7
	09/18/2019	9.06	0.00	91.15	ND<1.0	5.2	22.4	21.9	49.5	ND<1.0	171.2
	12/31/2019	8.95	0.00	91.26	ND<1.0	3.3	13.7	25.2	42.2	ND<1.0	77.0
	03/25/2020	9.02	0.00	91.19	ND<1.0	27.2	30.3	193	250	ND<1.0	418
	06/08/2020	**8.84**	**0.00**	**91.37**	**ND<1.0**	**26.5**	**73.6**	**30**	**130**	**ND<1.0**	**290.9**

Table 1 (Continued)

Historical Groundwater Data Summary
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (µg/L)
MW5	06/19/2004	8.64	0.00	90.92	ND	2,940	2,030	7,870	12,840	ND	
99.56	10/31/2005	8.72	0.00	90.84	ND	220	390	670	1,280	ND	
	01/30/2006	8.51	0.00	91.05	10	2,100	1,300	4,700	8,110	ND	
4-inch PVC	04/18/2006	8.72	0.00	90.84	ND	1,200	780	2,700	4,680	ND	
Total Depth:	10/02/2006	8.55	0.00	91.01	2.7	810	650	2,200	3,663	ND	
20'	03/13/2007	8.71	0.00	90.85	ND	1,700	950	4,200	6,850	ND	
Depth to Screen:	06/25/2007	9.38	0.00	90.18	ND	1,200	910	3,200	5,310	ND	
8.58'	11/30/2007	8.70	0.00	90.86	ND	780	970	2,400	4,150	ND	
	02/19/2008	8.63	0.00	90.93	ND	870	390	1,100	2,360	ND	
	05/27/2008	8.85	0.00	90.71	ND	1,900	1,400	4,200	7,500	ND	
	08/28/2008	2.62	0.00	96.94	ND	63	61	200	324	ND	
	11/24/2008	9.02	0.00	90.54	ND	27.6	45.8	104	177.4	ND	
	02/11/2009	8.64	0.00	90.92	ND	614	393	918	1,925	ND	
	05/13/2009	8.72	0.00	90.84	ND	885	1,350	3,740	5,975	ND	
	08/19/2009	8.69	0.00	90.87	ND	1,750	1,560	3,970	7,280	ND	
	11/17/2009	9.01	0.00	90.55	ND	2,390	1,360	4,570	8,320	ND	
	02/23/2010	8.90	0.00	90.66	ND	2,300	1,550	5,810	9,660	ND	
	05/17/2010	8.72	0.00	90.84	ND	1,260	1,080	3,840	6,180	ND	
	09/22/2010	8.97	0.00	90.59	ND	1,100	322	944	2,366	ND	
	12/07/2010	8.60	0.00	90.96	ND	1,440	1,250	4,110	6,800	ND	
	03/16/2011	8.19	0.00	91.37	ND<1.0	1,200	1,100	3,280	5,580	ND<1.0	6,722
	06/22/2011	8.63	0.00	90.93	0.9	1,490	1,300	3,930	6,721	ND<1.0	8,421
	09/08/2011	8.64	0.00	90.92	ND<2.5	781	820	1,950	3,551	ND<5.0	4,538
100.32	12/01/2011	8.58	0.00	91.74	0.7	659	833	2,330	3,823	ND<1.0	5,122
	03/26/2012	8.70	0.00	91.62	ND<2.5	556	851	1,860	3,267	ND<5.0	4,154
	06/25/2012	8.80	0.00	91.52	ND<5.0	623	860	2,420	3,903	ND<10	5,051
	09/11/2012	8.71	0.00	91.61	ND<5.0	189	569	1,850	2,608	ND<10	3,731
	12/13/2012	8.82	0.00	91.50	ND<0.50	546	605	1,170	2,321	ND<1.0	2,970
	03/11/2013	8.68	0.00	91.64	ND<0.50	491	535	1,170	2,196	ND<10	2,942
	06/07/2013	8.46	0.00	91.86	ND<2.0	719	1,090	1,460	3,269	ND<4.0	4,532
	09/16/2013	8.83	0.00	91.49	ND<0.50	590	808	1,280	2,678	ND<1.0	3,865
	12/13/2013	8.78	0.00	91.54	ND<2.5	543	944	1,200	2,687	ND<5.0	3,980
	03/24/2014	8.62	0.00	91.70	ND<0.50	55.2	150	135	340	ND<1.0	751
	06/09/2014	8.59	0.00	91.73	ND<0.50	59.7	113	110	283	ND<1.0	394
	09/12/2014	8.85	0.00	91.47	ND<0.50	253	620	675	1,548	ND<1.0	2,337
	12/08/2014	8.78	0.00	91.54	ND<1.0	210	638	725	1,573	ND<2.0	2,251
	03/24/2015	9.90	0.00	90.42	ND<0.5	21.1	124	230	375	ND<1.0	541
	06/25/2015	9.24	0.00	91.08	ND<2.5	62.3	595	669	1,326	ND<5.0	1,965
	09/11/2015	8.64	0.00	91.68	ND<1.0	26.8	386	720	1,133	ND<5.0	1,659
	12/04/2015	9.52	0.00	90.80	ND<1.0	34.2	1,000	1,270	2,304	ND<2.0	3,689
	03/11/2016	8.98	0.00	91.34	ND<1.0	3.4	64.8	178	246	ND<1.0	331
	06/23/2016	9.49	0.00	90.83	ND<1.0	24.2	126	228	378	ND<1.0	512
	09/28/2016	9.30	0.00	91.02	ND<1.0	10.0	247	242	499	ND<1.0	712
	12/01/2016	9.36	0.00	90.96	ND<1.0	5.4	123	92	221	ND<1.0	367
	03/23/2017	9.11	0.00	91.21	ND<1.0	3.5	67.0	46.4	116.9	ND<1.0	176.2
	06/23/2017	9.01	0.00	91.31	ND<1.0	84.7	346	332	762	ND<1.0	1,051
	09/22/2017	9.40	0.00	90.92	ND<1.0	12.9	243	247	503	ND<1.0	777
	12/08/2017	9.19	0.00	91.13	ND<1.0	8.0	33.6	8.5	50.1	ND<1.0	82.6
	03/26/2018	9.10	0.00	91.22	ND<1.0	164	201	231	596	ND<1.0	755
	06/22/2018	9.17	0.00	91.15	ND<1.0	28.1	218	169	416	ND<1.0	657
	09/25/2018	9.33	0.00	90.99	ND<1.0	29.3	87.1	46.8	163	ND<1.0	218
	12/13/2018	9.03	0.00	91.29	ND<1.0	5.4	79.9	162.2	248	ND<1.0	342
	03/21/2019	9.31	0.00	91.01	ND<1.0	76.1	212.0	110.6	399	ND<1.0	560
	06/07/2019	9.29	0.00	91.03	ND<1.0	11.1	107	18.0	136	ND<1.0	250
	09/18/2019	9.30	0.00	91.02	ND<1.0	27.4	335	28.1	391	ND<1.0	597
	12/31/2019	9.21	0.00	91.11	ND<1.0	16.7	540	29.7	586	ND<1.0	1,311
	03/25/2020	9.28	0.00	91.04	ND<1.0	13.7	260	106	380	ND<1.0	833
	06/08/2020	**9.10**	**0.00**	**91.22**	**ND<1.0**	**10.4**	**139**	**155.6**	**305**	**ND<1.0**	**614.8**

Table 1 (Continued)

Historical Groundwater Data Summary
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (µg/L)
MW6	06/19/2004	9.19	0.00	90.81	ND	4,080	1,750	7,740	13,570	ND	
100.00	10/31/2005	9.31	0.00	90.69	ND	2,600	1,300	5,800	9,700	ND	
	01/30/2006	9.03	0.00	90.97	ND	4,400	1,200	5,500	11,100	ND	
4-inch PVC	04/18/2006	9.31	0.00	90.69	80	2,400	740	3,500	6,720	18	
Total Depth:	10/02/2006	9.14	0.00	90.86	4.0	4,500	1,300	5,500	11,304	ND	
20'	03/13/2007	9.27	0.00	90.73	ND	3,900	980	4,900	9,780	ND	
Depth to Screen:	06/25/2007	10.47	0.00	89.53	ND	3,500	830	3,800	8,130	ND	
8.68'	11/30/2007	9.23	0.00	90.77	ND	1,200	260	1,700	3,160	ND	
	02/19/2008	9.21	0.00	90.79	ND	1,300	190	980	2,470	ND	
	05/27/2008	9.39	0.00	90.61	ND	1,200	390	2,200	3,790	ND	
	08/28/2008	7.79	0.00	92.21	ND	190	110	360	660	ND	
	11/24/2008	9.55	0.00	90.45	ND	6.0	ND	69.5	75.5	ND	
	02/11/2009	9.22	0.00	90.78	ND	1,110	652	2,340	4,102	ND	
	05/13/2009	9.27	0.00	90.73	ND	2,430	1,460	5,840	9,730	ND	
	08/19/2009	9.24	0.00	90.76	ND	1,930	1,030	3,940	6,900	ND	
	11/17/2009	9.45	0.00	90.55	ND	2,760	1,120	4,900	8,780	ND	
	02/23/2010	9.42	0.00	90.58	ND	3,870	1,720	8,070	13,660	ND	
	05/17/2010	9.21	0.00	90.79	ND	2,020	749	3,570	6,339	ND	
	09/22/2010	9.48	0.00	90.52	ND	1,550	276	1,070	2,896	ND	
	12/07/2010	9.18	0.00	90.82	ND	1,760	764	3,380	5,904	ND	
	03/16/2011	8.81	0.00	91.19	ND<3.0	2,300	850	3,900	7,050	ND<3.0	8,282
	06/22/2011	9.17	0.00	90.83	ND<0.50	1,160	785	3,050	4,995	ND<1.0	6,446
100.03	09/08/2011	9.19	0.00	90.84	ND<2.5	790	593	2,140	3,523	ND<5.0	4,169
100.69	12/01/2011	8.98	0.00	91.71	ND<0.50	912	143	4,360	5,415	ND<1.0	6,592
	03/26/2012	9.10	0.00	91.59	ND<2.5	170	44	3,000	3,214	ND<5.0	3,976
	06/25/2012	9.19	0.00	91.50	ND<5.0	447	62	3,750	4,259	ND<10	5,147
	09/11/2012	9.14	0.00	91.55	ND<5.0	362	28.1	2,410	2,800	ND<10	3,363
	12/13/2012	9.19	0.00	91.50	ND<0.50	395	27.2	3,140	3,562	ND<1.0	4,355
	03/11/2013	9.03	0.00	91.66	ND<0.50	384	18.4	3,330	3,732	ND<10	4,476
	06/07/2013	8.83	0.00	91.86	ND<0.50	40.5	20.4	573	634	ND<1.0	831
	09/16/2013	9.20	0.00	91.49	ND<0.50	34.2	31.7	385	451	ND<1.0	672
	12/13/2013	9.22	0.00	91.47	ND<1.0	52.4	9.6	905	967	ND<2.0	1,151
	03/24/2014	8.74	0.00	91.95	ND<0.50	32.7	2.7	405	440	ND<1.0	509
	06/09/2014	9.10	0.00	91.59	ND<0.50	101.0	14.0	1,560	1,675	ND<1.0	2,017
	09/12/2014	9.32	0.00	91.37	ND<0.50	22.3	6.2	642	671	ND<1.0	872
	12/08/2014	9.28	0.00	91.41	ND<0.50	1.6	1.3	49.4	52.3	ND<1.0	61.8
	03/24/2015	10.38	0.00	90.31	ND<0.50	1.4	2.4	13.1	16.9	ND<1.0	23.9
	06/25/2015	9.68	0.00	91.01	ND<0.50	5.5	3.2	260.0	268.7	ND<1.0	317.4
	09/11/2015	9.66	0.00	91.03	ND<0.50	ND<1.0	ND<1.0	ND<1.0	ND	ND<1.0	ND
	12/04/2015	10.04	0.00	90.65	ND<0.50	ND<1.0	ND<1.0	1.3	1.3	ND<1.0	1.3
	03/11/2016	9.51	0.00	91.18	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	1.0
	06/23/2016	10.01	0.00	90.68	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	09/28/2016	9.70	0.00	90.99	ND<1.0	1.1	ND<1.0	19.6	20.7	ND<1.0	21.9
	12/01/2016	9.74	0.00	90.95	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	03/23/2017	9.56	0.00	91.13	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	06/23/2017	9.44	0.00	91.25	ND<1.0	ND<1.0	ND<1.0	13.4	13.4	ND<1.0	16.3
	09/22/2017	9.90	0.00	90.79	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	12/08/2017	9.75	0.00	90.94	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	03/26/2018	9.69	0.00	91.00	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	06/22/2018	9.77	0.00	90.92	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	09/25/2018	9.77	0.00	90.92	ND<1.0	41.0	15.1	59.4	115.5	ND<1.0	122.7
	12/13/2018	9.39	0.00	91.30	ND<1.0	ND<1.0	ND<1.0	10.1	10.1	ND<1.0	12.8
	03/21/2019	9.38	0.00	91.31	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	06/07/2019	9.86	0.00	90.83	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	09/18/2019	9.72	0.00	90.97	ND<1.0	5.4	2.1	478	486	ND<1.0	627
	12/31/2019	9.62	0.00	91.07	ND<1.0	3.4	18.1	137	159	ND<1.0	221
	03/25/2020	9.69	0.00	91.00	ND<1.0	3.4	11.3	210	224	ND<1.0	384
	06/08/2020	**9.55**	**0.00**	**91.14**	**ND<1.0**	**9.4**	**3.7**	**476**	**489.1**	**ND<1.0**	**722.3**

Table 1 (Continued)

Historical Groundwater Data Summary
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (µg/L)
MW7	06/19/2004	7.98	0.00	90.79	648	3,100	2,320	10,450	16,518	ND	
98.77	10/31/2005	8.11	0.00	90.66	710	2,400	1,300	7,800	12,210	ND	
	01/30/2006	7.85	0.00	90.92	870	4,200	2,500	13,000	20,570	ND	
4-inch PVC	04/18/2006	8.07	0.00	90.70	910	4,800	2,400	13,000	21,110	ND	
Total Depth:	10/02/2006	7.91	0.00	90.86	560	3,900	2,100	9,500	16,060	ND	
20'	03/13/2007	NG-i	0.00	NG-i	NSI	NSI	NSI	NSI	NSI	NSI	
Depth to Screen:	06/25/2007	8.29	0.00	90.48	ND	ND	ND	ND	ND	ND	
8.58'	11/30/2007	8.02	0.00	90.75	160	2,500	1,500	8,700	12,860	ND	
	02/19/2008	8.04	0.00	90.73	200	3,300	1,700	8,300	13,500	ND	
	05/27/2008	8.18	0.00	90.59	22	190	360	1,900	2,472	ND	
	08/28/2008	7.49	0.00	91.28	ND	310	180	610	1,100	ND	
	11/24/2008	8.79	0.00	89.98	48.9	2,130	365	8,350	10,894	ND	
	02/11/2009	8.45	0.00	90.32	36.1	1,070	823	3,650	5,579	ND	
	05/13/2009	8.50	0.00	90.27	71.8	1,450	2,350	10,000	13,872	ND	
	08/19/2009	8.47	0.00	90.30	57.3	1,950	2,590	13,600	18,197	ND	
	11/17/2009	8.76	0.00	90.01	38.1	2,150	1,920	9,010	13,118	ND	
	02/23/2010	NG-i	0.00	NG-i	NSI	NSI	NSI	NSI	NSI	NSI	
	05/17/2010	8.48	0.00	90.29	23.4	2,240	1,960	9,570	13,793	ND	
	09/22/2010	NG-i	0.00	NG-i	NSI	NSI	NSI	NSI	NSI	NSI	
	12/07/2010	8.41	0.00	90.36	18.9	2,820	1,890	9,990	14,719	ND	
	03/16/2011	7.96	0.00	90.81	12	2,200	1,800	9,500	13,512	ND<3.0	15,362
	06/22/2011	8.36	0.00	90.41	11.9	2,290	1,830	9,840	13,972	ND<1.0	16,421
99.17	09/08/2011	8.40	0.00	90.77	51.1	2,930	2,200	10,600	15,781	ND<20	17,569
99.96	12/01/2011	8.32	0.00	91.64	2.2	568	208	10,400	11,178	ND<1.0	13,459
	03/26/2012	8.43	0.00	91.53	ND<5.0	132	60.2	6,740	6,932	ND<10	8,435
	06/25/2012	8.52	0.00	91.44	ND<5.0	60.6	21.8	5,810	5,892	ND<10	7,163
	09/11/2012	8.53	0.00	91.43	ND<5.0	40.1	54.9	2,660	2,755	ND<10	3,669
	12/13/2012	8.65	0.00	91.31	ND<0.50	4.1	20.5	645	669.6	ND<1.0	1,002
	03/11/2013	8.31	0.00	91.65	ND<0.50	2.3	10.0	578	590.3	ND<1.0	951
	06/07/2013	8.17	0.00	91.79	ND<0.50	11.0	14.7	624	649.7	ND<1.0	1,081
	09/16/2013	8.76	0.00	91.20	ND<0.50	6.5	7.9	61.8	76.2	ND<1.0	139.2
	12/13/2013	8.53	0.00	91.43	ND<0.50	4.2	2.9	15.2	22.3	ND<1.0	37.8
	03/24/2014	8.42	0.00	91.54	ND<0.50	ND<1.0	ND<1.0	13.9	13.9	ND<1.0	56.8
	06/09/2014	8.37	0.00	91.59	ND<0.50	9.0	5.6	135	150	ND<1.0	589
	09/12/2014	8.64	0.00	91.32	ND<0.50	7.0	6.6	23	36	ND<1.0	61
	12/08/2014	8.56	0.00	91.40	ND<0.50	ND<1.0	ND<1.0	2.0	2.0	ND<1.0	7.5
	03/24/2015	9.73	0.00	90.23	ND<0.50	5.6	3.1	12.0	20.7	ND<1.0	20.7
	06/25/2015	9.00	0.00	90.96	ND<5.0	ND<10	ND<10	ND<10	ND	ND<10	0.88
	09/11/2015	8.24	0.00	91.72	ND<0.50	1.7	0.89	3.3	5.9	ND<1.0	7.2
	12/04/2015	9.38	0.00	90.58	ND<0.50	ND<1.0	ND<1.0	2.2	2.2	ND<1.0	2.9
	03/11/2016	8.82	0.00	91.14	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	06/23/2016	9.24	0.00	90.72	ND<1.0	15.0	22.60	37.2	74.8	ND<1.0	84.5
	09/28/2016	9.03	0.00	90.93	ND<1.0	5.9	1.2	ND<2.0	7.1	ND<1.0	14.2
	12/01/2016	9.05	0.00	90.91	ND<1.0	2.6	8.3	3.1	14.0	ND<1.0	17.8
	03/23/2017	8.93	0.00	91.03	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND	ND<1.0	ND
	06/23/2017	8.88	0.00	91.08	ND<1.0	112	60.8	329	502	ND<1.0	557
	09/22/2017	9.26	0.00	90.70	ND<1.0	3.8	1.8	6.2	11.8	ND<1.0	11.8
	12/08/2017	9.12	0.00	90.84	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	03/26/2018	9.03	0.00	90.93	ND<1.0	1.8	ND<1.0	ND<2.0	1.8	ND<1.0	3.8
	06/22/2018	9.12	0.00	90.84	ND<1.0	12.9	8.0	51.8	72.7	ND<1.0	78.9
	09/25/2018	9.28	0.00	90.68	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	12/13/2018	8.77	0.00	91.19	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	03/21/2019	8.66	0.00	91.30	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	06/07/2019	9.29	0.00	90.67	ND<1.0	33.9	5.1	116.5	155.5	ND<1.0	177.5
	09/18/2019	9.10	0.00	90.86	ND<1.0	1.3	ND<1.0	3.7	5.0	ND<1.0	6.7
	12/31/2019	9.01	0.00	90.95	ND<1.0	8.8	6.5	18.0	33.3	ND<1.0	37.4
	03/25/2020	9.05	0.00	90.91	ND<1.0	27.0	20.2	68.8	116	ND<1.0	131
	06/08/2020	**8.89**	**0.00**	**91.07**	**ND<1.0**	**40.6**	**38.4**	**190.4**	**269.4**	**ND<1.0**	**310.4**

Table 1 (Continued)

Historical Groundwater Data Summary
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (µg/L)
MW10	06/19/2004	NG	0.00	NG	NS	NS	NS	NS	NS	NS	
98.87	10/31/2005	8.31	0.00	90.56	27	60	46	160	293	ND	
	01/30/2006	8.03	0.00	90.84	190	60	120	370	740	ND	
4-inch PVC	04/18/2006	8.30	0.00	90.57	45	28	130	470	673	ND	
Total Depth:	10/02/2006	8.11	0.00	90.76	93	26	34	180	333	ND	
18'	03/13/2007	8.26	0.00	90.61	65	7.3	23	28	123.3	ND	
Depth to Screen:	06/25/2007	7.58	0.00	91.29	220	110	130	160	620	ND	
NA	11/30/2007	8.25	0.00	90.62	170	87	200	2,100	2,557	ND	
	02/19/2008	8.18	0.00	90.69	280	45	100	590	1,015	ND	
	05/27/2008	8.40	0.00	90.47	160	20	31	300	511	ND	
	08/28/2008	7.82	0.00	91.05	490	190	350	700	1,730	ND	
	11/24/2008	8.45	0.00	90.42	28.4	27.1	31.5	199	286	ND	
	02/11/2009	8.15	0.00	90.72	74.7	188	800	700	1,763	ND	
	05/13/2009	8.17	0.00	90.7	186	163	1,100	1,060	2,509	ND	
	08/19/2009	8.14	0.00	90.73	285	181	395	941	1,802	ND	
	11/17/2009	8.45	0.00	90.42	131	59.1	242	378	810	ND	
	02/23/2010	8.31	0.00	90.56	82.9	127	298	758	1,266	ND	
	05/17/2010	8.21	0.00	90.66	92.2	197	480	1,090	1,859	ND	
	09/22/2010	8.41	0.00	90.46	17.6	44.3	185	408	654.9	ND	
	12/07/2010	8.09	0.00	90.78	11.4	141	423	1,280	1,855	ND	
	03/16/2011	7.61	0.00	91.26	5	42	94	368	509	ND<0.5	574
	06/22/2011	8.01	0.00	90.86	33.3	68.2	540	651	1,293	ND<1.0	1,512.3
	09/08/2011	8.08	0.00	90.79	70.9	53.7	563	520	1,208	ND<2.0	1,431.8
	12/01/2011	No Access									
	03/26/2012										
	06/25/2012	8.22	0.00	90.65	2.8	26.6	315	329	670.6	ND<1.0	482
99.60	09/11/2012	8.24	0.00	91.36	1.3	51.2	564	449	1,064	ND<1.0	1424
	12/13/2012	8.26	0.00	91.34	0.85	44.1	250	316	611.0	ND<1.0	703
	03/11/2013	8.10	0.00	91.50	ND<0.5	39.1	196	285	520.1	ND<1.0	628
	06/07/2013	7.89	0.00	91.71	ND<.50	33.9	146	250	429.9	ND<1.0	583
	09/16/2013	8.22	0.00	91.38	2.8	179	145	624	951	ND<1.0	1,092
	12/13/2013	8.30	0.00	91.30	2.6	81.1	90.2	381	555	ND<1.0	609
	03/24/2014	8.10	0.00	91.50	0.89	117	112	484	714	ND<1.0	760
	06/09/2014	8.13	0.00	91.47	0.55	51.2	93.8	187	333	ND<1.0	367
	09/12/2014	8.32	0.00	91.28	0.94	12.8	139	177	330	ND<1.0	384
	12/08/2014	8.28	0.00	91.32	0.58	10.5	88.7	107	207	ND<1.0	241
	03/24/2015	9.52	0.00	90.08	ND<0.5	370	809	2,750	3,929	ND<1.0	4,578
	06/25/2015	8.73	0.00	90.87	ND<1.0	39.1	707	1,430	2,176	ND<2.0	2,539
	09/11/2015	9.02	0.00	90.58	ND<1.0	79.9	72.6	212	365	ND<2.0	514
	12/04/2015	9.12	0.00	90.48	ND<0.50	19.0	189	756	964	ND<1.0	1,141
	03/11/2016	8.46	0.00	91.14	ND<1.0	ND<1.0	2.1	ND<2.0	2.1	ND<1.0	47.7
	06/23/2016	9.05	0.00	90.55	ND<1.0	1.2	66.2	6.0	73.4	ND<1.0	128.4
	09/28/2016	8.74	0.00	90.86	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	3.8
	12/01/2016	8.68	0.00	90.92	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	4.8
	03/23/2017	8.65	0.00	90.95	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	06/23/2017	8.51	0.00	91.09	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	09/22/2017	8.94	0.00	90.66	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	1.2
	12/08/2017	8.79	0.00	90.81	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	03/26/2018	8.72	0.00	90.88	ND<1.0	12.9	21.3	62.1	96.3	ND<1.0	99.2
	06/22/2018	8.85	0.00	90.75	ND<1.0	304	351	677	1,332	ND<1.0	1,502
	09/25/2018	8.96	0.00	90.64	ND<1.0	92.4	464	298	854	ND<1.0	1,059
	Well Destroyed										

Table 1 (Continued)

Historical Groundwater Data Summary
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (µg/L)
MW11	04/18/2006	8.51	0.00	90.94	540	2,500	2,100	9,800	14,940	ND	
99.45	10/02/2006	8.38	0.00	91.07	340	3,600	2,700	10,000	16,640	ND	
	03/13/2007	8.52	0.00	90.93	200	1,600	1,800	7,500	11,100	ND	
4-inch PVC	06/25/2007	8.73	0.00	90.72	190	1,100	2,400	9,600	13,290	ND	
Total Depth:	11/30/2007	NG	0.00	NG	NS	NS	NS	NS	NS	NS	
19.3	02/19/2008	8.56	0.00	90.89	490	290	1,600	5,200	7,580	ND	
Depth to Screen:	05/27/2008	8.70	0.00	90.75	640	1500	2,400	5,900	10,440	ND	
3.08'	08/28/2008	4.00	0.00	95.45	370	1,400	2,900	11,000	15,670	ND	
	11/24/2008	8.58	0.00	90.87	115	1,020	2,020	11,600	14,755	ND	
	02/11/2009	8.15	0.00	91.3	138	324	1,870	6,480	8,812	ND	
	05/13/2009	8.24	0.00	91.21	134	310	903	2,980	4,327	ND	
	08/19/2009	8.19	0.00	91.26	222	1,090	1,820	7,270	10,402	ND	
	11/17/2009	8.46	0.00	90.99	111	295	521	1,900	2,827	ND	
	02/23/2010	8.32	0.00	91.13	66.9	239	369	2,210	2,885	ND	
	05/17/2010	8.24	0.00	91.21	104	514	834	2,780	4,232	ND	
	09/22/2010	8.60	0.00	90.85	52.8	157	256	891	1,357	ND	
	12/07/2010	8.11	0.00	91.34	133	499	619	2,350	3,601	ND	
	03/16/2011	7.67	0.00	91.78	220	1,100	800	3,210	5,330	ND<1.0	6,901
	06/22/2011	8.12	0.00	91.33	66.1	405	588	3,970	5,029	ND<1.0	6,754
98.94	09/08/2011	8.01	0.00	90.93	10.4	32	50	1,610	1,702	ND<2.0	2,485
99.85	12/01/2011	8.03	0.00	91.82	2.9	13	152	333	500.9	ND<1.0	887.4
	03/26/2012	8.10	0.00	91.75	2.9	8.4	30.4	173	214.7	ND<10	278.3
	06/25/2012	8.29	0.00	91.56	1.1	10.8	67.8	262	341.7	ND<1.0	496.2
	09/11/2012	8.30	0.00	91.55	0.80	7.5	97.1	186	291.7	ND<1.0	494.7
	12/13/2012	8.33	0.00	91.52	ND<0.50	6.3	45.7	152	204	ND<1.0	289.8
	03/11/2013	8.06	0.00	91.79	ND<0.50	3.7	15.5	57	76	ND<1.0	121.0
	06/07/2013	7.87	0.00	91.98	0.95	10.0	39.1	103	153	ND<1.0	207.9
	09/16/2013	8.95	0.00	90.90	ND<0.50	6.2	13.9	71.6	91.7	ND<1.0	238
	12/13/2013	8.33	0.00	91.52	ND<0.50	ND<1.0	ND<1.0	8.9	8.9	ND<1.0	17.3
	03/24/2014	8.04	0.00	91.81	ND<0.50	1.5	ND<1.0	13.7	15.2	ND<1.0	15.2
	06/09/2014	8.18	0.00	91.67	ND<0.50	1.6	1.2	14.7	17.5	ND<1.0	17.5
	09/12/2014	8.39	0.00	91.46	ND<0.50	2.0	20.6	15.5	38.1	ND<1.0	48.4
	12/08/2014	8.30	0.00	91.55	0.62	7.4	8.1	54.5	70.6	ND<1.0	75.9
	03/24/2015	9.28	0.00	90.57	ND<0.50	1.4	4.1	25.4	30.9	ND<1.0	38.8
	06/25/2015	8.68	0.00	91.17	0.47	6.1	23.1	31.7	61.4	ND<1.0	79.0
	09/11/2015	8.84	0.00	91.01	ND<0.50	9.3	29.2	42.8	81.3	ND<1.0	132.7
	12/04/2015	9.16	0.00	90.69	ND<0.50	9.2	56.2	59.7	125.1	ND<1.0	228.0
	03/11/2016	8.58	0.00	91.27	ND<1.0	ND<1.0	ND<1.0	20.4	20.4	ND<1.0	24.4
	06/23/2016	8.99	0.00	90.86	5.7	97.5	549	517	1,169	ND<1.0	2,230
	09/28/2016	8.71	0.00	91.14	2.2	36.2	273	154	466	ND<1.0	1,056
	12/01/2016	8.73	0.00	91.12	ND<1.0	1.1	5.7	8.9	15.7	ND<1.0	22.4
	03/23/2017	8.68	0.00	91.17	ND<1.0	2.9	15.0	13.2	31.1	ND<1.0	50.3
	06/23/2017	8.53	0.00	91.32	1.3	5.2	23.8	9.2	39.5	ND<1.0	68.6
	09/22/2017	8.92	0.00	90.93	ND<1.0	6.2	106	8.8	121	ND<1.0	228
	12/08/2017	8.74	0.00	91.11	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	03/26/2018	8.68	0.00	91.17	ND<1.0	2.7	18.1	11.1	31.9	ND<1.0	44.0
	06/22/2018	8.78	0.00	91.07	ND<1.0	ND<1.0	2.8	5.7	8.5	ND<1.0	15.7
	09/25/2018	8.92	0.00	90.93	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	2.0
	12/13/2018	8.47	0.00	91.38	ND<1.0	1.2	3.8	9.4	14.4	ND<1.0	14.4
	03/21/2019	8.79	0.00	91.06	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	2.0
	06/07/2019	8.68	0.00	91.17	ND<1.0	2.6	16.5	30.3	49.4	ND<1.0	62.4
	09/18/2019	8.69	0.00	91.16	ND<1.0	1.3	1.2	1.6	4.1	ND<1.0	93.9
	12/31/2019	8.58	0.00	91.27	ND<1.0	ND<1.0	ND<1.0	1.2	1.2	ND<1.0	2.2
	03/25/2020	8.64	0.00	91.21	ND<1.0	ND<1.0	1.5	1.5	3.0	ND<1.0	4.3
	06/08/2020	**8.46**	**0.00**	**91.39**	**ND<1.0**	**1.0**	**ND<1.0**	**1.2**	**2.2**	**ND<1.0**	**2.2**

Table 1 (Continued)

Historical Groundwater Data Summary
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Well ID# and Casing Elevation (ft)	Date	Depth to Water (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	EthylBenzene (ug/L)	Xylenes (ug/L)	BTEX (ug/L)	MTBE (ug/L)	STARS VOCS (µg/L)
MW12	05/17/2010	8.90	0.00	90.45	ND	2,110	1,370	5,500	8,980	ND	
99.35	09/22/2010	9.10	0.00	90.25	ND	1,460	1,070	4,030	6,560	ND	
4-inch PVC	12/07/2010	8.81	0.00	90.54	ND	2,080	1,340	5,740	9,160	ND	
Total Depth: 20'	03/16/2011	8.34	0.00	91.01	3	1,800	1,200	5,480	8,483	ND<3.0	10,367
Depth to Screen:	06/22/2011	8.78	0.00	90.57	2.3	1,640	1,150	4,780	7,572	ND<1.0	9,546
3.83'	09/08/2011	8.81	0.00	90.96	ND<5.0	1,620	1,230	4,270	7,120	ND<10	8,534
99.77	12/01/2011	8.83	0.00	91.83	2.1	997	501	3,630	5,130	ND<1.0	6,702
100.66	03/26/2012	8.95	0.00	91.71	ND<5.0	817	728	2,470	4,015	ND<10	5,239
	06/25/2012	9.08	0.00	91.58	ND<5.0	856	654	3,460	4,970	ND	6,402
	09/11/2012	8.94	0.00	91.72	ND<5.0	935	672	2,760	4,367	ND<10	5,714
	12/13/2012	9.19	0.00	91.47	0.71	814	796	2,420	4,031	ND<1.0	5,602
	03/11/2013	8.76	0.00	91.90	ND<5.0	715	677	2,350	3,742	ND<10	5,176
	06/07/2013	8.73	0.00	91.93	ND<2.5	1,210	1,100	3,760	6,070	ND<5.0	8,051
	09/16/2013	9.12	0.00	91.54	0.77	961	766	2,140	3,868	ND<1.0	5,165
	12/13/2013	9.19	0.00	91.47	ND<2.5	427	43.2	2,300	2,770	ND<5.0	3,451
	03/24/2014	8.91	0.00	91.75	ND<2.5	968	157	2,360	3,485	ND<5.0	4,406
	06/09/2014	9.02	0.00	91.64	ND<2.5	718	310	778	1,806	ND<5.0	2,200
	09/12/2014	9.21	0.00	91.45	ND<1.3	898	650	1,400	2,948	ND<2.5	3,807
	12/08/2014	9.14	0.00	91.52	ND<0.50	487	378	1,110	1,975	ND<1.0	2,666
	03/24/2015	10.16	0.00	90.50	ND<1.0	623	420	949	1,992	ND<2.0	2,425
	06/25/2015	9.54	0.00	91.12	ND<0.50	245	300	435	980	ND<1.0	1,318
	09/11/2015	9.87	0.00	90.79	ND<0.50	411	375	552	1,338	ND<1.0	1,832
	12/04/2015	9.80	0.00	90.86	ND<1.0	542	512	901	1,955	ND<2.0	2,575
	03/11/2016	9.40	0.00	91.26	ND<1.0	664	479	993	2,136	ND<1.0	2,652
	06/23/2016	9.82	0.00	90.84	ND<1.0	1,210	1,700	5,423	8,333	ND<1.0	10,053
	09/28/2016	9.55	0.00	91.11	ND<1.0	1,020	1,860	6,523	9,403	ND<1.0	11,189
	12/01/2016	9.72	0.00	90.94	ND<1.0	225	347	696	1,268	ND<1.0	1,706
	03/23/2017	9.51	0.00	91.15	ND<1.0	374	797	551	1,722	ND<1.0	2,547
	06/23/2017	9.35	0.00	91.31	ND<1.0	221	776	611	1,608	ND<1.0	2,338
	09/22/2017	9.74	0.00	90.92	ND<1.0	401	1,180	2,178	3,759	ND<1.0	4,820
	12/08/2017	9.52	0.00	91.14	ND<1.0	58.3	427	161	646	ND<1.0	1,077
	03/26/2018	9.53	0.00	91.13	ND<1.0	178	488	579	1,245	ND<1.0	1,802
	06/22/2018	9.49	0.00	91.17	ND<1.0	805	1,190	3,180	5,175	ND<1.0	6,384
	09/25/2018	9.78	0.00	90.88	ND<1.0	463	995	2,228	3,686	ND<1.0	4,601
	12/13/2018	9.38	0.00	91.28	2.1	ND<1.0	ND<1.0	ND<2.0	2.1	ND<1.0	2.1
	03/21/2019	9.69	0.00	90.97	ND<1.0	15.2	40.1	49.1	104.4	ND<1.0	136.5
	06/07/2019	9.50	0.00	91.16	ND<1.0	4.7	ND<1.0	3.4	8.1	ND<1.0	8.1
	09/18/2019	9.54	0.00	91.12	ND<1.0	4.0	4.3	3.4	11.7	ND<1.0	23.5
	12/31/2019	9.45	0.00	91.21	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	1.0
	03/25/2020	9.54	0.00	91.12	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	ND<1.0	ND
	06/08/2020	**9.35**	**0.00**	**91.31**	**ND<1.0**	**ND<1.0**	**ND<1.0**	**ND<2.0**	**ND**	**ND<1.0**	**ND**

Notes:

ND = Compound not detected.

NG = Not gauged.

NS = Not sampled.

NSI = Not sampled, well inaccessible.

NSP = Not sampled due to product.

CNS = Well casing not surveyed

Data from off-site monitoring wells has been removed from the sampling program and these tables but is available on file at METI.

Table 2

Groundwater Elevations
And LNAPL Thickness Measurements (feet)

June 8, 2020

Well ID	Casing Elevation	Depth to LNAPL	Depth to Water	LNAPL Thickness	Adj. Depth to Water	Groundwater Elevations
MW1R	Well Destroyed					
MW2	100.74	ND	9.19	-	9.19	91.55
MW3	99.39	ND	8.00	-	8.00	91.39
MW4	100.21	ND	8.84	-	8.84	91.37
MW5	100.32	ND	9.10	-	9.10	91.22
MW6	100.69	ND	9.55	-	9.55	91.14
MW7	99.96	ND	8.89	-	8.89	91.07
MW10	Well Destroyed					
MW11	99.85	ND	8.46	-	8.46	91.39
MW12	100.66	ND	9.35	-	9.35	91.31

NG-i = Not Gauged, well inaccessible
NG = Not Gauged
ND = LNAPL not detected

Table 3
Groundwater VOC Data Summary - Four Quarters
EPA Method 8260 STARS
Former Sunoco Station
181 Delaware Avenue
Buffalo, NY

Compounds	NYDEC GW Quality Standard	MW2				MW3			
		9/18/2019	12/31/2019	3/25/2020	6/8/2020	10/10/2019	12/31/2019	3/25/2020	6/8/2020
Benzene	1	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.6	ND<1.0	ND<1.0	ND<1.0
n-Butylbenzene	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
sec-Butylbenzene	5	1.1	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
tert-Butylbenzene	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Ethylbenzene	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	2.2	3.4	2.6
Isopropylbenzene	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
p-Isopropyltoluene	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
n-Propylbenzene	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.3	1.9	ND<1.0
Toluene	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
1,2,4-Trimethylbenzene	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	5.7	ND<1.0
1,3,5-Trimethylbenzene	5	3.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	3.2	ND<1.0
Total Xylenes	10	1.2	ND<2.0	ND<2.0	ND<2.0	ND<2.0	2.6	33.8	9.4
Total NYSDEC STARS VOCs	-	5.3	ND	ND	ND	1.6	6.1	48.0	12.0
Total BTEX	-	*1.2*	*ND*	*ND*	*ND*	*1.6*	*4.8*	*37.2*	*12.0*
MTBE	10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Naphthalene	10	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	2.3	ND<2.0

Table 3 (Continued)
Groundwater VOC Data Summary
EPA Method 8260 STARS
Former Sunoco Station
181 Delaware Avenue
Buffalo, NY

Compounds	NYDEC GW Quality Standard	MW4				MW5			
		9/18/2019	12/31/2019	3/25/2020	6/8/2020	9/18/2019	12/31/2019	3/25/2020	6/8/2020
Benzene	1	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
n-Butylbenzene	5	ND<1.0	ND<1.0	ND<1.0	2.1	3.0	9.4	6.9	4.9
sec-Butylbenzene	5	1.5	ND<1.0	1.2	3.1	6.0	11.5	6.4	5.2
tert-Butylbenzene	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Ethylbenzene	5	22.4	13.7	30.3	73.6	335	540	260	139
Isopropylbenzene	5	6.1	3.4	5.5	23.0	46.8	108	55.9	31
p-Isopropyltoluene	5	ND<1.0	ND<1.0	1.2	1.5	2.3	3.1	3.6	31.6
n-Propylbenzene	5	9.1	4.6	8.9	30.2	78.3	197	114	59.6
Toluene	5	5.2	3.3	27.2	26.5	27.4	16.7	13.7	10.4
1,2,4-Trimethylbenzene	5	103	25.4	134	95.9	68.0	389	258	168
1,3,5-Trimethylbenzene	5	2.0	1.4	16.7	5.1	2.4	6.5	8.5	9.5
Total Xylenes	10	21.9	25.2	193	29.9	28.1	29.7	106.0	155.6
Total NYSDEC STARS VOCs	-	171.2	77.0	418	290.9	597	1,311	833	614.8
Total BTEX	-	*49.5*	*42.2*	*250*	*130.0*	*391*	*586*	*380*	*305*
MTBE	10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Naphthalene	10	14.6	4.0	12.8	6.2	12.7	17.6	15.2	22.3

Table 3 (Continued)
Groundwater VOC Data Summary
EPA Method 8260 STARS
Former Sunoco Station
181 Delaware Avenue
Buffalo, NY

Compounds	NYDEC GW Quality Standard	MW6				MW7			
		9/18/2019	12/31/2019	3/25/2020	6/8/2020	9/18/2019	12/31/2019	3/25/2020	6/8/2020
Benzene	1	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
n-Butylbenzene	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
sec-Butylbenzene	5	ND<1.0	ND<1.0	ND<1.0	1.2	ND<1.0	ND<1.0	ND<1.0	ND<1.0
tert-Butylbenzene	5	15.8	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Ethylbenzene	5	2.1	18.1	11.3	3.7	ND<1.0	6.5	20.2	38.4
Isopropylbenzene	5	ND<1.0	3.7	4.4	3.4	ND<1.0	ND<1.0	ND<1.0	1.3
p-Isopropyltoluene	5	ND<1.0	1.6	3.4	1.1	ND<1.0	ND<1.0	1.6	5.5
n-Propylbenzene	5	4.5	6.7	6.5	2.3	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Toluene	5	5.4	3.4	3.4	9.4	1.3	8.8	27.0	40.6
1,2,4-Trimethylbenzene	5	109	43.7	126	207	1.7	4.1	11.8	24.7
1,3,5-Trimethylbenzene	5	11.7	6.4	18.9	18.2	ND<1.0	ND<1.0	1.3	9.5
Total Xylenes	10	478	137	210	476.0	3.7	18.0	68.8	190.4
Total NYSDEC STARS VOCs	-	627	221	384	722.3	6.7	37.4	130.7	310.4
Total BTEX	-	*486*	*159*	*224*	*489.1*	*5.0*	*33.3*	*117.3*	*269.4*
MTBE	10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Naphthalene	10	46.9	30.7	34.7	41.7	ND<2.0	5.2	7.4	19.3

Table 3 (Continued)
Groundwater VOC Data Summary
EPA Method 8260 STARS
Former Sunoco Station
181 Delaware Avenue
Buffalo, NY

Compounds	NYDEC GW Quality Standard	MW11				MW12			
		9/18/2019	12/31/2019	3/25/2020	6/8/2020	9/18/2019	12/31/2019	3/25/2020	6/8/2020
Benzene	1	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
n-Butylbenzene	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
sec-Butylbenzene	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
tert-Butylbenzene	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Ethylbenzene	5	1.2	ND<1.0	1.5	ND<1.0	4.3	ND<1.0	ND<1.0	ND<1.0
Isopropylbenzene	5	9.9	ND<1.0	ND<1.0	ND<1.0	1.5	ND<1.0	ND<1.0	ND<1.0
p-Isopropyltoluene	5	1.3	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
n-Propylbenzene	5	14.9	ND<1.0	ND<1.0	ND<1.0	2.4	ND<1.0	ND<1.0	ND<1.0
Toluene	5	1.3	ND<1.0	ND<1.0	1.0	4.0	ND<1.0	ND<1.0	ND<1.0
1,2,4-Trimethylbenzene	5	63.7	1.0	1.3	ND<1.0	1.5	1.0	ND<1.0	ND<1.0
1,3,5-Trimethylbenzene	5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	6.4	ND<1.0	ND<1.0	ND<1.0
Total Xylenes	10	1.6	1.2	1.5	1.2	3.4	ND<2.0	ND<2.0	ND<2.0
Total NYSDEC STARS VOCs	-	93.9	2.2	4.3	2.2	23.5	1.0	ND	ND
Total BTEX	-	*ND*	*1.2*	*3.0*	*2.2*	*11.7*	*ND*	*ND*	*ND*
MTBE	10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
Naphthalene	10	15.5	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0

Table 4

Dissolved Oxygen Concentrations in Monitoring Wells (mg/L)
Former Sunoco Station
181 Delaware Avenue

Date	Description	Monitoring Wells											
		MW1R	MW2	MW3	MW4	MW5	MW6	MW7	MW10	MW11	MW12	PZ1	Average
1/8/2016	25-35 SCFH @6-8 min/hr/bank	3.1	4.7	-	12	2.8	21	17	3.1	18	2.5	-	9.4
2/4/2016	25-35 SCFH @6-8 min/hr/bank	2.0	5.4	6.5	5.8	2.9	12	9.9	4.2	9.7	1.2	-	6.0
3/11/2016	25-35 SCFH @6-8 min/hr/bank	1.1	6.9	24	19	4.7	20	19	5.3	20	4.6	-	12
4/27/2016	IP25-27: 30 SCFH @6 min/hr/bank	2.4	2.6	-	1.3	3.6	20	20	-	1.8	0.7	-	6.6
5/26/2016	IP25-27: 30 SCFH @6 min/hr/bank	1.1	1.3	-	0.6	4.3	22	22	-	1.6	1.2	-	6.8
6/23/2016	IP25-27: 30 SCFH @6 min/hr/bank	2.6	3.2	3.6	1.9	3.6	19	14	5.4	2.3	2.4	-	5.8
7/20/2016	IP25-27: 30 SCFH @6 min/hr/bank	1.8	1.4	2.9	1.4	2.3	16	9.9	1.9	1.5	1.9	-	4.1
8/31/2016	IP25-27: 30 SCFH @6 min/hr/bank	2.5	1.9	2.3	2.0	2.7	14	19	2.5	1.9	3.6	-	5.2
9/28/2016	IP25-27: 30 SCFH @6 min/hr/bank	2.0	2.7	2.6	1.1	3.4	4.0	8.0	2.3	1.9	2.6	-	3.1
11/4/2016	IP16,19,20,22-27: 30 SCFH @8 min/hr/bank		1.6	1.1	1.3	1.9	1.3	2.1	-	-	1.2	-	1.5
11/18/2016	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		1.4	0.5	1.0	1.6	19	11	-	1.3	0.8	-	4.4
12/1/2016	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		3.4	1.7	15	7.8	12	10	3.3	8.7	5.5	-	7.5
1/11/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		3.4	-	15	1.4	7.8	8.3	2.5	5.1	2.3	-	5.7
2/3/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		4.2	2.4	18	3.1	22	20	-	5.0	1.7	-	9.5
3/23/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		5.8	-	16	2.8	23	22	6.5	2.6	3.4	-	10
4/21/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		4.2	-	21	2.4	22	17	-	8.7	1.5	-	11
5/24/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		3.0	-	19	2.0	21	20	-	4.4	2.0	-	10
6/23/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		1.9	1.5	13	1.7	12	17	3.0	2.5	0.6	-	5.9
7/24/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		1.4	-	6.0	1.7	14	9.4	-	1.8	1.7	-	5.1
8/21/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		3.7	-	1.9	2.0	7.9	4.3	-	2.1	1.6	-	3.4
9/22/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		6.2	-	11	4.5	16	14	2.2	3.7	4.4	-	7.7
10/20/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		3.8	-	7.8	1.4	8.8	7.0	-	3.2	1.0	-	4.7
11/22/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		4.3	-	18	2.4	22	20	-	7.4	3.2	-	11
12/8/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		7.1	-	-	2.4	20	17	1.7	1.7	1.1	-	7.3
1/22/2018	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		4.6	-	15	2.2	-	21	-	2.0	1.1	-	7.6
2/26/2018	30-50 SCFH @ 8-12 min/hr/bank		7.8	2.2	21	3.1	23	25	-	5.2	1.5	-	11

Table 4 (Continued)

Dissolved Oxygen Concentrations in Monitoring Wells (mg/L)
Former Sunoco Station
181 Delaware Avenue

Date	Description	Monitoring Wells											
		MW1R	MW2	MW3	MW4	MW5	MW6	MW7	MW10	MW11	MW12	PZ1	Average
3/26/2018	30-50 SCFH @ 8-12 min/hr/bank		8.1	-	21	7.5	23	22	5.4	2.6	3.9	-	12
4/23/2018	30 SCFH @ 8-12 min/hr/bank		14	-	22	2.1	24	24	-	1.9	2.5	-	13
5/18/2018	30 SCFH @ 8-12 min/hr/bank		5.0	1.7	21	3.5	19	19	-	2.3	1.8	-	9.2
6/22/2018	30 SCFH @ 8-12 min/hr/bank		2.8	-	13	4.1	15	15	0.1	2.2	4.4	-	7.0
7/26/2018	30 SCFH @ 8-12 min/hr/bank		1.0	1.4	3.0	1.5	5.9	6.4	-	0.1	1.7	-	2.6
8/27/2018	30 SCFH @ 8-12 min/hr/bank		1.4	1.1	3.8	1.6	4.6	-	-	1.6	0.8	-	2.1
9/25/2018	30-50 SCFH @ 8-12 min/hr/bank		1.8	2.5	6.5	1.1	11	10	2.8	0.1	2.5	-	4.2
10/24/2018	30-40 SCFH @ 8-12 min/hr/bank		1.1	1.5	14	2.0	19	9	-	1.6	0.7	-	6.1
11/19/2018	30-40 SCFH @ 8-12 min/hr/bank		5.8	1.9	14	2.2	16	23	-	1.5	1.3	-	8.2
12/6/2018	30-40 SCFH @ 8-12 min/hr/bank		10	43	16	1.7	17	14	-	2.7	50	-	19
12/13/2018	30-40 SCFH @ 8-12 min/hr/bank		1.7	-	1.7	2.0	9.5	16		0.9	25	-	8.1
1/16/2019	30-40 SCFH @ 8-12 min/hr/bank		1.9	23	19	2.8	15	22		9.3	22	-	14.4
2/27/2019	30 SCFH @ 8-12 min/hr/bank		5.9	-	20	3.3	13	-		3.2	17	-	10.4
3/21/2019	30 SCFH @ 8-12 min/hr/bank		5.6	-	20	1.9	14	28		0.7	22	-	13.2
4/18/2019	30 SCFH @ 8-12 min/hr/bank		6.5	28	15	2.0	21	25		1.8	20	-	14.8
5/17/2019	30 SCFH @ 8-12 min/hr/bank		5.3	27	10	2.5	12	23		1.4	21	-	12.8
6/7/2019	30 SCFH @ 8-12 min/hr/bank		3.4	-	17	3.6	10	18		6.2	19	-	11.0
7/2/2019	30 SCFH @ 8-12 min/hr/bank		5.5	-	3.9	2.0	-	22		2.4	15	-	8.5
8/22/2019	30 SCFH @ 8-12 min/hr/bank		2.9	2.2	6.6	1.3	8.2	17		2.0	13	-	6.7
9/18/2019	System Deactivated		2.1	-	1.6	1.1	2.8	6.0		0.22	15	-	4.0
12/31/2019	System Deactivated		3.1	21	1.3	0.80	1.1	1.7		1.8	9.6	-	5.0
3/25/2020	System Deactivated		1.3	15	0.9	3.5	1.9	2.5		1.4	6.8	-	4.2
6/8/2020	System Deactivated		1.9	1.2	1.6	2.4	1.8	2.0		1.6	6.2	-	2.3

NOTE: Data from 2011-2015 is available and may be furnished upon request.

Table 5

Oxidation Reduction Potential in Monitoring Wells (mV)
Former Sunoco Station
181 Delaware Avenue

Date	Description	Monitoring Wells											
		MW1R	MW2	MW3	MW4	MW5	MW6	MW7	MW10	MW11	MW12	PZ1	Average
1/8/2016	25-35 SCFH @6-8 min/hr/bank	10	74	-	78	-46	266	243	242	123	-15	-	108
2/4/2016	25-35 SCFH @6-8 min/hr/bank	-158	-87	-30	-4	-28	237	219	306	74	-101	-	43
3/11/2016	25-35 SCFH @6-8 min/hr/bank	-137	-52	58	197	216	303	290	325	168	29	-	140
4/27/2016	IP25-27: 30 SCFH @6 min/hr/bank	41	87	-	149	159	361	356	-	172	20	-	168
5/26/2016	IP25-27: 30 SCFH @6 min/hr/bank	-64	-76	-	-20	160	294	301	-	-13	40	-	78
6/23/2016	IP25-27: 30 SCFH @6 min/hr/bank	-118	-97	18	-127	-28	206	157	46	-117	-76	-	-14
7/20/2016	IP25-27: 30 SCFH @6 min/hr/bank	-132	-131	69	-127	-62	214	154	108	-128	-100	-	-14
8/31/2016	IP25-27: 30 SCFH @6 min/hr/bank	-41	-13	12	-114	48	236	264	155	-105	-122	-	32
9/28/2016	IP25-27: 30 SCFH @6 min/hr/bank	-81	-63	-80	-122	-60	235	231	258	-110	-123	-	9
11/4/2016	IP16,19,20,22-27: 30 SCFH @8 min/hr/bank		-30	-31	-82	-10	145	38	-	-	-33	-	0
11/18/2016	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		-71	-85	-103	-74	264	257	-	-98	-94	-	-1
12/1/2016	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		79	165	152	92	245	242	240	188	49	-	161
1/11/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		78	-	167	96	137	166	148	169	-4	-	120
2/3/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		109	105	138	253	317	315	-	133	7	-	172
3/23/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		233	-	159	251	297	303	322	157	50	-	222
4/21/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		210	-	187	135	301	304	-	192	-24	-	186
5/24/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		159	-	158	84	292	297	-	149	-10	-	161
6/23/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		44	146	165	54	308	305	125	17.1	-105	-	118
7/24/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		88	-	89	27	266	247	-	70	-41	-	107
8/21/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		153	-	122	72	313	307	-	124	38	-	161
9/22/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		13	-	11	-77	84	88	-29	-79	-192	-	-23
10/22/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		-	-	-	-	-	-	-	-	-	-	-
11/22/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		-66	-	20	-18	244	225	-	-13	-180	-	30
12/8/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		20	-	-	-140	257	18	233	-6	-132	-	36
1/22/2018	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		-53	-	26	-85	-	324	-	-121	-197	-	-18
2/26/2018	30-50 SCFH @ 8-12 min/hr/bank		-22	-111	-26	-27	350	342	-	-45	-114	-	43

Table 5 (Continued)

Oxidation Reduction Potential in Monitoring Wells (mV)
Former Sunoco Station
181 Delaware Avenue

Date	Description	Monitoring Wells										
		MW1R	MW2	MW3	MW4	MW5	MW6	MW7	MW10	MW11	MW12	PZ1	Average
3/26/2018	30-50 SCFH @ 8-12 min/hr/bank		81	-	77	-18	302	294	294	-17	-96	-	115
4/23/2018	30 SCFH @ 8-12 min/hr/bank		12	-	30	159	229	210	-	-96	-153	-	56
5/18/2018	30 SCFH @ 8-12 min/hr/bank		-14	-136	-14	-107	151	145	-	-104	-124	-	-25
6/22/2018	30 SCFH @ 8-12 min/hr/bank		-58	-	-26	-122	25	18	-99	-76	-110	-	-56
7/26/2018	30 SCFH @ 8-12 min/hr/bank		-145	-160	-109	-159	115	115	-	-139	-182	-	-83
8/27/2018	30 SCFH @ 8-12 min/hr/bank		-112	-142	-116	-102	105	-	-	-125	-188	-	-97
9/25/2018	30 SCFH @ 8-12 min/hr/bank		-105	-108	-89	-89	88	32	-80	-50	-152	-	-61
10/24/2018	30-40 SCFH @ 8-12 min/hr/bank		-121	-129	-50	-104	115	98	-	-115	-196	-	-63
11/19/2018	30-40 SCFH @ 8-12 min/hr/bank		-88	-122	-64	92	123	112	-	-67	-171	-	-23
12/6/2018	30-40 SCFH @ 8-12 min/hr/bank		157	228	105	27	230	163	-	185	256	-	169
12/13/2018	30-40 SCFH @ 8-12 min/hr/bank		30	-	40	11	208	198		42	262	-	113
1/16/2019	30-40 SCFH @ 8-12 min/hr/bank		324	146	366	230	228	213		336	308	-	269
2/27/2019	30 SCFH @ 8-12 min/hr/bank		318	-	326	201	334	-		311	252	-	290
3/21/2019	30 SCFH @ 8-12 min/hr/bank		305	-	332	194	384	366		312	301	-	313
4/18/2019	30 SCFH @ 8-12 min/hr/bank		190	14	328	123	345	325		325	308	-	245
5/17/2019	30 SCFH @ 8-12 min/hr/bank		273	79	313	106	255	275		-120	324	-	188
6/7/2019	30 SCFH @ 8-12 min/hr/bank		170	-	306	190	416	407		217	279	-	284
7/2/2019	30 SCFH @ 8-12 min/hr/bank		221	-	275	105	-	319		217	277	-	236
8/22/2019	30 SCFH @ 8-12 min/hr/bank		187	-19	256	147	300	316		193	275	-	207
9/18/2019	System Deactivated		-42	-	41	-69	280	337		-70	294	-	110
12/31/2019	System Deactivated		87	-31	-57	-226	-3	15		-50	227	-	-5
3/25/2020	System Deactivated		88	-12	-87	-113	-50	-21		-146	87	-	-32
6/8/2020	System Deactivated		84	-41	-64	-105	-18	-15		-126	11	-	-34

NOTE: Data from 2011-2015 is available and may be furnished upon request.

Table 6

Organic Vapor Meter Reading Summary (ppm)
Former Sunoco Station
181 Delaware Avenue

Date	Description	Monitoring Wells										Vapor Monitoring Points			
		MW1R	MW2	MW3	MW4	MW5	MW6	MW7	MW10	MW11	MW12	PZ1	VP1	VP2	VP3	VP4
1/8/2016	25-35 SCFH @6-8 min/hr/bank	1	184	-	14	58	16.6	17	ND	1.0	2	-	-	-	ND	ND
2/4/2016	25-35 SCFH @6-8 min/hr/bank	ND	5.1	2.0	10.5	10	10	41	ND	ND	ND	-	-	-	ND	ND
3/11/2016	25-35 SCFH @6-8 min/hr/bank	ND	700+	ND	262	312	87.0	12.5	ND	ND	ND	-	-	-	ND	ND
4/27/2016	IP25-27: 30 SCFH @6 min/hr/bank	2	1,000+	-	95	120	65	80	-	2.0	2.0	-	-	-	ND	ND
5/26/2016	IP25-27: 30 SCFH @6 min/hr/bank	0.5	500	-	168	350	800	34	-	140	250	-	-	-	ND	ND
6/23/2016	IP25-27: 30 SCFH @6 min/hr/bank	1	295	-	19.4	70	6	24	-	1	1	-	-	-	0.6	-
7/20/2016	IP25-27: 30 SCFH @6 min/hr/bank	3.0	60	1.0	4.0	8.0	4.0	4.0	ND	ND	8.0	-	-	-	ND	ND
8/31/2016	IP25-27: 30 SCFH @6 min/hr/bank	ND	60	ND	-	-	-	ND	-	-	-	-	-	-	ND	ND
9/28/2016	IP25-27: 30 SCFH @6 min/hr/bank	ND	27	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	ND	ND
11/18/2016	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		2	ND	ND	297	100	205	-	ND	760	-	ND	-	ND	ND
12/1/2016	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		2.7	-	-	-	-	-	ND	-	-	-	-	-	ND	ND
1/11/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		1,400	-	40	20	5	5	-	ND	5	-	-	-	ND	-
2/3/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		510	ND	55	ND	10	ND	-	2	ND	-	-	-	ND	ND
3/23/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		163	-	28	18	9	40	-	ND	ND	-	-	-	ND	ND
4/21/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		258	-	10	1.4	3.0	ND	-	ND	ND	-	-	-	ND	ND
5/24/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		219	-	18	1.8	7	ND	-	ND	ND	-	-	-	ND	ND
6/23/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		-	-	-	-	-	-	-	-	-	-	-	-	-	-
7/24/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		150	-	3.2	ND	ND	ND	-	ND	ND	-	-	-	ND	ND
8/21/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		8	-	ND	ND	ND	ND	-	ND	ND	-	-	ND	ND	ND
9/22/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		214	-	21	ND	ND	12	ND	ND	ND	-	-	-	ND	ND
10/20/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		850	-	400	38	40	600	-	ND	2.7	-	-	ND	ND	ND
11/22/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		154	-	25	6	5	ND	-	ND	ND	-	-	-	ND	ND
12/8/2017	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/22/2018	IP1,10-13,15,16,19-27: 30 SCFH @8 min/hr/bank		114	-	21	9	-	23	-	ND	ND	-	-	-	ND	ND
2/26/2018	30-50 SCFH @ 8-12 min/hr/bank		251	2	4	64	19	ND	-	ND	ND	-	-	-	ND	ND

Table 6 (Continued)

Organic Vapor Meter Reading Summary (ppm)
Former Sunoco Station
181 Delaware Avenue

Date	Description	Monitoring Wells										Vapor Monitoring Points			
		MW1R	MW2	MW3	MW4	MW5	MW6	MW7	MW10	MW11	MW12	PZ1	VP1	VP2	VP3	VP4
3/26/2018	30-50 SCFH @ 8-12 min/hr/bank		260	-	50	34	2	39	-	2	60	-	-	-	-	-
4/23/2018	30 SCFH @ 8-12 min/hr/bank		140	-	100	4	2	3	-	1	7	-	-	-	ND	ND
5/18/2018	30 SCFH @ 8-12 min/hr/bank		195	ND	7	4	2	22	-	ND	ND	-	-	-	ND	ND
6/22/2018	30 SCFH @ 8-12 min/hr/bank		187	-	9	2	1	14	ND	ND	ND	-	-	-	ND	-
7/26/2018	30 SCFH @ 8-12 min/hr/bank		400	0.4	68	18	ND	0.9	-	ND	ND	-	-	-	ND	ND
8/27/2018	30 SCFH @ 8-12 min/hr/bank		292	0.4	17	60	ND	-	-	0.4	1.0	-	-	ND	ND	ND
9/25/2018	30 SCFH @ 8-12 min/hr/bank		200	ND	13	ND	ND	1.0	ND	ND	2.0	-	-	-	ND	ND
10/24/2018	30-40 SCFH @ 8-12 min/hr/bank		150	ND	44	ND	ND	ND	-	ND	ND	-	-	-	ND	ND
11/19/2018	30-40 SCFH @ 8-12 min/hr/bank		130	1.4	45	ND	2	ND	-	ND	ND	-	-	-	ND	ND
12/6/2018	30-40 SCFH @ 8-12 min/hr/bank		-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/13/2018	30-40 SCFH @ 8-12 min/hr/bank		250	-	-	13	2	ND		-	200	-	-	-	1	ND
1/16/2019	30-40 SCFH @ 8-12 min/hr/bank		-	-	-	-	-	-		-	-	-	-	-	-	-
2/27/2019	30 SCFH @ 8-12 min/hr/bank		111	-	29	22	4	-		1	56	-	-	-	ND	ND
3/21/2019	30 SCFH @ 8-12 min/hr/bank		-	-	-	-	-	-		-	-	-	-	-	-	-
4/18/2019	30 SCFH @ 8-12 min/hr/bank		ND	ND	ND	ND	ND	ND		ND	ND	ND	-	-	-	-
5/17/2019	30 SCFH @ 8-12 min/hr/bank		-	-	-	-	-	-		-	-	-	-	-	-	-
6/7/2019	30 SCFH @ 8-12 min/hr/bank		1,000	-	244	6	21	1,500		8	97	-	-	-	7	3
7/2/2019	30 SCFH @ 8-12 min/hr/bank		820	-	110	35	-	65		ND	40	-	-	-	ND	ND
8/22/2019	30 SCFH @ 8-12 min/hr/bank		900	ND	144	ND	ND	2		1	39	-	-	-	ND	ND
9/18/2019	System Deactivated		510	-	40	ND	ND	ND		ND	10	-	-	-	-	-

NOTE: Data from 2011-2015 is available and may be furnished upon request.

Table 7

Post-Injection pH Data Summary
Former Sunoco Station
181 Delaware Avenue
Buffalo, New York

Date	Monitoring Wells							
	MW2	MW3	MW4	MW5	MW6	MW7	MW11	MW12
9/25/2018 (baseline)	*7.27*	*7.27*	*7.04*	*6.97*	*7.12*	*7.04*	*6.99*	*7.04*
12/6/2018	9.56	12.76	6.63	7.24	7.67	9.06	7.78	12.47
12/13/2018	7.03	-	6.62	7.04	6.88	7.27	6.59	8.86
1/16/2019	6.97	12.91	7.09	6.99	7.08	6.49	6.84	7.07
2/27/2019	7.02	-	6.99	6.91	7.34	-	7.17	7.08
3/21/2019	7.10	-	7.04	6.62	7.07	7.34	6.89	7.23
4/18/2019	9.25	12.71	7.02	6.72	7.48	7.82	7.32	7.04
5/17/2019	6.85	12.27	7.20	7.03	9.14	7.17	6.82	7.08
6/7/2019	7.06	-	7.18	7.12	7.17	7.23	6.86	7.23
7/2/2019	6.78	-	6.89	7.26	-	7.63	6.78	6.94
8/22/2019	8.56	12.01	6.85	6.67	6.98	7.33	6.80	6.79
9/18/2019	7.11	-	6.92	6.62	6.71	6.88	6.89	6.89
12/31/2019	7.68	11.69	7.26	6.94	7.25	7.14	7.24	7.22
3/25/2020	6.75	7.00	6.92	7.14	7.14	7.10	6.93	7.08
6/8/2020	7.14	9.16	6.15	6.98	7.34	7.56	7.00	6.98

CHARTS

Chart 1 - Site Source Area Monitoring Wells
(VOC Concentrations vs. Groundwater Elevation)

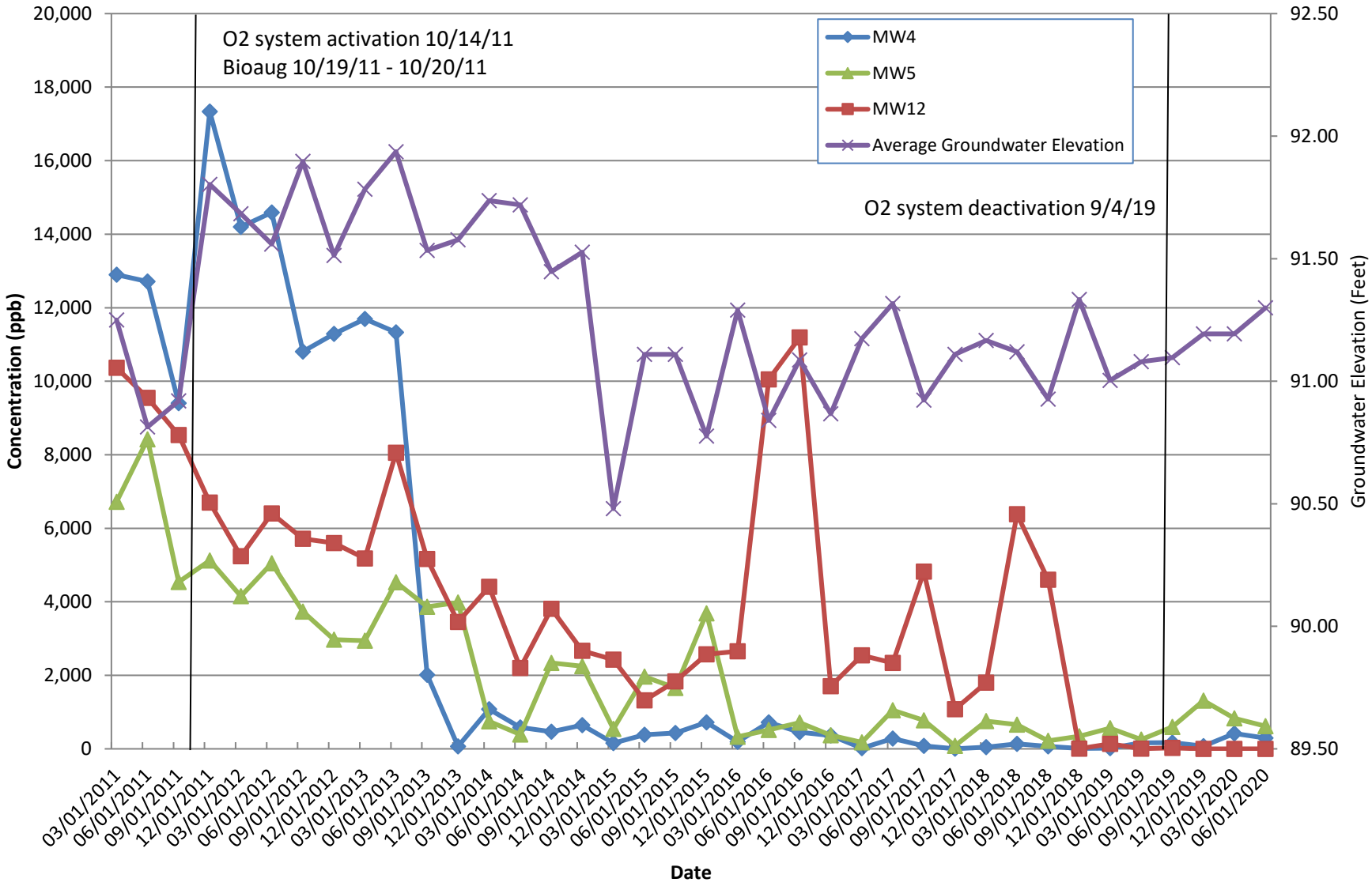


Chart 2 - Upgradient Monitoring Wells
(VOC Concentrations vs. Groundwater Elevation)

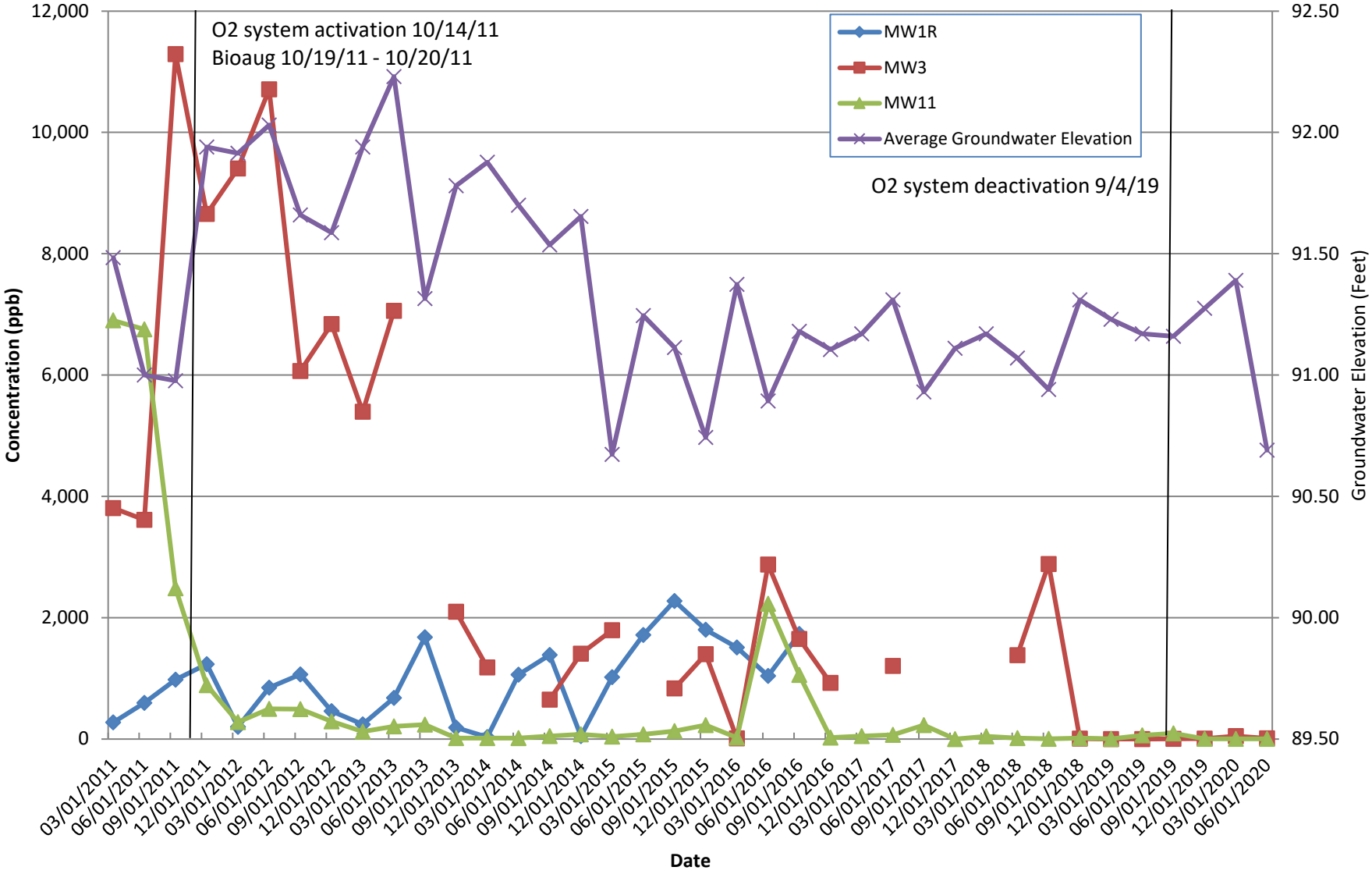
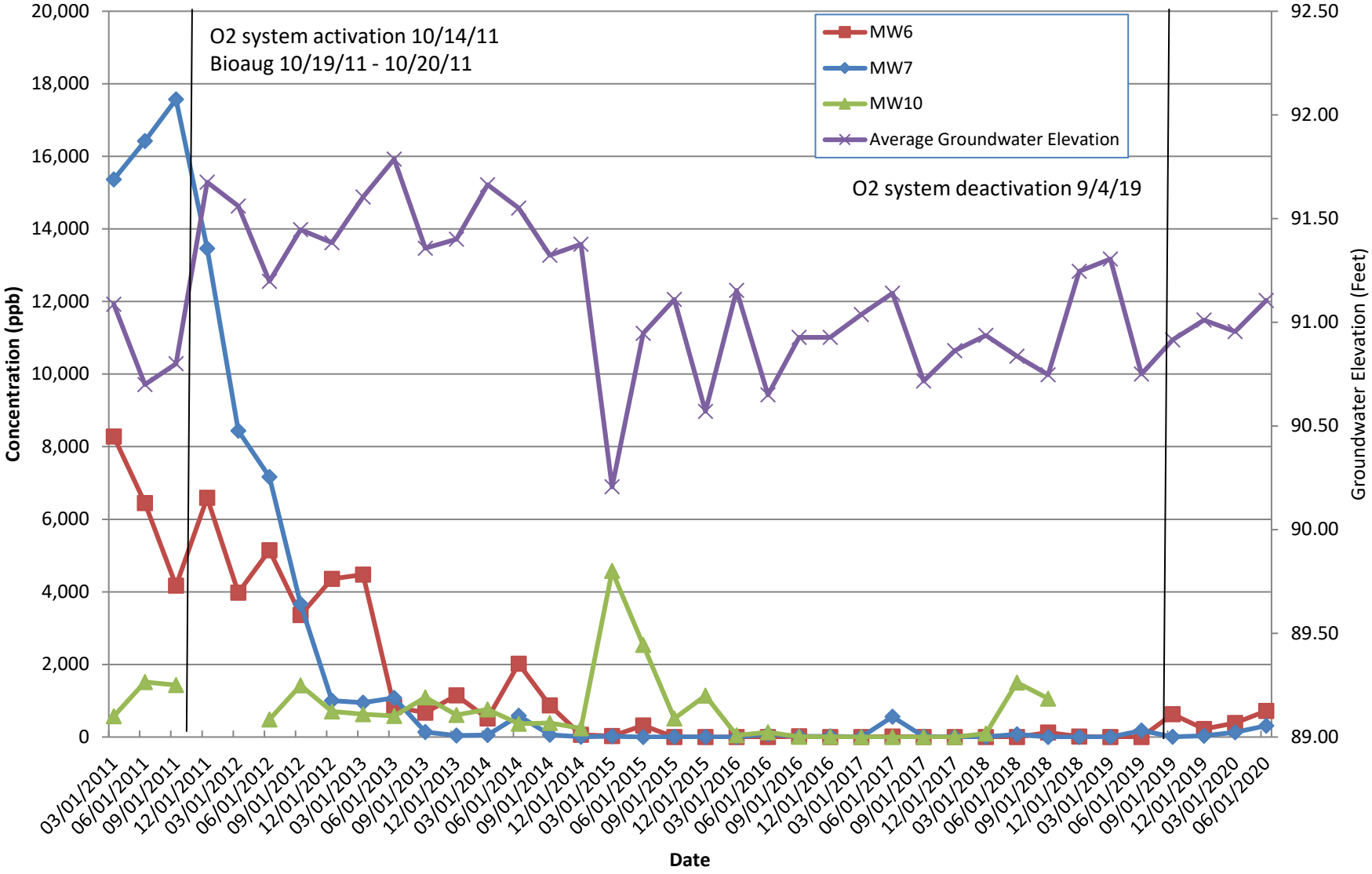


Chart 3 - Downgradient Monitoring Wells
(VOC Concentrations vs. Groundwater Elevation)



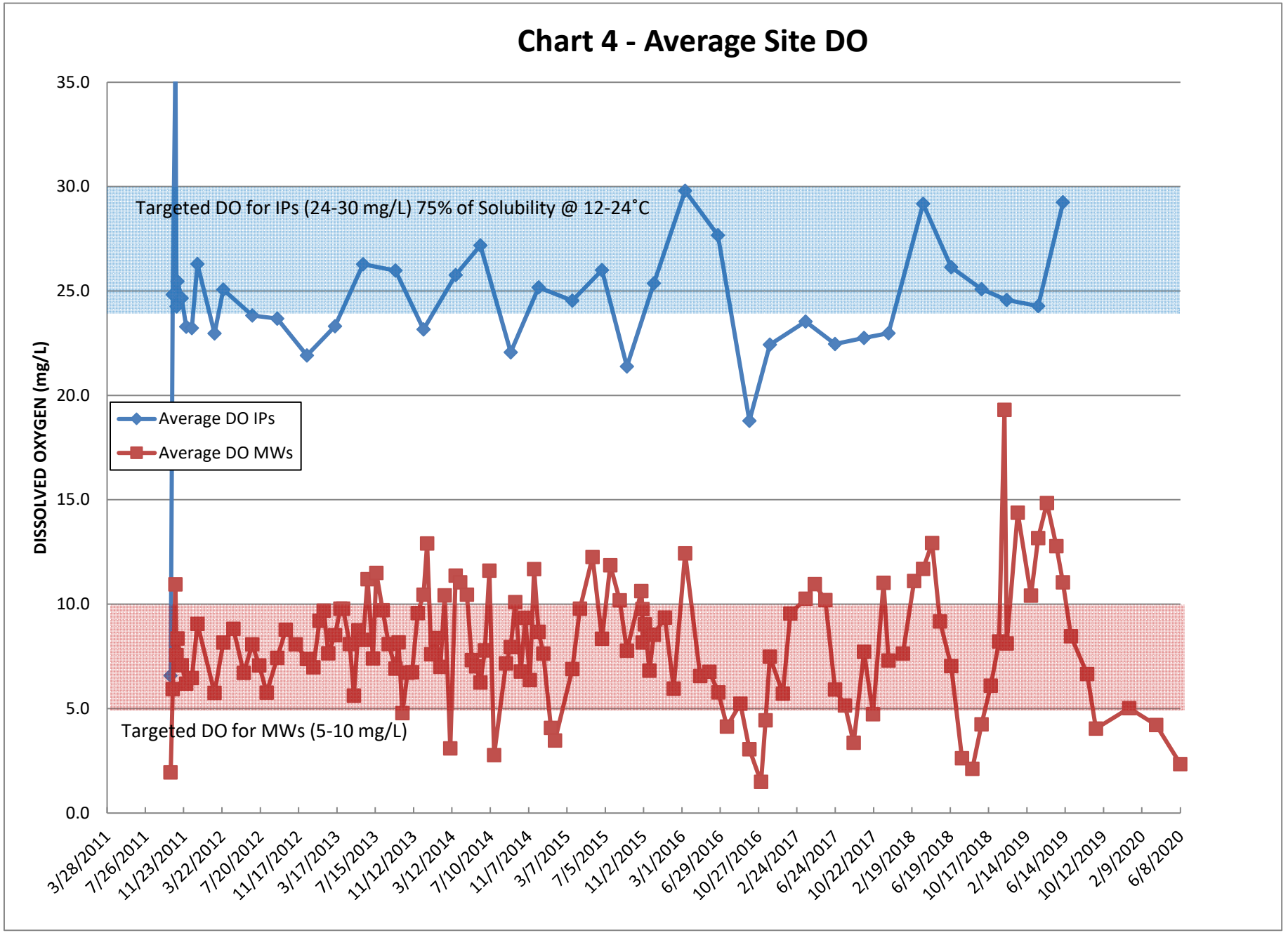


Chart 4 - Average Site DO
DISSOLVED OXYGEN (mg/L)
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
Targeted DO for IPs (24-30 mg/L) 75% of Solubility @ 12-24˚C
Targeted DO for MWs (5-10 mg/L)
Average DO IPs
Average DO MWs
3/28/2011
7/26/2011
11/23/2011
3/22/2012
7/20/2012
11/17/2012
3/17/2013
7/15/2013
11/12/2013
3/12/2014
7/10/2014
11/7/2014
3/7/2015
7/5/2015
11/2/2015
3/1/2016
6/29/2016
10/27/2016
2/24/2017
6/24/2017
10/22/2017
2/19/2018
6/19/2018
10/17/2018
2/14/2019
6/14/2019
10/12/2019
2/9/2020
6/8/2020

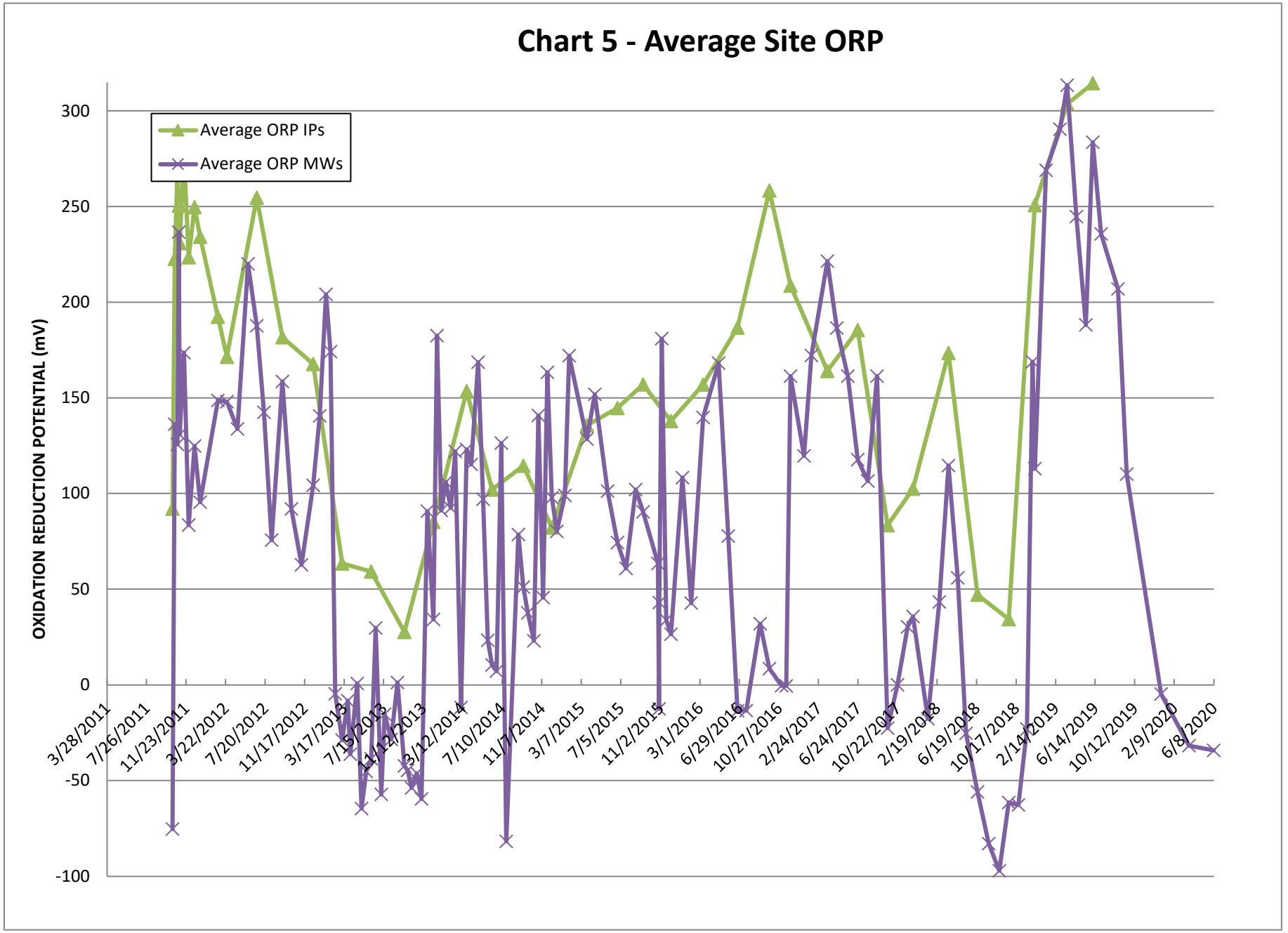
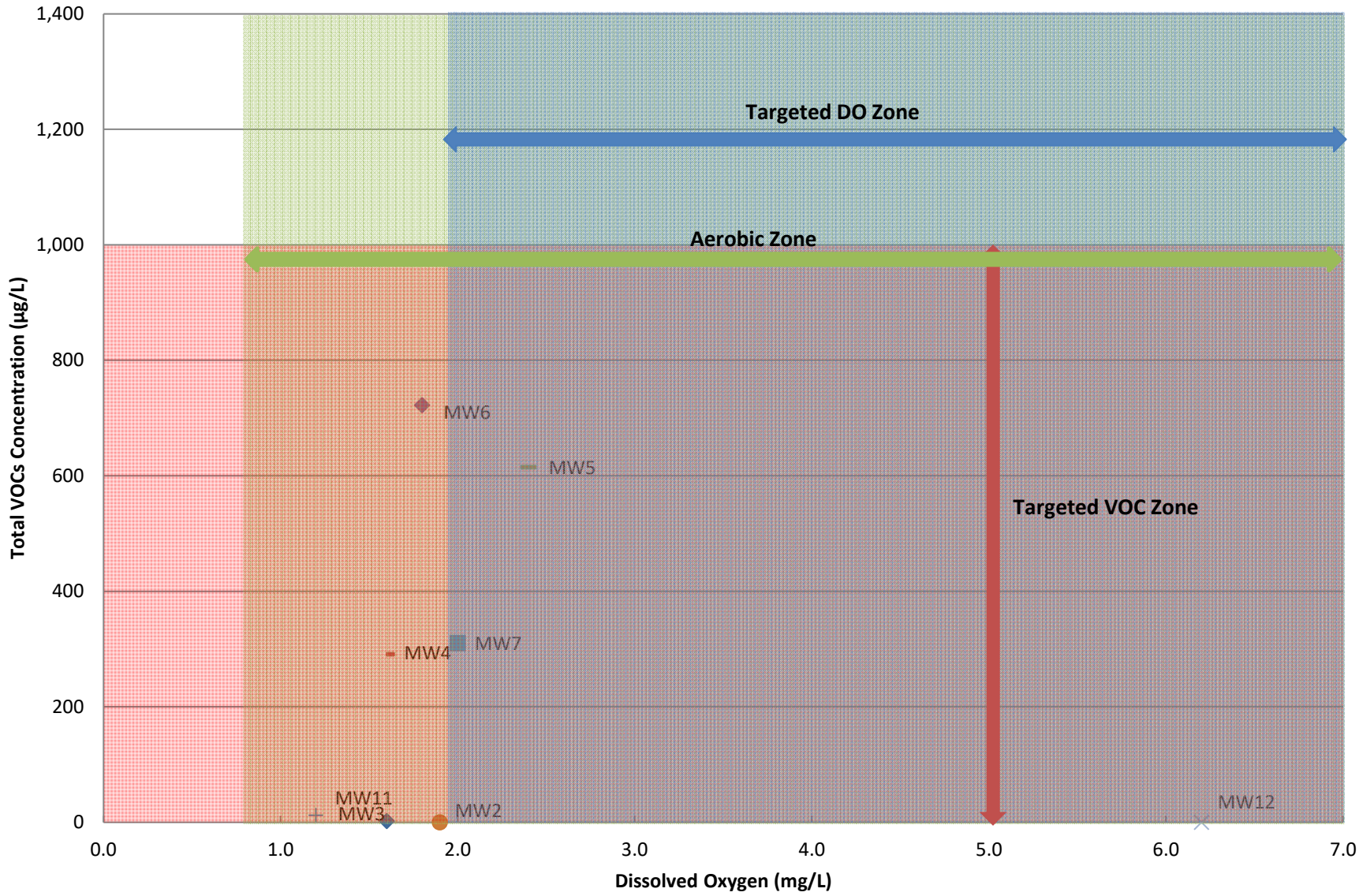


Chart 5 - Average Site ORP
Average ORP IPs
Average ORP MWs
OXIDATION REDUCTION POTENTIAL (mV)
300
250
200
150
100
50
0
-50
-100
3/28/2011
7/26/2011
11/23/2011
3/22/2012
7/20/2012
11/17/2012
3/17/2013
7/15/2013
11/12/2013
3/12/2014
7/10/2014
11/7/2014
3/7/2015
7/5/2015
11/2/2015
3/1/2016
6/29/2016
10/27/2016
2/24/2017
6/24/2017
10/22/2017
2/19/2018
6/19/2018
10/17/2018
2/14/2019
6/14/2019
10/12/2019
2/9/2020
6/8/2020

Chart 6 - Dissolved Oxygen v. Groundwater Quality (June 2020)



APPENDIX A
LABORATORY ANALYTICAL REPORT

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

June 16, 2020

Mr. Patrick Bliek
Matrix Environmental
689 Lakeview Knolls
Ontario, NY 14519

RE: Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

Dear Mr. Bliek:

Enclosed are the analytical results for sample(s) received by the laboratory on June 10, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rachel D Christner

Rachel Christner
rachel.christner@pacelabs.com
724-850-5611
Project Manager

Enclosures

cc: Ms. Christine Curtis, Matrix Environmental
Mr. Steve Marchetti, Matrix Environmental Technologies, Inc.
Matrix Biotech Results, Matrix Environmental Technologies Inc.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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SAMPLE ANALYTE COUNT

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30367234001	**MW2**	EPA 8260C	LEL	19	PASI-PA
30367234002	**MW3**	EPA 8260C	LEL	19	PASI-PA
30367234003	**MW4**	EPA 8260C	LEL	19	PASI-PA
30367234004	**MW5**	EPA 8260C	LEL	19	PASI-PA
30367234005	**MW6**	EPA 8260C	LEL	19	PASI-PA
30367234006	**MW7**	EPA 8260C	LEL	19	PASI-PA
30367234007	**MW11**	EPA 8260C	LEL	19	PASI-PA
30367234008	**MW12**	EPA 8260C	LEL	19	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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PROJECT NARRATIVE

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

Date: June 16, 2020

MW12 (Lab ID: 30367234008)

- The pH of the VOA vial used for analysis was 7.
- Post-analysis pH measurement indicates pH > 2.
- Residual Chlorine was present in the VOA vial used for analysis.

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PROJECT NARRATIVE

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

Method: **EPA 8260C**
Description: 8260C MSV
Client: Sunoco_Matrix Environmental Technologies, Inc.
Date: June 16, 2020

General Information:
8 samples were analyzed for EPA 8260C by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

Sample: MW2 **Lab ID: 30367234001** Collected: 06/08/20 09:15 Received: 06/10/20 09:15 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C MSV	Analytical Method: EPA 8260C Pace Analytical Services - Greensburg							
Benzene	ND	ug/L	1.0	1		06/15/20 14:12	71-43-2	
n-Butylbenzene	ND	ug/L	1.0	1		06/15/20 14:12	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		06/15/20 14:12	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		06/15/20 14:12	98-06-6	
Ethylbenzene	ND	ug/L	1.0	1		06/15/20 14:12	100-41-4	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		06/15/20 14:12	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		06/15/20 14:12	99-87-6	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/15/20 14:12	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		06/15/20 14:12	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		06/15/20 14:12	103-65-1	
Toluene	ND	ug/L	1.0	1		06/15/20 14:12	108-88-3	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		06/15/20 14:12	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		06/15/20 14:12	108-67-8	
m&p-Xylene	ND	ug/L	2.0	1		06/15/20 14:12	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		06/15/20 14:12	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	106	%.	70-130	1		06/15/20 14:12	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%.	70-130	1		06/15/20 14:12	17060-07-0	
Toluene-d8 (S)	98	%.	70-130	1		06/15/20 14:12	2037-26-5	
Dibromofluoromethane (S)	101	%.	70-130	1		06/15/20 14:12	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

Sample: MW3 **Lab ID: 30367234002** Collected: 06/08/20 09:53 Received: 06/10/20 09:15 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C MSV	Analytical Method: EPA 8260C Pace Analytical Services - Greensburg							
Benzene	ND	ug/L	1.0	1		06/15/20 15:53	71-43-2	
n-Butylbenzene	ND	ug/L	1.0	1		06/15/20 15:53	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		06/15/20 15:53	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		06/15/20 15:53	98-06-6	
Ethylbenzene	**2.6**	ug/L	1.0	1		06/15/20 15:53	100-41-4	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		06/15/20 15:53	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		06/15/20 15:53	99-87-6	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/15/20 15:53	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		06/15/20 15:53	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		06/15/20 15:53	103-65-1	
Toluene	ND	ug/L	1.0	1		06/15/20 15:53	108-88-3	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		06/15/20 15:53	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		06/15/20 15:53	108-67-8	
m&p-Xylene	**7.9**	ug/L	2.0	1		06/15/20 15:53	179601-23-1	
o-Xylene	**1.5**	ug/L	1.0	1		06/15/20 15:53	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	107	%.	70-130	1		06/15/20 15:53	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%.	70-130	1		06/15/20 15:53	17060-07-0	
Toluene-d8 (S)	96	%.	70-130	1		06/15/20 15:53	2037-26-5	
Dibromofluoromethane (S)	98	%.	70-130	1		06/15/20 15:53	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

Sample: MW4 **Lab ID: 30367234003** Collected: 06/08/20 10:05 Received: 06/10/20 09:15 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C MSV	Analytical Method: EPA 8260C Pace Analytical Services - Greensburg							
Benzene	ND	ug/L	1.0	1		06/15/20 16:18	71-43-2	
n-Butylbenzene	**2.1**	ug/L	1.0	1		06/15/20 16:18	104-51-8	
sec-Butylbenzene	**3.1**	ug/L	1.0	1		06/15/20 16:18	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		06/15/20 16:18	98-06-6	
Ethylbenzene	**73.6**	ug/L	1.0	1		06/15/20 16:18	100-41-4	
Isopropylbenzene (Cumene)	**23.0**	ug/L	1.0	1		06/15/20 16:18	98-82-8	
p-Isopropyltoluene	**1.5**	ug/L	1.0	1		06/15/20 16:18	99-87-6	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/15/20 16:18	1634-04-4	
Naphthalene	**6.2**	ug/L	2.0	1		06/15/20 16:18	91-20-3	
n-Propylbenzene	**30.2**	ug/L	1.0	1		06/15/20 16:18	103-65-1	
Toluene	**26.5**	ug/L	1.0	1		06/15/20 16:18	108-88-3	
1,2,4-Trimethylbenzene	**95.9**	ug/L	1.0	1		06/15/20 16:18	95-63-6	
1,3,5-Trimethylbenzene	**5.1**	ug/L	1.0	1		06/15/20 16:18	108-67-8	
m&p-Xylene	**21.2**	ug/L	2.0	1		06/15/20 16:18	179601-23-1	
o-Xylene	**8.7**	ug/L	1.0	1		06/15/20 16:18	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	104	%.	70-130	1		06/15/20 16:18	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%.	70-130	1		06/15/20 16:18	17060-07-0	
Toluene-d8 (S)	97	%.	70-130	1		06/15/20 16:18	2037-26-5	
Dibromofluoromethane (S)	97	%.	70-130	1		06/15/20 16:18	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

Sample: MW5 **Lab ID: 30367234004** Collected: 06/08/20 10:17 Received: 06/10/20 09:15 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C MSV	Analytical Method: EPA 8260C Pace Analytical Services - Greensburg							
Benzene	ND	ug/L	1.0	1		06/15/20 18:49	71-43-2	
n-Butylbenzene	**4.9**	ug/L	1.0	1		06/15/20 18:49	104-51-8	
sec-Butylbenzene	**5.2**	ug/L	1.0	1		06/15/20 18:49	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		06/15/20 18:49	98-06-6	
Ethylbenzene	**139**	ug/L	1.0	1		06/15/20 18:49	100-41-4	
Isopropylbenzene (Cumene)	**31.6**	ug/L	1.0	1		06/15/20 18:49	98-82-8	
p-Isopropyltoluene	**1.2**	ug/L	1.0	1		06/15/20 18:49	99-87-6	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/15/20 18:49	1634-04-4	
Naphthalene	**22.3**	ug/L	2.0	1		06/15/20 18:49	91-20-3	
n-Propylbenzene	**59.6**	ug/L	1.0	1		06/15/20 18:49	103-65-1	
Toluene	**10.4**	ug/L	1.0	1		06/15/20 18:49	108-88-3	
1,2,4-Trimethylbenzene	**168**	ug/L	1.0	1		06/15/20 18:49	95-63-6	
1,3,5-Trimethylbenzene	**9.5**	ug/L	1.0	1		06/15/20 18:49	108-67-8	
m&p-Xylene	**149**	ug/L	2.0	1		06/15/20 18:49	179601-23-1	
o-Xylene	**6.6**	ug/L	1.0	1		06/15/20 18:49	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	103	%.	70-130	1		06/15/20 18:49	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%.	70-130	1		06/15/20 18:49	17060-07-0	
Toluene-d8 (S)	95	%.	70-130	1		06/15/20 18:49	2037-26-5	
Dibromofluoromethane (S)	99	%.	70-130	1		06/15/20 18:49	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

Sample: MW6 **Lab ID: 30367234005** Collected: 06/08/20 10:29 Received: 06/10/20 09:15 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C MSV	Analytical Method: EPA 8260C Pace Analytical Services - Greensburg							
Benzene	ND	ug/L	1.0	1		06/15/20 16:43	71-43-2	
n-Butylbenzene	ND	ug/L	1.0	1		06/15/20 16:43	104-51-8	
sec-Butylbenzene	**1.2**	ug/L	1.0	1		06/15/20 16:43	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		06/15/20 16:43	98-06-6	
Ethylbenzene	**3.7**	ug/L	1.0	1		06/15/20 16:43	100-41-4	
Isopropylbenzene (Cumene)	**3.4**	ug/L	1.0	1		06/15/20 16:43	98-82-8	
p-Isopropyltoluene	**1.1**	ug/L	1.0	1		06/15/20 16:43	99-87-6	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/15/20 16:43	1634-04-4	
Naphthalene	**41.7**	ug/L	2.0	1		06/15/20 16:43	91-20-3	
n-Propylbenzene	**2.3**	ug/L	1.0	1		06/15/20 16:43	103-65-1	
Toluene	**9.4**	ug/L	1.0	1		06/15/20 16:43	108-88-3	
1,2,4-Trimethylbenzene	**207**	ug/L	1.0	1		06/15/20 16:43	95-63-6	
1,3,5-Trimethylbenzene	**18.2**	ug/L	1.0	1		06/15/20 16:43	108-67-8	
m&p-Xylene	**369**	ug/L	2.0	1		06/15/20 16:43	179601-23-1	
o-Xylene	**107**	ug/L	1.0	1		06/15/20 16:43	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	106	%.	70-130	1		06/15/20 16:43	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%.	70-130	1		06/15/20 16:43	17060-07-0	
Toluene-d8 (S)	102	%.	70-130	1		06/15/20 16:43	2037-26-5	
Dibromofluoromethane (S)	99	%.	70-130	1		06/15/20 16:43	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

Sample: MW7 **Lab ID: 30367234006** Collected: 06/08/20 10:40 Received: 06/10/20 09:15 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C MSV	Analytical Method: EPA 8260C Pace Analytical Services - Greensburg							
Benzene	ND	ug/L	1.0	1		06/15/20 17:08	71-43-2	
n-Butylbenzene	ND	ug/L	1.0	1		06/15/20 17:08	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		06/15/20 17:08	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		06/15/20 17:08	98-06-6	
Ethylbenzene	**38.4**	ug/L	1.0	1		06/15/20 17:08	100-41-4	
Isopropylbenzene (Cumene)	**1.3**	ug/L	1.0	1		06/15/20 17:08	98-82-8	
p-Isopropyltoluene	**5.5**	ug/L	1.0	1		06/15/20 17:08	99-87-6	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/15/20 17:08	1634-04-4	
Naphthalene	**19.3**	ug/L	2.0	1		06/15/20 17:08	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		06/15/20 17:08	103-65-1	
Toluene	**40.6**	ug/L	1.0	1		06/15/20 17:08	108-88-3	
1,2,4-Trimethylbenzene	**24.7**	ug/L	1.0	1		06/15/20 17:08	95-63-6	
1,3,5-Trimethylbenzene	**9.5**	ug/L	1.0	1		06/15/20 17:08	108-67-8	
m&p-Xylene	**155**	ug/L	2.0	1		06/15/20 17:08	179601-23-1	
o-Xylene	**35.4**	ug/L	1.0	1		06/15/20 17:08	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	105	%.	70-130	1		06/15/20 17:08	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%.	70-130	1		06/15/20 17:08	17060-07-0	
Toluene-d8 (S)	99	%.	70-130	1		06/15/20 17:08	2037-26-5	
Dibromofluoromethane (S)	99	%.	70-130	1		06/15/20 17:08	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

Sample: MW11 **Lab ID: 30367234007** Collected: 06/08/20 09:39 Received: 06/10/20 09:15 Matrix: Water

Comments: • Samples in this workorder were received in the laboratory without an associated trip blank.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C MSV	Analytical Method: EPA 8260C Pace Analytical Services - Greensburg							
Benzene	ND	ug/L	1.0	1		06/15/20 17:33	71-43-2	
n-Butylbenzene	ND	ug/L	1.0	1		06/15/20 17:33	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		06/15/20 17:33	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		06/15/20 17:33	98-06-6	
Ethylbenzene	ND	ug/L	1.0	1		06/15/20 17:33	100-41-4	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		06/15/20 17:33	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		06/15/20 17:33	99-87-6	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/15/20 17:33	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		06/15/20 17:33	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		06/15/20 17:33	103-65-1	
Toluene	**1.0**	ug/L	1.0	1		06/15/20 17:33	108-88-3	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		06/15/20 17:33	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		06/15/20 17:33	108-67-8	
m&p-Xylene	ND	ug/L	2.0	1		06/15/20 17:33	179601-23-1	
o-Xylene	**1.2**	ug/L	1.0	1		06/15/20 17:33	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	111	%.	70-130	1		06/15/20 17:33	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%.	70-130	1		06/15/20 17:33	17060-07-0	
Toluene-d8 (S)	98	%.	70-130	1		06/15/20 17:33	2037-26-5	
Dibromofluoromethane (S)	101	%.	70-130	1		06/15/20 17:33	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

Sample: MW12 **Lab ID: 30367234008** Collected: 06/08/20 10:09 Received: 06/10/20 09:15 Matrix: Water

Comments:
- Samples in this workorder were received in the laboratory without an associated trip blank.
- The pH of the VOA vial used for analysis was 7.
- Post-analysis pH measurement indicates pH > 2.
- Residual Chlorine was present in the VOA vial used for analysis.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C MSV	Analytical Method: EPA 8260C Pace Analytical Services - Greensburg							
Benzene	ND	ug/L	1.0	1		06/15/20 15:02	71-43-2	
n-Butylbenzene	ND	ug/L	1.0	1		06/15/20 15:02	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		06/15/20 15:02	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		06/15/20 15:02	98-06-6	
Ethylbenzene	ND	ug/L	1.0	1		06/15/20 15:02	100-41-4	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		06/15/20 15:02	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		06/15/20 15:02	99-87-6	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		06/15/20 15:02	1634-04-4	
Naphthalene	ND	ug/L	2.0	1		06/15/20 15:02	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		06/15/20 15:02	103-65-1	
Toluene	ND	ug/L	1.0	1		06/15/20 15:02	108-88-3	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		06/15/20 15:02	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		06/15/20 15:02	108-67-8	
m&p-Xylene	ND	ug/L	2.0	1		06/15/20 15:02	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		06/15/20 15:02	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	108	%.	70-130	1		06/15/20 15:02	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%.	70-130	1		06/15/20 15:02	17060-07-0	
Toluene-d8 (S)	101	%.	70-130	1		06/15/20 15:02	2037-26-5	
Dibromofluoromethane (S)	99	%.	70-130	1		06/15/20 15:02	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

QC Batch: 400895 Analysis Method: EPA 8260C
QC Batch Method: EPA 8260C Analysis Description: 8260C MSV
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30367234001, 30367234002, 30367234003, 30367234004, 30367234005, 30367234006, 30367234007, 30367234008

METHOD BLANK: 1941066 Matrix: Water
Associated Lab Samples: 30367234001, 30367234002, 30367234003, 30367234004, 30367234005, 30367234006, 30367234007, 30367234008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	ND	1.0	06/15/20 12:31	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	06/15/20 12:31	
Benzene	ug/L	ND	1.0	06/15/20 12:31	
Ethylbenzene	ug/L	ND	1.0	06/15/20 12:31	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	06/15/20 12:31	
m&p-Xylene	ug/L	ND	2.0	06/15/20 12:31	
Methyl-tert-butyl ether	ug/L	ND	1.0	06/15/20 12:31	
n-Butylbenzene	ug/L	ND	1.0	06/15/20 12:31	
n-Propylbenzene	ug/L	ND	1.0	06/15/20 12:31	
Naphthalene	ug/L	ND	2.0	06/15/20 12:31	
o-Xylene	ug/L	ND	1.0	06/15/20 12:31	
p-Isopropyltoluene	ug/L	ND	1.0	06/15/20 12:31	
sec-Butylbenzene	ug/L	ND	1.0	06/15/20 12:31	
tert-Butylbenzene	ug/L	ND	1.0	06/15/20 12:31	
Toluene	ug/L	ND	1.0	06/15/20 12:31	
1,2-Dichloroethane-d4 (S)	%.	98	70-130	06/15/20 12:31	
4-Bromofluorobenzene (S)	%.	106	70-130	06/15/20 12:31	
Dibromofluoromethane (S)	%.	103	70-130	06/15/20 12:31	
Toluene-d8 (S)	%.	84	70-130	06/15/20 12:31	

LABORATORY CONTROL SAMPLE: 1941067

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.1	106	70-130	
1,3,5-Trimethylbenzene	ug/L	20	20.5	103	70-130	
Benzene	ug/L	20	21.6	108	70-130	
Ethylbenzene	ug/L	20	21.6	108	70-130	
Isopropylbenzene (Cumene)	ug/L	20	23.5	118	70-130	
m&p-Xylene	ug/L	40	41.7	104	70-130	
Methyl-tert-butyl ether	ug/L	20	18.3	91	70-130	
n-Butylbenzene	ug/L	20	20.1	100	70-130	
n-Propylbenzene	ug/L	20	21.0	105	70-130	
Naphthalene	ug/L	20	21.4	107	55-160	
o-Xylene	ug/L	20	21.0	105	70-130	
p-Isopropyltoluene	ug/L	20	20.9	105	70-130	
sec-Butylbenzene	ug/L	20	21.6	108	70-130	
tert-Butylbenzene	ug/L	20	21.1	106	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

LABORATORY CONTROL SAMPLE: 1941067

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Toluene	ug/L	20	21.2	106	70-130	
1,2-Dichloroethane-d4 (S)	%.			94	70-130	
4-Bromofluorobenzene (S)	%.			102	70-130	
Dibromofluoromethane (S)	%.			100	70-130	
Toluene-d8 (S)	%.			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1941068 1941069

Parameter	Units	30367234001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2,4-Trimethylbenzene	ug/L	ND	20	20	17.3	18.6	86	93	52-151	8	
1,3,5-Trimethylbenzene	ug/L	ND	20	20	16.8	17.8	84	89	53-142	6	
Benzene	ug/L	ND	20	20	17.6	17.5	88	87	50-149	1	
Ethylbenzene	ug/L	ND	20	20	17.2	18.1	86	90	63-135	5	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	19.7	20.9	98	104	50-167	6	
m&p-Xylene	ug/L	ND	40	40	33.9	35.3	85	88	63-135	4	
Methyl-tert-butyl ether	ug/L	ND	20	20	15.3	13.0	77	65	53-123	16	
n-Butylbenzene	ug/L	ND	20	20	15.4	15.8	77	79	51-125	3	
n-Propylbenzene	ug/L	ND	20	20	17.1	17.9	86	89	56-135	4	
Naphthalene	ug/L	ND	20	20	16.1	16.1	81	81	30-157	0	
o-Xylene	ug/L	ND	20	20	16.9	17.6	85	88	57-133	4	
p-Isopropyltoluene	ug/L	ND	20	20	16.7	17.3	83	87	56-128	4	
sec-Butylbenzene	ug/L	ND	20	20	17.7	19.3	87	95	56-130	9	
tert-Butylbenzene	ug/L	ND	20	20	17.7	18.2	88	91	60-129	3	
Toluene	ug/L	ND	20	20	17.6	17.5	88	87	59-139	1	
1,2-Dichloroethane-d4 (S)	%.						95	86	70-130		
4-Bromofluorobenzene (S)	%.						106	110	70-130		
Dibromofluoromethane (S)	%.						100	94	70-130		
Toluene-d8 (S)	%.						102	96	70-130		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DUNS 00001289 181 Delaware Ave
Pace Project No.: 30367234

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30367234001	**MW2**	EPA 8260C	400895		
30367234002	**MW3**	EPA 8260C	400895		
30367234003	**MW4**	EPA 8260C	400895		
30367234004	**MW5**	EPA 8260C	400895		
30367234005	**MW6**	EPA 8260C	400895		
30367234006	**MW7**	EPA 8260C	400895		
30367234007	**MW11**	EPA 8260C	400895		
30367234008	**MW12**	EPA 8260C	400895		

Matrix BioTech - Sunoco

PO Box 427
Orchard Park, NY 14127

Billing Information:
Accounts Payable
PO Box 427
Orchard Park, NY 14127

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

WO# : 30367234

30367234

Report to: **Christine Curtis**

Email To: **ccurtis@matrixbiotech.com; smarchetti@matrixbiotech.com;**

Project Description: **Evergreen 181 Delaware**

City/State Collected: NY

Phone: **908-399-3651**
Fax:

Client Project # EG 181 delaware 10-043

Lab Project # **SUNMATRIXBIO-0000128**

Collected by (print): N.A. Ten Cate

Site/Facility ID # **00001289**

P.O. # 10-043

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Quote #

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day Normal

Date Results Needed

L #

Table #

Acctnum: **SUNMATRIXBIO**
Template: **T146942**
Prelogin: **P696441**
TSR: **134 - Mark W. Beasley**
PB: 3-1-19

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260STARS 40mlAmb-HCl	Remarks	Sample # (lab only)
MW2	Grab	GW		6/8/20	9:15	3	X		001
MW3		GW		6/8/20	9:53	3	X		002
MW4		GW		6/8/20	10:05	3	X		003
MW5		GW		6/8/20	10:17	3	X		004
MW6		GW		6/8/20	10:29	3	X		005
MW7		GW		6/8/20	10:40	3	X		006
MW11		GW		6/8/20	9:39	3	X		007
MW12		GW		6/8/20	10:09	3	X		008
[redacted]		GW		[illegible]		3	X		

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
[signature]	6/8/2020	11:00am	[signature] 6-10-20 9:19		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK

Pittsburgh Lab Sample Condition Upon Receipt

Pace Analytical

Client Name: Sunoco Matrix

Project # 30367234

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Label PM

LIMS Login PM

Tracking #: 3936 9079 7311

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Thermometer Used 9 Type of Ice: (Wet) Blue None

Cooler Temperature Observed Temp 6.4 °C Correction Factor: -0.5 °C Final Temp: 5.9 °C

Temp should be above freezing to 6°C

Comments:	Yes	No	N/A	pH paper Lot# N/A	Date and Initials of person examining contents: PM 6-10-20
Chain of Custody Present:	✓			1.	
Chain of Custody Filled Out:	✓			2.	
Chain of Custody Relinquished:	✓			3.	
Sampler Name & Signature on COC:	✓			4.	
Sample Labels match COC:	✓			5.	
-Includes date/time/ID Matrix: WT					
Samples Arrived within Hold Time:	✓			6.	
Short Hold Time Analysis (<72hr remaining):		✓		7.	
Rush Turn Around Time Requested:		✓		8.	
Sufficient Volume:	✓			9.	
Correct Containers Used:	✓			10.	
-Pace Containers Used:		✓			
Containers Intact:	✓			11.	
Orthophosphate field filtered			✓	12.	
Hex Cr Aqueous sample field filtered			✓	13.	
Organic Samples checked for dechlorination:			✓	14.	
Filtered volume received for Dissolved tests			✓	15.	
All containers have been checked for preservation. exceptions: (VOA), coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix			✓	16.	
All containers meet method preservation requirements.	✓			Initial when completed PM	Date/time of preservation
				Lot # of added preservative	
Headspace in VOA Vials (>6mm):	✓			17. Headspace in 2 VOA MW4, 2 VOAs MW5	
Trip Blank Present:		✓		18.	
Trip Blank Custody Seals Present		✓			
Rad Samples Screened < 0.5 mrem/hr			✓	Initial when completed: PM	Date:

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

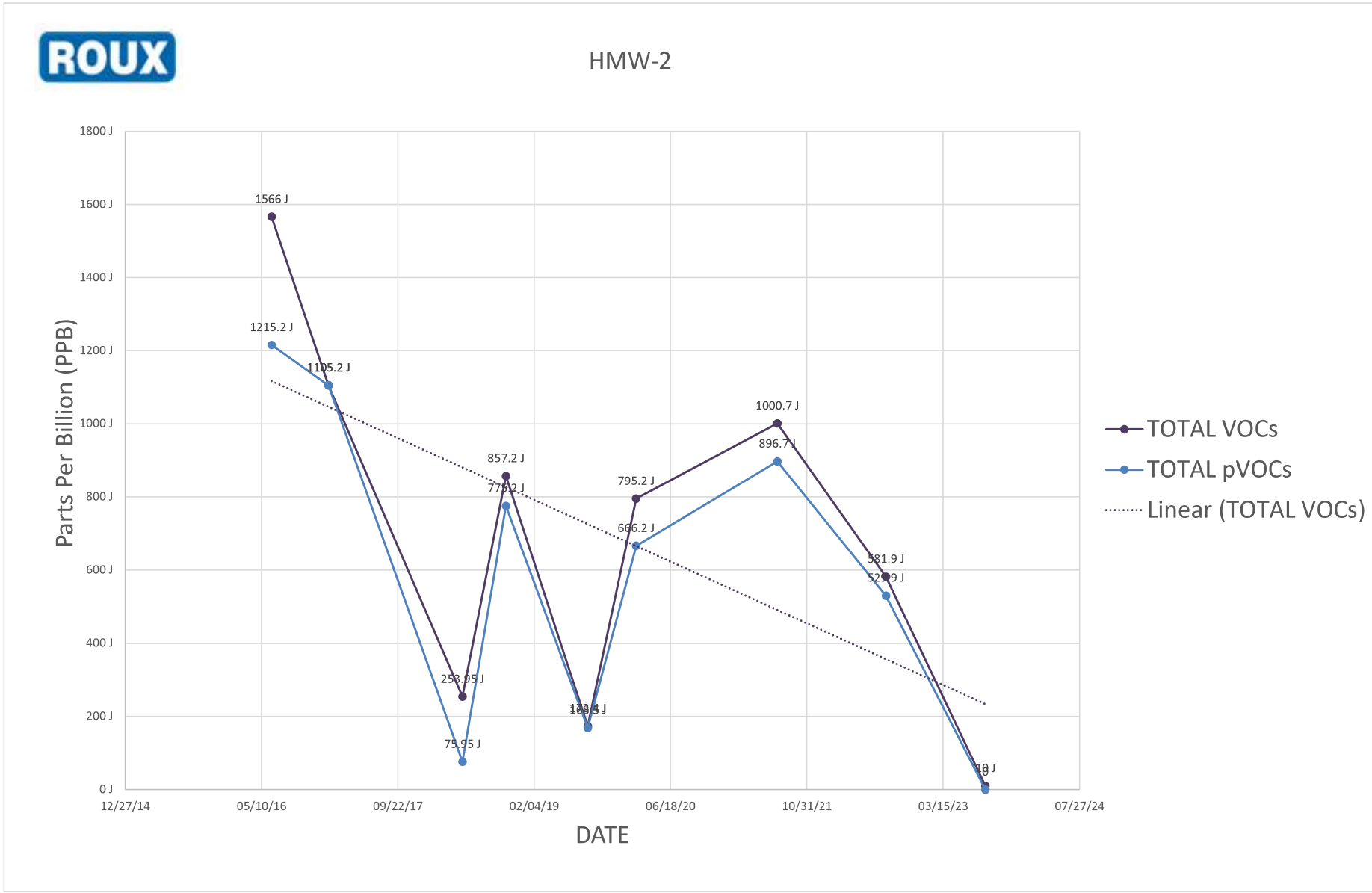
☐ **A check in this box indicates that additional information has been stored in ereports.**

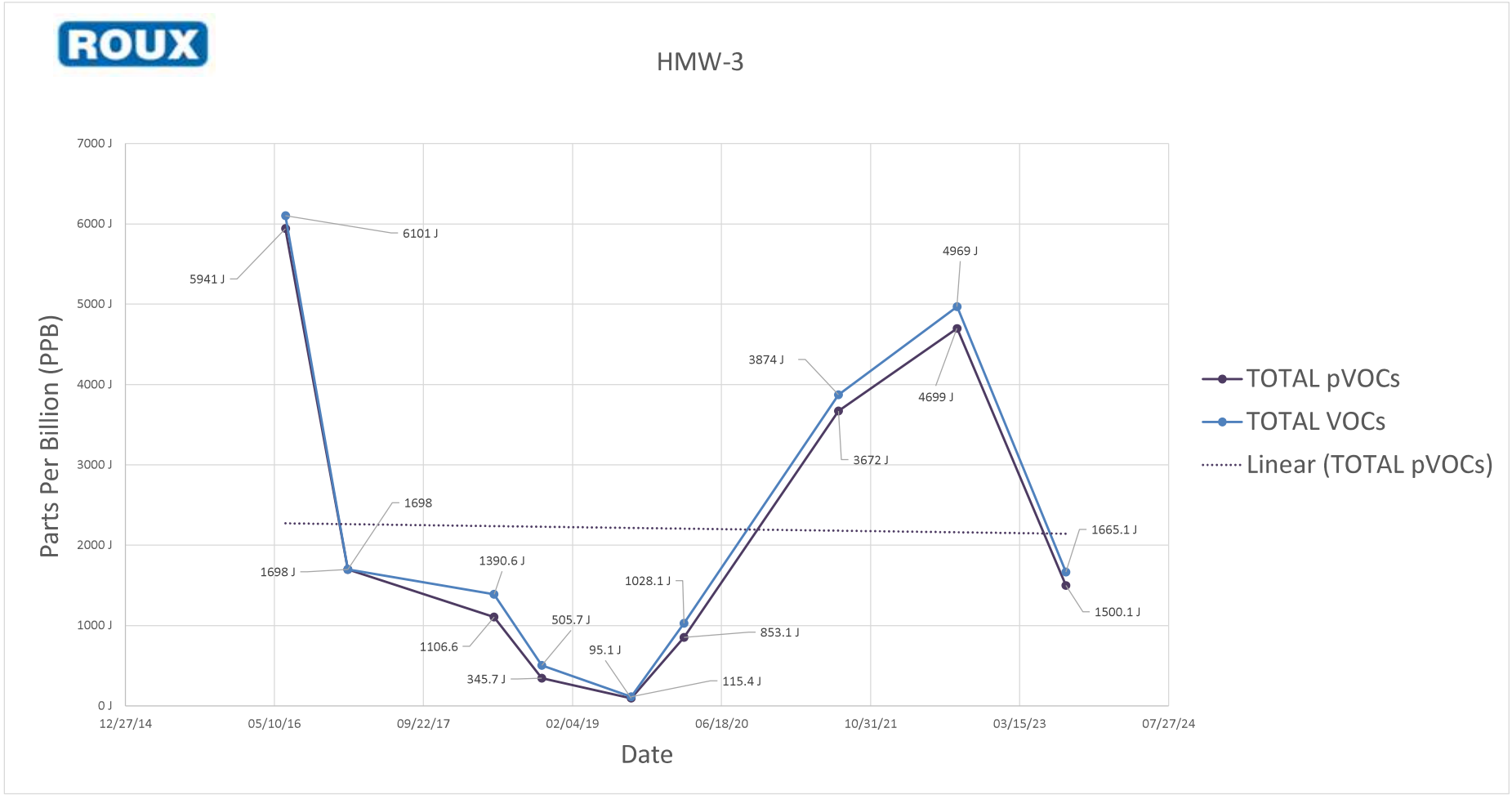
Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

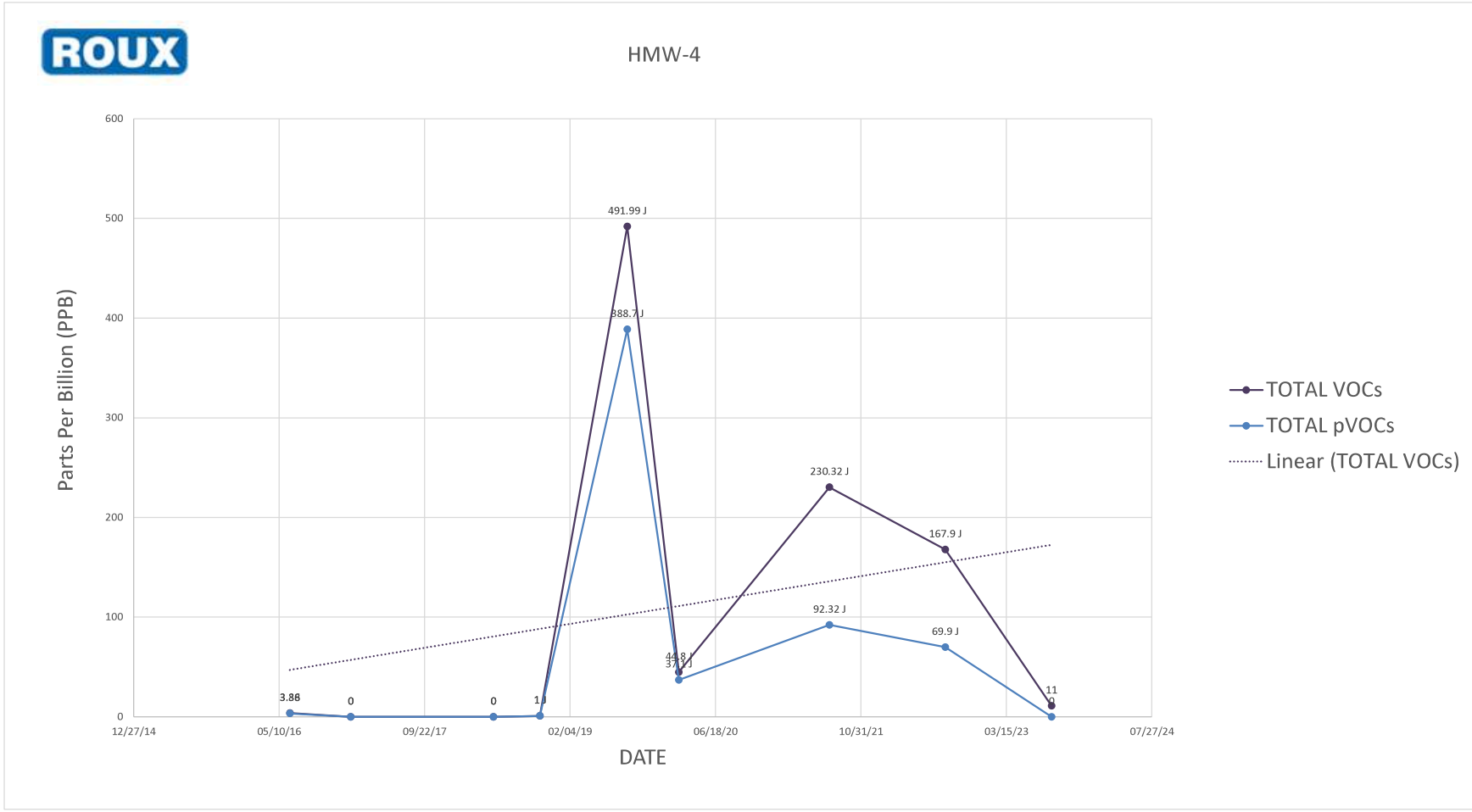
*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

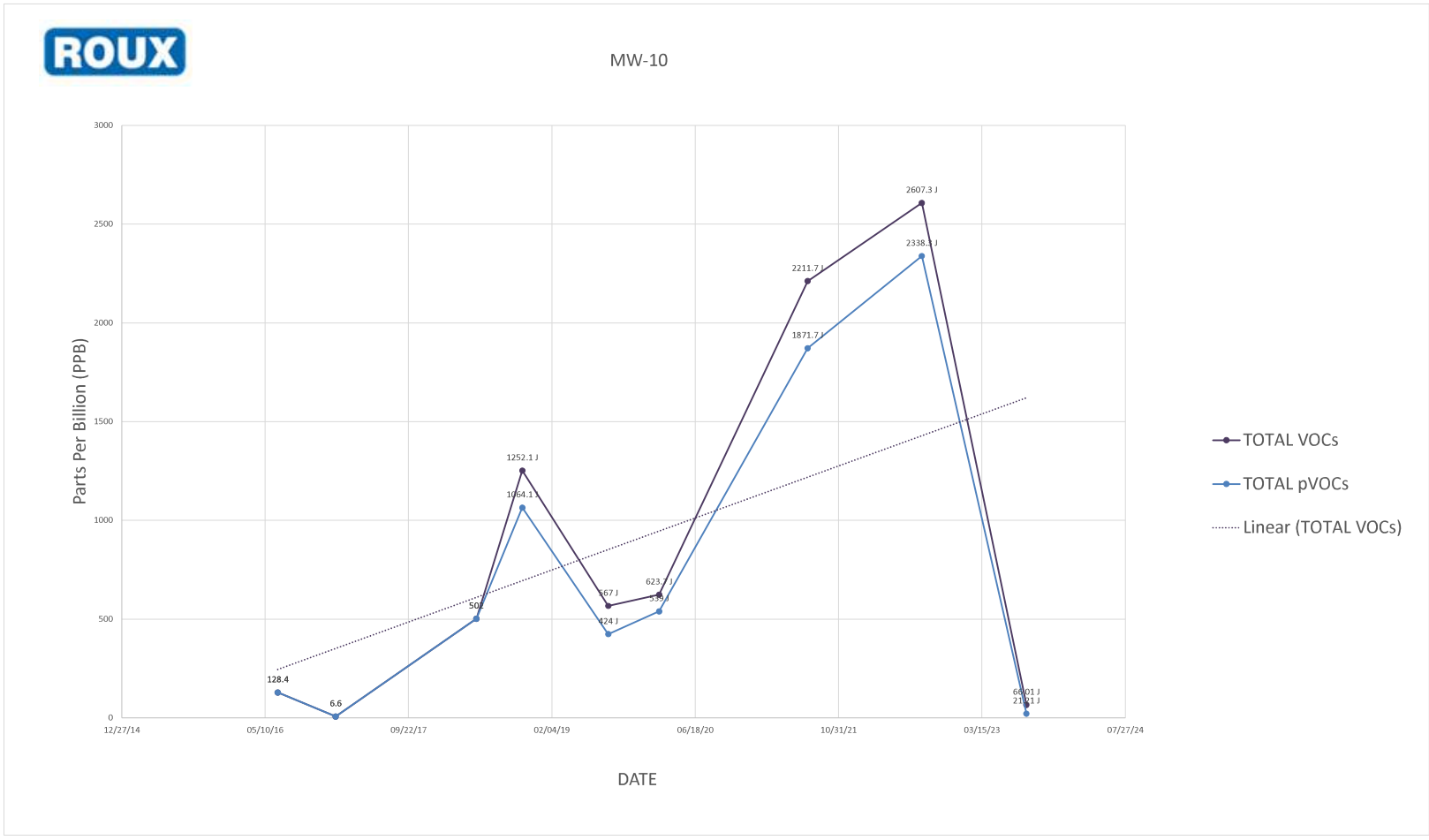
APPENDIX F

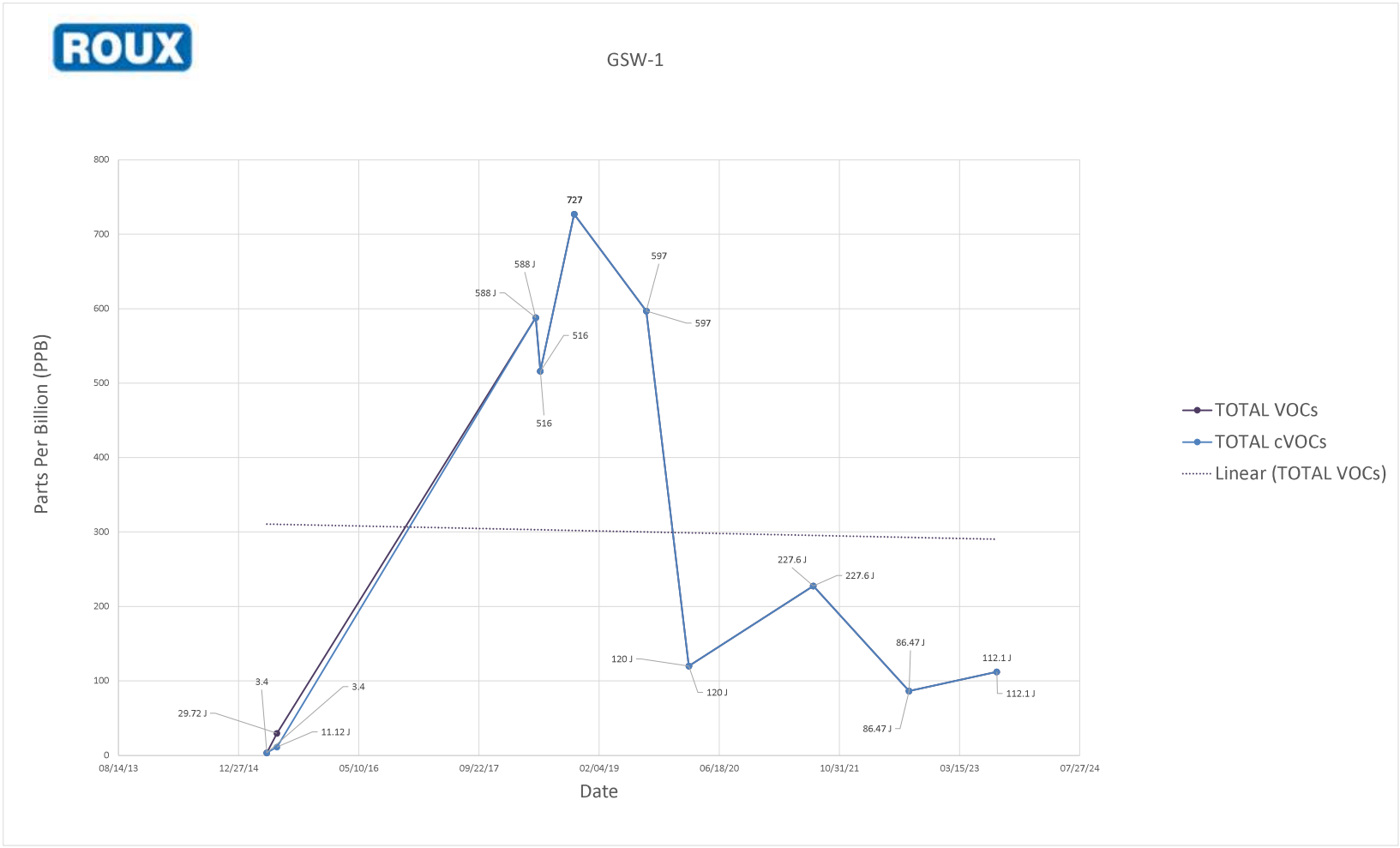
HISTORICAL TREND ANALYSIS


HMW-2
Parts Per Billion (PPB)
1800 J
1600 J
1400 J
1200 J
1000 J
800 J
600 J
400 J
200 J
0 J
12/27/14
05/10/16
09/22/17
02/04/19
06/18/20
10/31/21
03/15/23
07/27/24
DATE
1566 J
1215.2 J
1105.2 J
857.2 J
253.95 J
75.95 J
795.2 J
666.2 J
1000.7 J
896.7 J
581.9 J
TOTAL VOCs
TOTAL pVOCs
Linear (TOTAL VOCs)


ROUX
HMW-3
Parts Per Billion (PPB)
7000 J
6000 J
5000 J
4000 J
3000 J
2000 J
1000 J
0 J
12/27/14
05/10/16
09/22/17
02/04/19
06/18/20
10/31/21
03/15/23
07/27/24
Date
5941 J
6101 J
1698
1698 J
1390.6 J
1106.6
505.7 J
345.7 J
95.1 J
1028.1 J
853.1 J
115.4 J
3874 J
4969 J
4699 J
3672 J
1665.1 J
1500.1 J
TOTAL pVOCs
TOTAL VOCs
Linear (TOTAL pVOCs)


ROUX
HMW-4
Parts Per Billion (PPB)
600
500
400
300
200
100
0
491.99 J
388.7 J
230.32 J
167.9 J
92.32 J
69.9 J
3.88
0
0
11
12/27/14
05/10/16
09/22/17
02/04/19
06/18/20
10/31/21
03/15/23
07/27/24
DATE
TOTAL VOCs
TOTAL pVOCs
Linear (TOTAL VOCs)


MW-10
Parts Per Billion (PPB)
DATE
3000
2500
2000
1500
1000
500
0
12/27/14
05/10/16
09/22/17
02/04/19
06/18/20
10/31/21
03/15/23
07/27/24
2607.3 J
2338.3 J
2211.7 J
1871.7 J
1252.1 J
1064.1 J
623.1 J
567 J
424 J
128.4
6.6
TOTAL VOCs
TOTAL pVOCs
Linear (TOTAL VOCs)


ROUX
GSW-1
Parts Per Billion (PPB)
800
700
600
500
400
300
200
100
0
08/14/13
12/27/14
05/10/16
09/22/17
02/04/19
06/18/20
10/31/21
03/15/23
07/27/24
Date
727
588 J
588 J
597
597
516
516
3.4
3.4
29.72 J
11.12 J
120 J
120 J
227.6 J
227.6 J
86.47 J
86.47 J
112.1 J
112.1 J
TOTAL VOCs
TOTAL cVOCs
Linear (TOTAL VOCs)

APPENDIX G

REMAINING SOIL CONTAMINATION ONSITE

LEGEND:
BCP / PROPERTY BOUNDARY
EXISTING BUILDING
PARCEL BOUNDARY
ROAD
HISTORIC FILLING STATION LOCATION (APPROX.)
IRM EXCAVATION BOUNDARY (APPROX.)
MW-2 MONITORING WELL (MATRIX, 2004-2010)
MW-8 DECOMMISSIONED MONITORING WELL (MATRIX, 2014)
TP-1 TEST PIT (BENCHMARK, JULY 2001)
B-2 SOIL BORING (GZA, JUNE 2003)
B-1 TEMPORARY MONITORING WELL (GZA, JUNE 2003)
SB1 SOIL BORING (GES, SEPTEMBER 2005)
SB104 SOIL BORING (METI, MARCH 2011)
IP1/SB112 INJECTION POINT / BORING (METI, MARCH 2011)
PZ1/SB-114 PIEZOMETER / BORING (METI, MARCH 2011)
HSVE-1 SOIL VAPOR EXTRACTION WELL (GES, MARCH 2010)
S-1 AMBIENT & INDOOR AIR (GES, JANUARY 2007)
Note:
1. Approximate IRM excavation limits are shown. Neither the excavation boundaries nor the confirmatory sample locations were surveyed; therefore, the excavation as shown was generated based on field sketches provided by IEG.
2. Boring and sample locations are approximate as provided by IEG.
3. Historic locations, if shown, are approximated based on scaled drawings provided by the respective consulting firm.
DELAWARE AVENUE
WEST HURON STREET
FRANKLIN ST
BEAN AL
(66' WIDE)
APPROX. LOCATION
500-GALLON WASTE OIL UST
APPROX. LOCATION
2 x 1,500 GALLON GASOLINE USTs
APPROX. LOCATION
2 x 1,500 GALLON GASOLINE USTs
FORMER SUNOCO STATION
1-STORY CONC. BLOCK BUILDING
183 DELAWARE
EMERSON HURON, LLC
MULTI-STORY CONC. BLOCK BUILDING
73 HURON WEST
EMERSON HURON, LLC
GYMNASIUM AND AT GRADE PARKING
77 HURON WEST
EMERSON HURON, LLC
PARKING LOT
79 HURON WEST
STAIRS
FMR. FREIGHT ELEVATOR
SUMP TRENCH
SUMP PUMP
SIDEWALK VAULT
BENCHMARK
Hydrant Top Nut
Elev. 609.30'
SCALE: 1 INCH = 20 FEET
SCALE IN FEET
(approximate)

ROUX
2558 HAMBURG TURNPIKE, SUITE 300
BUFFALO, NY 14218
(716) 856-0599

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HISTORIC INVESTIGATION LOCATIONS
SITE MANAGEMENT PLAN
BCP SITE NO. C915282
73-79 WEST HURON STREET
BUFFALO, NEW YORK
PREPARED FOR
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FIGURE 7

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SI SAMPLE LOCATIONS

SITE MANAGEMENT PLAN
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FIGURE 8

COMPLETED IRM ACTIVITIES

SITE MANAGEMENT PLAN

BCP SITE NO. C915282

73-79 WEST HURON STREET

BUFFALO, NEW YORK

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FIGURE 9

C:\Users\CJACK\Documents\Projects\Emerson Huron\CAD\2021 SMP Response to DEC Comments\Figure 10_Remaining Soil Sample Exceedances Above USCOs.dwg

LEGEND:

- BCP / PROPERTY BOUNDARY
- EXISTING BUILDING
- PARCEL BOUNDARY
- NAME — ROAD
- IRM EXCAVATION BOUNDARY (APPROX.)
- MW-2 — MONITORING WELL (METI, 2004-2010)
- MW-8 — DECOMMISSIONED MONITORING WELL (METI, 2014)
- HMW-1 — MONITORING WELL (BM, 2016)
- IMPACTED AREAS ABOVE USCOs
- IMPACTED AREAS ABOVE USCOs EXCAVATED DURING IRM

Note:

1. *Approximate IRM excavation limits are shown. Neither the excavation boundaries nor the confirmatory sample locations were surveyed; therefore, the excavation as shown was generated based on field sketches provided by IEG .*
2. *Boring and sample locations are approximate as provided by IEG.*
3. *Historic locations, if shown, are approximated based on scaled drawings provided by the respective consulting firm.*

Impacted Areas Above USCOs

Location	Table Ref.	Depth	Compound
GP-6	9A	16.0	1,2,4-Trimethylbenzene n-Propylbenzene
GP-8	9A	16.0	n-Propylbenzene
GP-14	9A	13.0	EXCAVATED DURING IRM
GP-15	9A	13.0	EXCAVATED DURING IRM
GP-16	9A	13.0	EXCAVATED DURING IRM
GP-17	9A	13.0	EXCAVATED DURING IRM
BS-2	14A	2.0 (below basement floor)	Mercury
HS-4	15A	14.0	Methylene chloride
HS-5	15A	15.0	1,2-Dichloroethane
HS-6	15A	14.0	EXCAVATED DURING IRM
HS-8	15A	20.0	Tetrachloroethene
HS-9	15A	15.0	EXCAVATED DURING IRM
HS-11	15A	12.0 & 18.0	EXCAVATED DURING IRM
HS-12	15A	14.0	EXCAVATED DURING IRM
HS-13	15A	15.0	EXCAVATED DURING IRM
CBS-7	23A	18.0	Total Xylenes
CBS-9	23A	18.0	1,2,4-Trimethylbenzene Ethylbenzene Total Xylenes
CB-4	23A	13.75 - 15.0	1,2,4-Trimethylbenzene Total Xylenes
CB-5	23A	12.0 - 14.0	1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Ethylbenzene n-Propylbenzene Toluene Total Xylenes
CWS-15	23A	11.0	Methylene chloride Total Xylenes
CWS-21	23A	10.0	Total Xylenes
CWS-22	23A	9.0	Methylene chloride Total Xylenes
CWS-23	23A	10.0	Methylene chloride Total Xylenes

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REMAINING SOIL SAMPLE EXCEEDANCES ABOVE USCOs

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73-79 WEST HURON STREET
BUFFALO, NEW YORK

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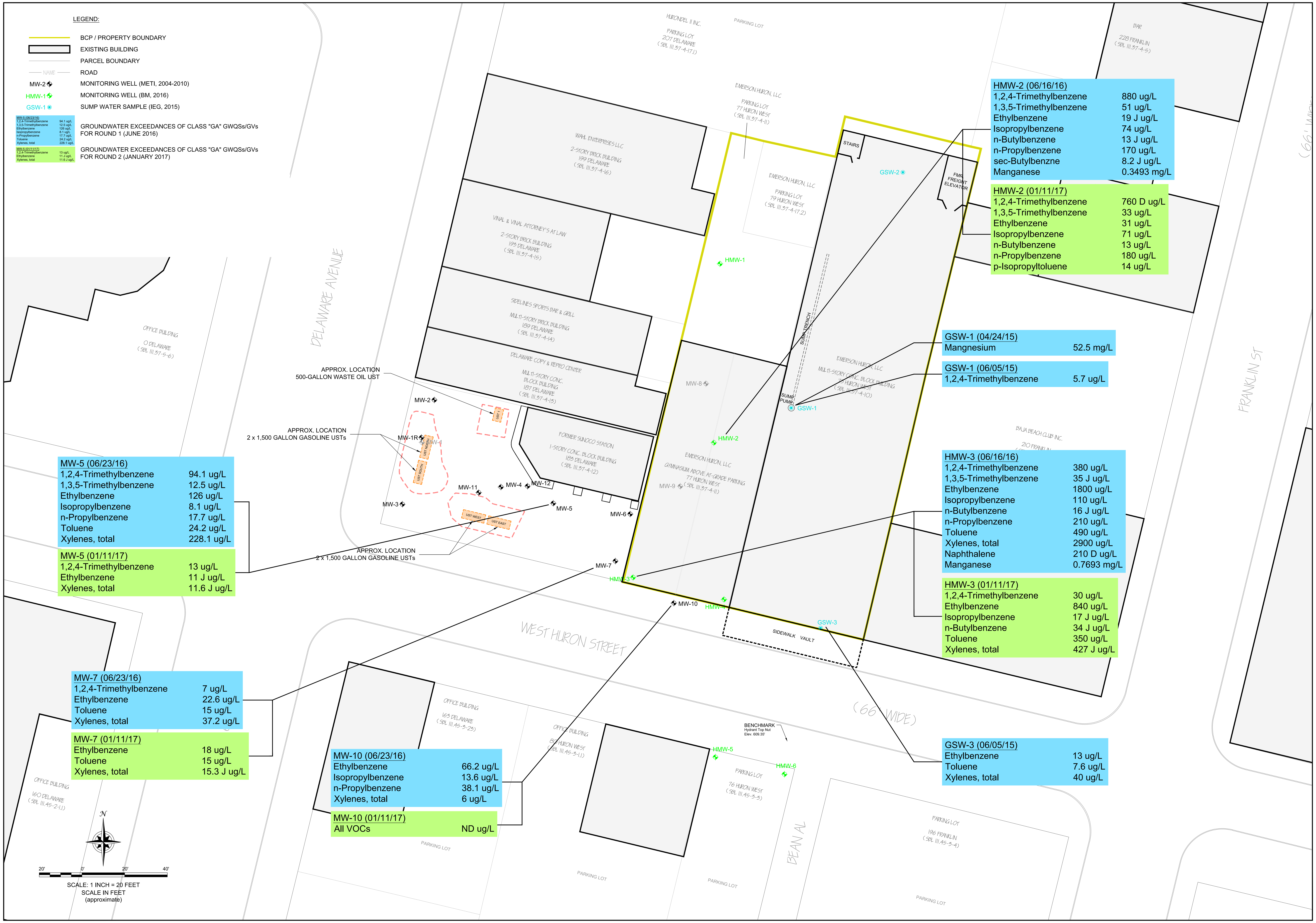
FIGURE 10



LEGEND:
BCP / PROPERTY BOUNDARY
EXISTING BUILDING
PARCEL BOUNDARY
ROAD
MW-2 MONITORING WELL (METI, 2004-2010)
HMW-1 MONITORING WELL (BM, 2016)
GSW-1 SUMP WATER SAMPLE (IEG, 2015)
GROUNDWATER EXCEEDANCES OF CLASS "GA" GWQSs/GVs FOR ROUND 1 (JUNE 2016)
GROUNDWATER EXCEEDANCES OF CLASS "GA" GWQSs/GVs FOR ROUND 2 (JANUARY 2017)
HMW-2 (06/16/16)
1,2,4-Trimethylbenzene 880 ug/L
1,3,5-Trimethylbenzene 51 ug/L
Ethylbenzene 19 J ug/L
Isopropylbenzene 74 ug/L
n-Butylbenzene 13 J ug/L
n-Propylbenzene 170 ug/L
sec-Butylbenzene 8.2 J ug/L
Manganese 0.3493 mg/L
HMW-2 (01/11/17)
1,2,4-Trimethylbenzene 760 D ug/L
1,3,5-Trimethylbenzene 33 ug/L
Ethylbenzene 31 ug/L
Isopropylbenzene 71 ug/L
n-Butylbenzene 13 ug/L
n-Propylbenzene 180 ug/L
p-Isopropyltoluene 14 ug/L
GSW-1 (04/24/15)
Mangnesium 52.5 mg/L
GSW-1 (06/05/15)
1,2,4-Trimethylbenzene 5.7 ug/L
HMW-3 (06/16/16)
1,2,4-Trimethylbenzene 380 ug/L
1,3,5-Trimethylbenzene 35 J ug/L
Ethylbenzene 1800 ug/L
Isopropylbenzene 110 ug/L
n-Butylbenzene 16 J ug/L
n-Propylbenzene 210 ug/L
Toluene 490 ug/L
Xylenes, total 2900 ug/L
Naphthalene 210 D ug/L
Manganese 0.7693 mg/L
HMW-3 (01/11/17)
1,2,4-Trimethylbenzene 30 ug/L
Ethylbenzene 840 ug/L
Isopropylbenzene 17 J ug/L
n-Butylbenzene 34 J ug/L
Toluene 350 ug/L
Xylenes, total 427 J ug/L
GSW-3 (06/05/15)
Ethylbenzene 13 ug/L
Toluene 7.6 ug/L
Xylenes, total 40 ug/L
MW-5 (06/23/16)
1,2,4-Trimethylbenzene 94.1 ug/L
1,3,5-Trimethylbenzene 12.5 ug/L
Ethylbenzene 126 ug/L
Isopropylbenzene 8.1 ug/L
n-Propylbenzene 17.7 ug/L
Toluene 24.2 ug/L
Xylenes, total 228.1 ug/L
MW-5 (01/11/17)
1,2,4-Trimethylbenzene 13 ug/L
Ethylbenzene 11 J ug/L
Xylenes, total 11.6 J ug/L
MW-7 (06/23/16)
1,2,4-Trimethylbenzene 7 ug/L
Ethylbenzene 22.6 ug/L
Toluene 15 ug/L
Xylenes, total 37.2 ug/L
MW-7 (01/11/17)
Ethylbenzene 18 ug/L
Toluene 15 ug/L
Xylenes, total 15.3 J ug/L
MW-10 (06/23/16)
Ethylbenzene 66.2 ug/L
Isopropylbenzene 13.6 ug/L
n-Propylbenzene 38.1 ug/L
Xylenes, total 6 ug/L
MW-10 (01/11/17)
All VOCs ND ug/L
APPROX. LOCATION 500-GALLON WASTE OIL UST
APPROX. LOCATION 2 x 1,500 GALLON GASOLINE USTs
APPROX. LOCATION 2 x 1,500 GALLON GASOLINE USTs
DELAWARE AVENUE
WEST HURON STREET
FRANKLIN ST
BEAN AL
(66' WIDE)
STAIRS
FMR. FREIGHT ELEVATOR
SUMP TRENCH
SUMP PUMP
SIDEWALK VAULT
BENCHMARK Hydrant Top Nut Elev. 609.35'
MW-1R
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
HMW-1
HMW-2
HMW-3
HMW-4
HMW-5
HMW-6
GSW-1
GSW-2
GSW-3
SCALE: 1 INCH = 20 FEET
SCALE IN FEET
(approximate)

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GROUNDWATER ANALYTICAL RESULTS EXCEEDING GWQSs/GVs

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FIGURE 11

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INSTITUTIONAL CONTROL BOUNDARY

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FIGURE 12