Periodic Review Report

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

May 2022
Revised August 2022

0441-021-001

Prepared For:

Emerson Huron, LLC

Prepared By:

BENCHMARK

2558 Hamburg Turnpike, Buffalo, New York | phone: (716) 856-0635 | fax: (716) 856-0583

PERIODIC REVIEW REPORT

73-79 W. HURON ST. SITE
BCP SITE NO. C915282

73-79 W. HURON ST.
BUFFALO, NEW YORK

May 2022
Revised August 2022

B0441-022-001

Prepared for:

Emerson Huron, LLC

Prepared By:

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PERIODIC REVIEW REPORT
73-79 W. Huron St. (C915282)
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1.0 INTRODUCTION

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) 73-79 West Huron Street Site (BCP No. C915282), 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 11, 2022.

This PRR and associated certifications have been completed to document post-remedial activities at the Site for the April 28, 2021 to April 28, 2022 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 commercial properties to the west include an auto repair shop (former Sunoco), restaurant, copy and document reproduction center, a sports bar and grill, and two 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 new gymnasium construction activities were completed in March 2020 and 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 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 11, 2022), the Site was fully compliant with the NYSDEC-approved SMP (Ref 4).

1.4 Recommendations

At the time of the annual Site inspection (April 11, 2022), the Site was compliant with the NYSDEC-approved SMP (Ref 4), however it appears that monthly ASD system readings have not been recorded. School staff have been reminded to collect these readings on a monthly basis.

An annual round of groundwater sampling will be performed in August of 2022. However, Benchmark requests:

- Wells HWM-1, HMW-5 and HMW-6 be removed from the annual sampling program (except for groundwater elevation to aid in isopotential map preparation)
- All remaining sampling locations (i.e., HMW-2, HMW-3, HMW-4, MW-10 and GSW-1) no longer be monitored for total alkalinity and be sampled via diffusion bag.

2.0 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.

3.0 REMEDY PERFORMANCE

A post-remedial site inspection involving a walk-over of the Site covered by this PRR was performed on April 11, 2022 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.

Appendix A includes the completed IC/EC Certification forms, Appendix B includes photographs taken during the inspection and Appendix C includes the groundwater data analytical package for the July 2021 sampling event.

4.0 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. Key components of the SMP are described below.

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;
- 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 in the area within the IC boundaries, and any potential impacts that are identified must be monitored or mitigated;
- Indoor air monitoring and soil vapor intrusion evaluation prior to future occupancy of the existing on-site building, preferably when the heating/ventilation systems are operational; and
- Vegetable gardens and farming on the site are prohibited.

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 were measured at 0.9 and 1.37 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 actives. 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, 2021 to April 28, 2022).

4.3 Active Subslab Depressurization (ASD) System

The NYSDEC-approved Site Management Plan (SMP – Ref. 4) required that measures to address subslab 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 Subslab 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 subslab perforated PVC pipe and solid risers located within interior partition walls. The risers are and 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. 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 personnel. 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 February 3, 2021. Appendix B provides photos of the April 11, 2022 annual magnehelic gauge pressure readings.

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. At this time, no further ASD evaluation work is anticipated for the existing building other than routine system vacuum gage checks as indicated in the NYSDEC and NYSDOH acceptance letter dated March 29, 2021.

During April 11th, 2022 PRR walk through it was observed that magnehelic gauge readings were similar to those recorded during the prior event (see Figure 3).

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 Benchmark on April 11, 2022. 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.

Appendix A includes the completed Site Management Periodic Review Report Notice – Institutional and Engineering Controls Certification Form. Appendix B includes photographic log of the Site inspection.

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.

5.0 GROUNDWATER MONITORING

Per the SMP, two 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. Groundwater monitoring was performed during the subject reporting period in July 2021.

5.1 July 2021 Groundwater Monitoring Event

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 2 years of semi-annual monitoring that occurred in 2018-2020 but was performed in 2021 per NYSDEC comment on the 2021 PRR. Annual groundwater monitoring is currently performed at wells HMW-1, HMW-2, HMW-3, HMW-4, HMW-5, HMW-6, and MW-10; groundwater beneath the basement floor slab is sampled at groundwater sump GSW-1. Note that in concert with building redevelopment activities GSW-1 was relocated approximately 25 feet east of its prior location.

Benchmark personnel performed the annual groundwater monitoring event during the current PRR reporting period on July 15, 2021. Groundwater was analyzed for Target Compound List (TCL) plus Commissioners Policy -51 (CP-51) Volatile Organic Compounds (VOCs) per USEPA Method 8260C, along with alkalinity (as $CaCO_3$) using analytical method 2320B, and field parameters (i.e., pH, temperature, specific conductance, turbidity, dissolved oxygen, and oxidation-reduction potential). Appendix C includes analytical data packages and field data sheets for the July 2021 sampling event. Table 1 summarizes the results and post COC groundwater monitoring results completed in accordance with the SMP (May 2018, October 2018, August 2019, and February 2020) along with data collected in June 2016 and January 2017 (during the RI) and provides a comparison to GWQS/GVs.

In general, data from the 2021 monitoring event are consistent with prior events, however HWMU-3 and MW-10 yielded an uptick in petroleum VOC detections. This may be due to recent discontinuation of groundwater remediation efforts on the adjacent upgradient former Sunoco site (an inactive NYSDEC Spill site, no. 1106834). Prior to 2020

active groundwater remediation on the former Sunoco site was undertaken. The site and spill area are hydraulically upgradient of HWMU-3 and MW-10. It is possible that post-treatment rebound is attributing to the levels observed in July 2021

Monitoring wells HMW-1, HMW-5 and HMW-6 are either non-detect or have individual compound concentrations below NYSDEC Class GA ground water standards or guidance values, with the exception of a slightly elevated chloroform detection at HMW-5. Total alkalinity was found in all wells sampled above laboratory reporting limits, however there is no NYSDEC GWQS/GV for this parameter. Accordingly, Benchmark would like to request a modification to the SMP sampling program as described in section 6.0 below.

The next round of Groundwater monitoring will take place in August of 2022. The July 2021 data is presently being uploaded to the Department's EQuIS database. Data acceptance and upload confirmatory email responses will be provided in a separate report.

5.2 Groundwater Flow Direction

In conjunction with the July 15th, 2021 groundwater monitoring event a round of water levels (Table 2) was collected from each monitoring location including GSW-1 and used to develop an isopotential map (Figure 4). Ground water flow is in an easterly direction with a slight southern component.

6.0 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 11, 2022), the Site was compliant with the NYSDEC-approved SMP (Ref 4), however it appears that monthly ASD system readings have not been recorded. School staff have been reminded to collect these readings on a monthly basis.
- An annual round of groundwater sampling will be performed in August of 2022. However, Benchmark requests:
    - Wells HWM-1, HMW-5 and HMW-6 be removed from the annual sampling program (except for groundwater elevation to aid in isopotential map preparation)
    - All remaining sampling locations (i.e., HMW-2, HMW-3, HMW-4, MW-10 and GSW-1) no longer be monitored for total alkalinity and be sampled via diffusion bag.

7.0 DECLARATION/LIMITATION

This PRR has been prepared for the exclusive use of Emerson Huron, LLC. The contents of this PRR are limited to information available at the time of the Site inspection. The findings herein may be relied upon only at the discretion of Emerson Huron, LLC. Use of or reliance upon this PRR or its findings by any other person or entity is prohibited without written permission of Benchmark Civil/Environmental Engineering & Geology, PLLC.

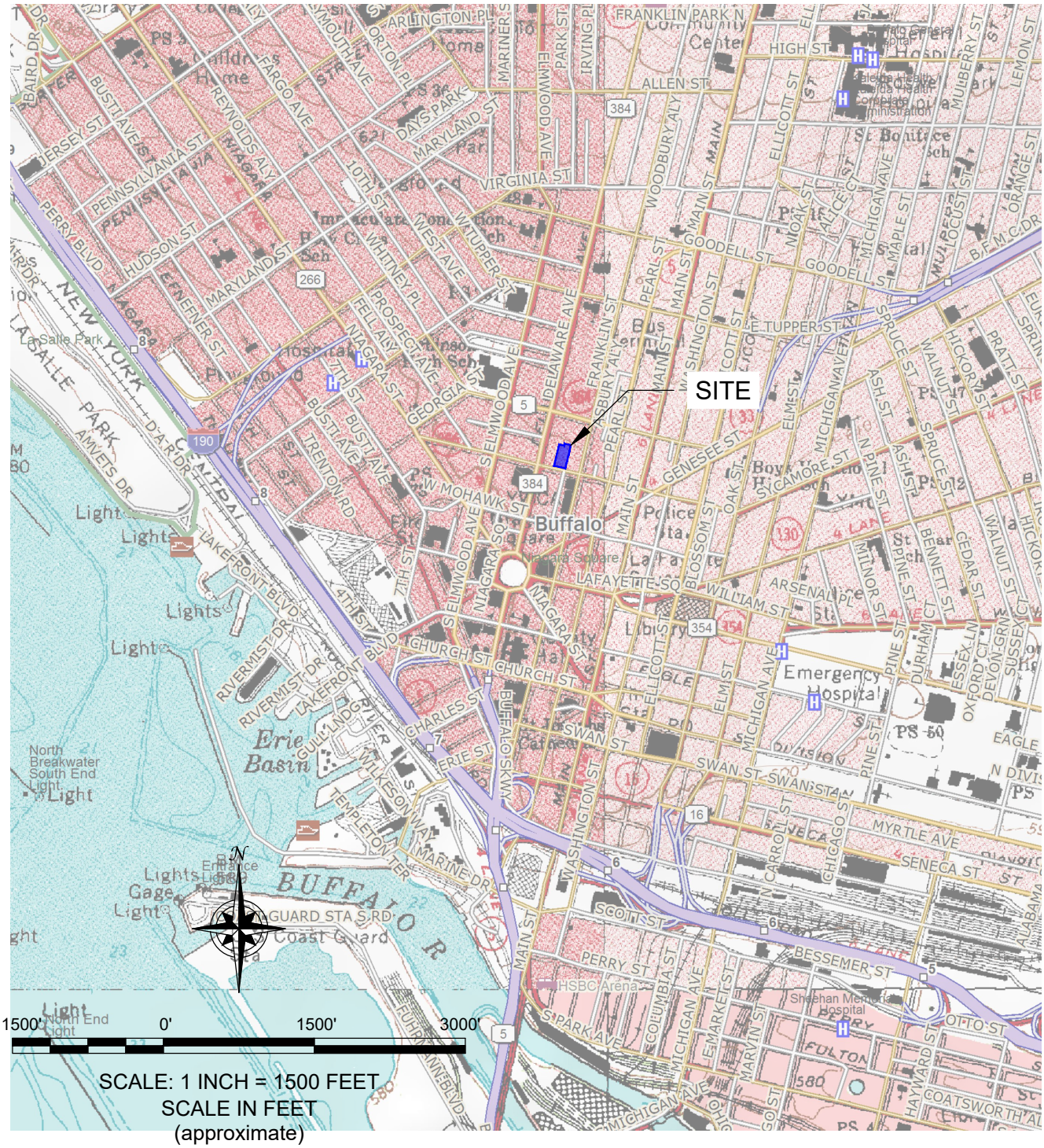
8.0 REFERENCES

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 2021.

FIGURES

F:\CAD\Benchmark\Emerson Huron, LLC\PRR\2021\Figure 1; Site Location & Vicinity Map.dwg, 5/17/2022 12:36:14 PM

FIGURE 1



BENCHMARK

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DATE: MAY 2022

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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

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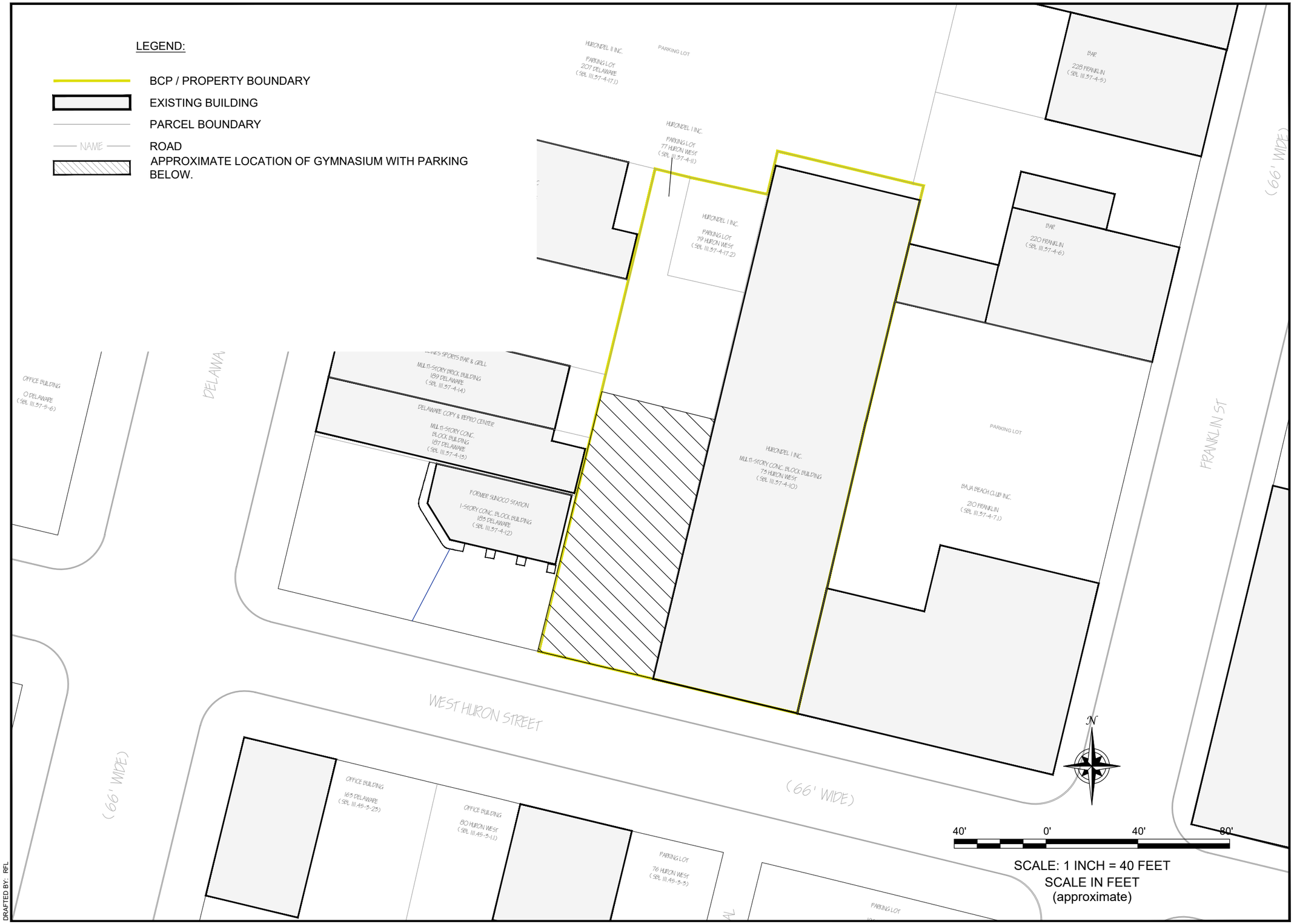
LEGEND:

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



SCALE: 1 INCH = 40 FEET
SCALE IN FEET
(approximate)

DATE: MAY 2022
DRAFTED BY: RFL

FIGURE 2

SITE PLAN

PERIODIC REVIEW REPORT
73-79 WEST HURON STREET SITE
BCP SITE NO. C915282
BUFFALO, NEW YORK
PREPARED FOR
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JOB NO.: 0441-020-001

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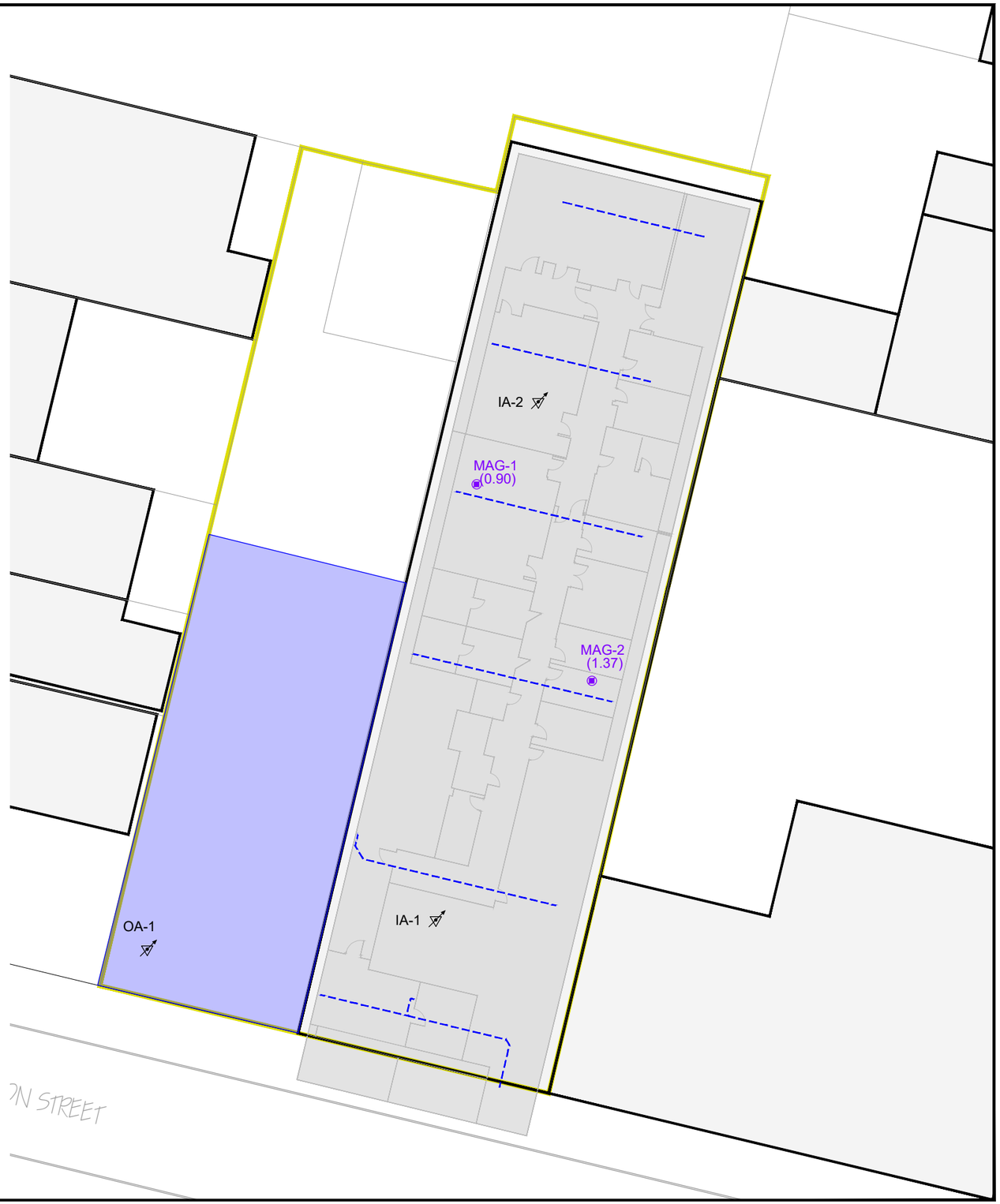
LEGEND:

- BCP / PROPERTY BOUNDARY
- EXISTING BUILDING
- BASEMENT FLOOR PLAN
- APPROXIMATE LOCATION OF NEWLY CONSTRUCTED GYMNASIUM WITH PARKING BELOW
- PARCEL BOUNDARY
- NAME — ROAD
- MAG-1 (0.93) — MAGNEHELIC PRESSURE GAUGE LOCATION (PRESSURE READING IN INCHES OF WATER, SEE NOTE 1)
- IA-1 — INDOOR AIR SAMPLE LOCATION
- OA-1 — OUT DOOR AIR SAMPLE LOCATION
- 4-INCH PERFORATED ASD PIPING

NOTES:
1. MAGNEHELIC GAUGE READINGS TAKEN ON APRIL 11, 2022



N

30' 0' 30' 60'

SCALE: 1 INCH = 30 FEET
SCALE IN FEET
(approximate)

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ASD SYSTEM AND VAPOR ASSESSMENT LOCATIONS

PERIODIC REVIEW REPORT

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

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FIGURE 3

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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)
- 597.5 — GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION
- 597.5 — GROUNDWATER ELEVATION

HURONDEL II INC. PARKING LOT 207 DELAWARE (SBL III.57-4-17.1)

HURONDEL I INC. PARKING LOT 77 HURON WEST (SBL III.57-4-11)

HURONDEL I INC. PARKING LOT 79 HURON WEST (SBL III.57-4-17.2)

BAR 228 FRANKLIN (SBL III.57-4-5)

BAR 220 FRANKLIN (SBL III.57-4-6)

HURONDEL I INC. MULTI-STORY CONC. BLOCK BUILDING 175 HURON WEST (SBL III.57-4-10)

BAJA BEACH CLUB INC. 210 FRANKLIN (SBL III.57-4-7.1)

PARKING LOT

OFFICE BUILDING 0 DELAWARE (SBL III.57-5-6)

DELAWARE

MULTI-STORY BRICK BUILDING 169 DELAWARE (SBL III.57-4-14)

DELAWARE COPY & REPRO CENTER MULTI-STORY CONC. BLOCK BUILDING 167 DELAWARE (SBL III.57-4-15)

FORMER SUNOCO STATION 1-STORY CONC. BLOCK BUILDING 183 DELAWARE (SBL III.57-4-12)

MW-1R MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8 MW-9 MW-10 MW-11 MW-12

HMW-1 598.4

HMW-2 597.7

HMW-3 597.6

HMW-4 597.5

HMW-5 597.2

HMW-6 597.0

GSW-1 597.3

598.5

598.0

597.5

597.0

DI-1 DI-2 DI-3

WEST HURON STREET

FRANKLIN ST

(66' WIDE)

BENCHMARK
Hydrant Top Nut
Elev. 609.35'

OFFICE BUILDING 163 DELAWARE (SBL III.45-3-23)

OFFICE BUILDING 80 HURON WEST (SBL III.45-3-11)

PARKING LOT 76 HURON WEST (SBL III.45-3-3.1)

DATE: MAY 2022
DRAFTED BY: RFL

BENCHMARK

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JOB NO.: 0441-020-001

GROUNDWATER ISOPOTENTIAL MAP (JULY 2021)

PERIODIC REVIEW REPORT
73-79 WEST HURON STREET SITE
BCP SITE NO. C915282
BUFFALO, NEW YORK
PREPARED FOR
EMERSON HURON, LLC

FIGURE 4

TABLES

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 1

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

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

Parameter	GWQS/GV	Hurondel Monitoring Wells																																				Hurondel Sump Water							
		MW-10							HMW-1							HMW-2							HMW-3							HMW-4							HMW-5							HMW-6							GSW-1 (SUMP - 1)						
		06/23/16	01/11/17	05/17/18	10/24/18	08/20/19	02/13/20	07/15/21	06/16/16	01/11/17	05/17/18	10/24/18	08/20/19	02/13/20	07/15/21	06/16/16	01/11/17	05/17/18	10/24/18	08/20/19	02/13/20	07/15/21	06/16/16	01/11/17	05/17/18	10/24/18	08/20/19	02/13/20	07/15/21	06/16/16	01/11/17	05/17/18	10/24/18	08/20/19	02/13/20	07/15/21	06/16/16	01/11/17	05/17/18	10/24/18	8/20/2019	2/13/2020	7/15/2021	04/24/15	06/05/15	05/17/18	06/05/18	10/24/18	08/20/19	02/13/20	07/15/21
VOLATILE ORGANICS (VOCs, ug/L)																																																
1,2,4-Trimethylbenzene	5	1.5	ND	ND	**51**	**62**	1.9 J	**42**	ND	ND	ND	ND	ND	ND	ND	**880**	**760 D**	ND	**540 D**	**5.2**	**520**	**710**	**380**	**30**	ND	**5.9**	4.3	**33**	**140**	ND	ND	ND	1 J	**280 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.7**	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	**7.3**	**340**	ND	ND	ND	ND	ND	ND	ND	**51**	**33**	ND	ND	**3.4 J**	**15**	**4 J**	**35 J**	ND	ND	ND	**53**	ND	**59**	**140**	ND	ND	ND	ND	ND	**24**	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	4.9 J	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
Acetone	50	--	--	27	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	ND	ND	**170**	ND	ND
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	0.17 J	ND	ND	ND	ND	ND	ND	0.23 J	ND	ND	ND	ND	ND	ND	0.22 J	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	3.8	--	2.3 J	ND	ND	3.1	**11**	2.7	--	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	ND	ND	ND	ND	ND	ND	--	ND	**25**	**24**	**31**	**28**	**6**	**26**
Cyclohexane	--	--	--	50	180	95	76	200	ND	--	ND	ND	ND	ND	ND	290	--	140	69	ND	97	110	460	--	190 D	96	12	130	140	ND	--	ND	ND	90 J	7.7 J	**95**	0.59 J	--	ND	ND	ND	ND	ND	ND	0.49 J	--	ND	**4.8 J**	ND	ND	ND	ND
Ethylbenzene	5	**66.2**	ND	**72**	**500**	**160**	**150**	**25**	ND	ND	ND	ND	ND	ND	ND	**19 J**	**31**	**17**	**10**	**30**	ND	ND	**1800**	**840**	**490 D**	**31**	ND	**100**	**230**	0.77 J	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	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**	ND	ND	ND	ND	ND	ND	ND	**74**	**71**	**58**	**73**	**12**	ND	**48**	**110**	**17 J**	**54**	**18**	**8.3**	**12**	**6 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	ND	ND
Methylcyclohexane	--	--	--	--	8 J	**48 J**	8.7 J	140 J	ND	--	ND	ND	ND	ND	ND	**59 J**	--	38	13	ND	32 J	42	160 J	--	94	64	12	45	62	0.48 J	--	ND	ND	13 J	ND	29	0.44	--	ND	ND	ND	ND	ND	ND	0.56 J	--	ND	0.49 J	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	1.9 J	**5.4**	ND	3.5 J	ND	ND	ND	ND	ND	ND	ND	**13 J**	**13**	ND	**9.3 J**	ND	**5.1 J**	4.7 J	**16 J**	**34 J**	ND	**12**	**7.3**	**11**	ND	ND	ND	ND	ND	3.9 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	5	**38.1**	4	ND	**110**	**65**	**84**	**53**	ND	ND	ND	ND	ND	ND	ND	**170**	**180**	ND	**140 J**	3.1 J	**120**	**130**	**210**	ND	ND	ND	**110**	**66**	**21**	**6 J**	0.9 J	ND	ND	ND	**98 J**	**1 J**	**19**	ND	ND	ND	ND	ND	ND	ND	ND	4.8	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	5	ND	ND	ND	ND	1.3 J	ND	**6 J**	ND	ND	ND	ND	ND	ND	ND	ND	**14**	ND	**2.9 J**	ND	ND	ND	ND	ND	ND	**5.7 J**	**2.6 J**	**3 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.82 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	5	1.8	ND	ND	**9.2**	**5.7**	4.8 J	**7.2**	ND	ND	ND	ND	ND	ND	ND	**8.2 J**	ND	ND	ND	ND	**6.1 J**	ND	ND	ND	ND	ND	**9.1**	**6**	**5.1 J**	ND	0.7 J	ND	ND	ND	**6.8 J**	ND	1.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	--	--	ND	ND	ND	ND	ND	0.24 J	--	0.18 J	0.3 J	0.21 J	ND	ND	1.8 J	--	ND	ND	ND	ND	2.4	ND	--	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	0.29 J	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
Toluene	5	1.2	ND	**39**	**12**	**4.6**	**18**	**120**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**7.8**	ND	ND	**490**	**350**	**7.6**	**9**	ND	**59**	**1000 D**	ND	ND	ND	ND	ND	**1.7 J**	**4.5 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	5	**6**	ND	**371**	**319**	**87**	**255**	**1260 D**	ND	ND	ND	ND	ND	ND	ND	ND	3.2 J	0.95 J	ND	**107**	ND	ND	**2900**	**427 J**	**555 D**	**92**	**8.9**	**550**	**2150**	0.84 J	ND	ND	ND	ND	ND	**29.5**	**31.4**	ND	ND	ND	ND	ND	ND	ND	ND	0.91 J	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	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**
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	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	1.2 J
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	ND	ND	ND	ND	ND	ND	--	ND	0.52 J	ND	ND	ND	ND	**3**
TOTAL VOCs	--	**128.4**	**6.6**	**502**	**1252.1 J**	**567 J**	**623.7 J**	**2211.7 J**	**0.24**	**0**	**0.18**	**0.3 J**	**0.21 J**	**0 J**	**0 J**	**1566 J**	**1105.2 J**	**253.95 J**	**857.2 J**	**173.4 J**	**795.2 J**	**1051.1 J**	**6101 J**	**1698**	**1390.6 J**	**505.7 J**	**115.4 J**	**1028.1 J**	**3874 J**	**3.86**	**0**	**0**	**1 J**	**491.99 J**	**44.8 J**	**230.32 J**	**5.6**	**0**	**2.65**	**0.43 J**	**0.29 J**	**3.35 J**	**11.36 J**	**4.88**	**0**	**1.64**	**0.53**	**0.34 J**	**0.38 J**	**0.44 J**	**3.4**	**29.72 J**	**588 J**	**516**	**727**	**597**	**120 J**	**227.6 J**
TOTAL pVOCs	--	**128.4**	**6.6**	**502**	**1064.1 J**	**424 J**	**539 J**	**1871.7 J**	**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**	**5941 J**	**1698 J**	**1106.6**	**345.7 J**	**95.1 J**	**853.1 J**	**3672 J**	**3.38**	**0**	**0**	**0**	**388.7 J**	**37.1 J**	**92.32 J**	**0.23**	**0**	**0**	**0**	**0**	**0**	**0**	**0.22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13.31 J**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL cVOCs	--	**0**	--	**0**	**0**	**0**	**0**	**0**	**0.48**	--	**0.18**	**0.3 J**	**0.21 J**	**0 J**	**0 J**	**1.8 J**	--	**0**	**0**	**0**	**0**	**2.4**	**0**	--	**0**	**0**	**0**	**0**	**0**	**0**	--	**0**	--	**0**	**0.29 J**	**0 J**	**0 J**	**0.54**	--	**0.35**	**0.43 J**	**0.29 J**	**0.25 J**	**0.36 J**	**0.91**	--	**0**	**0.53**	**0.34 J**	**0.38 J**	**0.44 J**	**3.4**	**11.12 J**	**588 J**	**516**	**727**	**597**	**120 J**	**227.6 J**
General Chemistry (mg/L)																																																	
T. Alkalinity (as $CaCO_3$)	--	--	--	518	476	467	733	312	--	--	320	329	319	339	286	--	--	305	320	239	258	246	--	--	470	396	394	538	311	--	--	108	196	466	450	282	--	--	237	336	245	356	255	--	--	289	418	317	371	316	--	--	331	--	338	334	327	316

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.

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.

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 2

SUMMARY OF GROUNDWATER ELEVATIONS

July 2021 Post Remedial Monitoring Event
73-79 West Huron Street Site (C915282)
Buffalo, New York

Location	TOR Elevation (fmsl)	07/15/21	
		DTW (fbTOR)	GWE (fmsl)
HMW-1	609.52	11.16	598.36
HMW-2	606.75	9.01	597.74
HMW-3	606.45	8.84	597.61
HMW-4	606.75	9.28	597.47
HMW-5	606.31	9.14	597.17
HMW-6	606.20	9.24	596.96
MW-10	606.44	8.89	597.55
GSW - 1	600.02	2.75	597.27

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

APPENDIX A

INSTITUTIONAL & ENGINEERING CONTROLS CERTIFICATION FORMS

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, 2021 to April 28, 2022

	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?	☐	☑

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

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

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

SITE NO. 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

- Prohibition against use of groundwater without treatment
- Provision for SVI evaluation of occupied buildings on site
- Annual monitoring of groundwater
- Compliance with excavation plan

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
111.37-4-11	Vapor Mitigation
Active SSDS	

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
☑	☐

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
☑	☐

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 (print name) at Emerson Huron, LLC (print business address),

am certifying as Owner's Representative (Owner or Remedial Party)

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

James F Mahoney

Digitally signed by James F Mahoney
DN: C=US, E=jmahoney@mcguiredevelopment.com, O=McGuire Development Co., OU=Property Manager, CN=James F Mahoney
Date: 2022.05.31 10:15:24-04'00'

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

05/31/22

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, PE at Benchmark 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 No. 70550-1 LICENSED PROFESSIONAL ENGINEER

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

Stamp (Required for PE)

5-31-22
Date

APPENDIX B

SITE PHOTO LOG

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Emerson Huron, LLC	73-79 W. Huron Street Site (C915282)	B0441-021-001

Photo No.	Date
1	04/11/22

Direction Photo Taken:
Interior

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

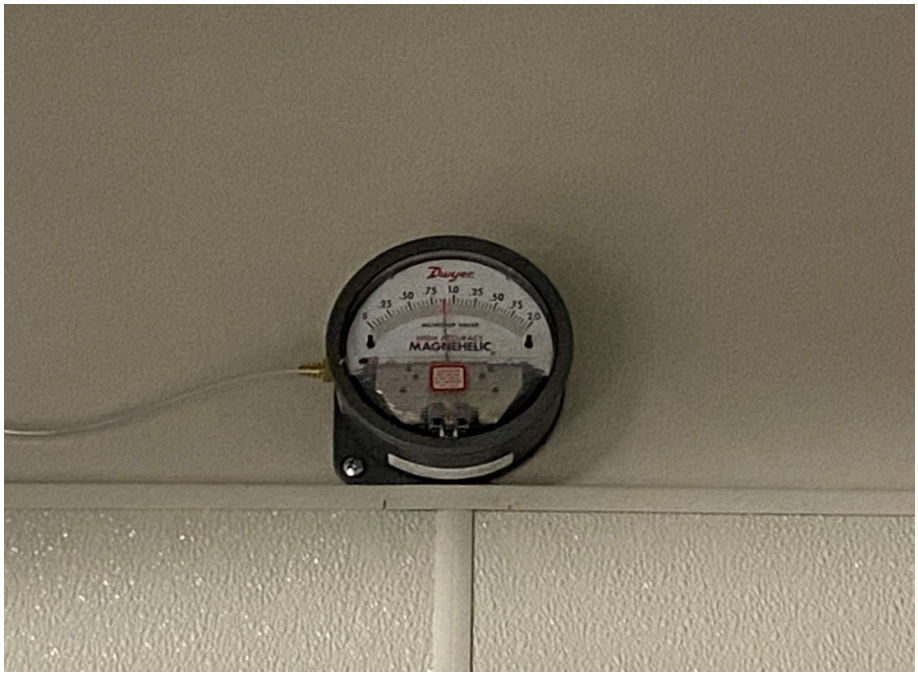
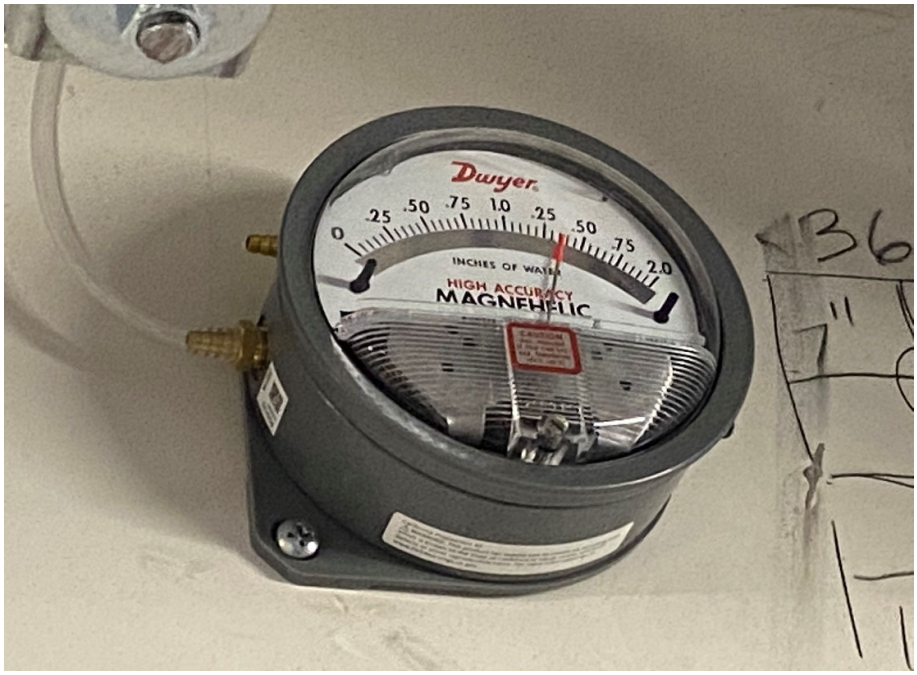


Photo No.	Date
2	04/11/22

Direction Photo Taken:
Interior

Description:
Vapor Assessment ASD System Monitoring:
Magnehelic Guage Pressure Reading MAG-2 (1.37 inches of water)



Prepared By: CCB

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Emerson Huron, LLC	73-79 W. Huron Street Site (C915282)	B0441-021-001

Photo No.	Date
3	04/11/22

Direction Photo Taken:
South

Description:
Annual Site Inspection:
Exterior Elevated Gymnasium Addition.

Photo No.	Date
4	04/11/22

Direction Photo Taken:
Interior

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

Prepared By: TAB

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Emerson Huron, LLC	73-79 W. Huron Street Site (C915282)	B0441-021-001

Photo No.	Date
5	04/11/22

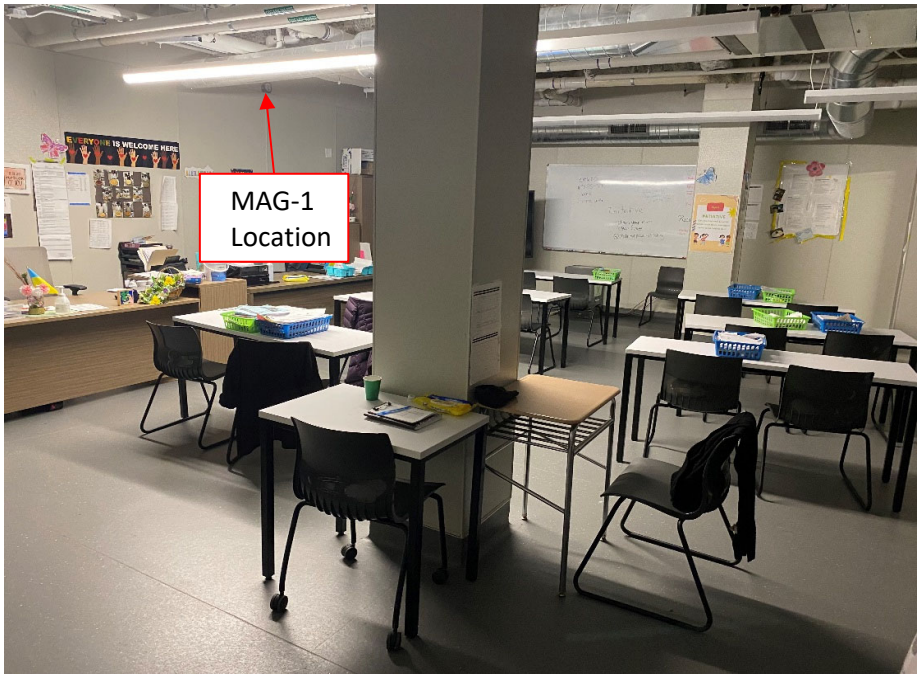
Direction Photo Taken:
Interior

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

Photo No.	Date
6	04/23/21

Direction Photo Taken:
Interior

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



Prepared By: TAB

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Emerson Huron, LLC	73-79 W. Huron Street Site (C915282)	B0441-021-001

Photo No.	Date
7	04/11/22

Direction Photo Taken:
Interior

Description:
Annual Site Inspection:
Sealed sumps on northeast side of basement.

Photo No.	Date
8	04/11/22

Direction Photo Taken:
Interior

Description:
Annual Site Inspection:
Electrical Room South end of building.

Prepared By: TAB

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Emerson Huron, LLC	73-79 W. Huron Street Site (C915282)	B0441-021-001

Photo No.	Date
9	04/11/22

Direction Photo Taken:
West

Description:
Annual Site Inspection:
Northside of existing building exterior.

Photo No.	Date
10	04/11/22

Direction Photo Taken:
North

Description:
Annual Site Inspection:
Exterior elevated gymnasium addition.

Prepared By: TAB

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
Emerson Huron, LLC	73-79 W. Huron Street Site (C915282)	B0441-021-001

Photo No.	Date
11	04/11/22

Direction Photo Taken:
West/Northwest

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

Photo No.	Date
12	04/11/22

Direction Photo Taken:
West

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

Prepared By: TAB

APPENDIX C

ALPHA LABORATORIES
ANALYTICAL DATA PACKAGE

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

EQUIPMENT CALIBRATION LOG

PROJECT INFORMATION:

Project Name: Emerson GWM

Project No.:

Client: Emerson School

Date: 7/15/24

Instrument Source: ☐ BM ☐ Rental

METER TYPE	UNITS	TIME	MAKE/MODEL	SERIAL NUMBER	CAL. BY	STANDARD	POST CAL. READING	SETTINGS
☑ pH meter	units	0830	Myron L Company Ultra Meter 6P	6213516 ☐ 6243084 ☐ 6212375 ☒ 6243003 ☐ 6223973 ☐	TAB	4.00	3.99	4.00
						7.00	7.04	7.00
						10.01	9.95	10.00
☑ Turbidity meter	NTU	0830	Hach 2100P or 2100Q Turbidimeter	06120C020523 (P) ☒ 13120C030432 (Q) ☐ 17110C062619 (Q) ☐	TAB	10 NTU verification		
						< 0.4	0.16	
						20	18.9	
						100	89.2	
						800	796	
☑ Sp. Cond. meter	uS mS	0830	Myron L Company Ultra Meter 6P	6213516 ☐ 6243084 ☐ 6212375 ☒ 6243003 ☐ 6223973 ☐	TAB	7,000 mS @ 25 °C	7,006	7,000
☐ PID	ppm		MinRAE 2000			open air zero		MIBK response factor = 1.0
						____ ppm Iso. Gas		
☑ Dissolved Oxygen	ppm	0830	HACH Model HQ30d	080700023281 ☐ 100500041867 ☐ 140200100319 ☒	TAB	100% Satuartion	—	96.6%
☐ Particulate meter	mg/m³					zero air		
☐ Radiation Meter	uR/H					background area		

ADDITIONAL REMARKS:

PREPARED BY: TAB **DATE:** 7/15/24

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER FIELD FORM

Project Name: Emerson GWM Date: 7/15/21

Location: Buffalo Project No.: Field Team: JAB

Well No. HMW-1			Diameter (inches): 2"			Sample Date / Time: 7/15/21			933
Product Depth (fbTOR): -			Water Column (ft): 6.03			DTW when sampled: 11.34			
DTW (static) (fbTOR): 11.16			One Well Volume (gal): 0.98			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 17.19			Total Volume Purged (gal): 3.0			Purge Method: Low Flow			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
924	0 Initial	0	7.29	17.5	3981	279	1.96	140	Turb. L No odor
926	1 11.22	0.5	7.31	16.9	3922	73.8	1.10	143	sl. Turb. L "
928	2 11.29	1.0	7.29	16.5	3944	25.1	1.02	144	clear "
930	3 11.34	2.0	7.29	15.6	3946	7.92	0.97	145	"
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
933	S1 11.34	3.0	7.30	17.0	3953	3.87	~~1.84~~ 1.15	154	
	S2								

Well No. HMW-5			Diameter (inches): 2"			Sample Date / Time: 7/15/21			1016
Product Depth (fbTOR): -			Water Column (ft): 8.08			DTW when sampled: 9.68			
DTW (static) (fbTOR): 9.14			One Well Volume (gal): 1.37			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 17.22			Total Volume Purged (gal): 4.5			Purge Method: Low Flow			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1003	0 Initial	0	7.32	20.5	3057	209	1.60	125	Turb. L No odor
1005	1 9.65	0.5	7.29	19.1	3206	61.7	1.56	126	sl Turb. L
1007	2 9.71	1.5	7.33	18.2	3412	31.8	1.66	125	clear "
1008	3 9.68	2.25	7.41	17.9	3504	21.8	1.50	122	"
1010	9.68	3.5	7.38	18.2	3502	13.3	2.02	117	"
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
1016	S1 9.68	4.5	7.41	19.2	3507	10.8	2.07	115	
	S2								

REMARKS:

Note: All water level measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY:

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER FIELD FORM

Project Name: Emerson GWM Date: 7/15/21
Location: Bluffton Project No.: Field Team: TAB

Well No. HMW-6			Diameter (inches): 2"			Sample Date / Time: 7/15/21			1045
Product Depth (fbTOR): -			Water Column (ft): 8.04			DTW when sampled: 7.75			
DTW (static) (fbTOR): 9.24			One Well Volume (gal): 1.31			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 17.26			Total Volume Purged (gal): 4.0			Purge Method: Low Flow			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1038	0 Initial	0	7.21	20.6	3501	135	6.55	110	Turb. L No odor
1035	1 9.81	1.0	7.30	18.7	3047	58.9	1.24	92	SL Turb. L No odor
1037	2 9.75	1.50	7.38	18.1	2913	25.2	1.08	88	clear "
1039	3 7.75	2.25	7.41	18.1	2912	13.3	1.05	87	"
1041	4 7.75	3.0	7.38	17.6	2878	9.60	1.15	86	"
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
1045	S1 7.75	4.0	7.38	18.1	2873	7.85	1.25	80	"
	S2								

Well No. HMW-4			Diameter (inches): 2"			Sample Date / Time: 7/15/21			1129
Product Depth (fbTOR): -			Water Column (ft): 7.3			DTW when sampled: 9.28			
DTW (static) (fbTOR): 9.28			One Well Volume (gal): 1.18			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 16.58			Total Volume Purged (gal):			Purge Method: Low Flow			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1112	0 Initial	0	7.37	20.1	1849	257	3.06	116	Turb. L No odor
1115	1 9.81	0.75	7.30	18.3	1841	97.0	3.10	121	SL Turb. L No odor
1118	2 9.81	1.75	7.25	17.7	1653	81.0	2.78	114	"
1121	3 9.81	2.25	7.21	17.9	1520	27.9	2.41	85	Clear "
1124	4 9.81	3.0	7.21	18.0	1413	123	2.13	65	"
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
1129	S1 9.81	4.0	7.23	18.4	1388	5.91	2.27	44	"
	S2								

REMARKS:

Note: All water level measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY: TAB

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER FIELD FORM

Project Name: Emerson GWM Date: 7/15/21
Location: Buffalo Project No.: Field Team: TH3

Well No. MW-10			Diameter (inches): 4"			Sample Date / Time: 7/15/21 1220			
Product Depth (fbTOR): -			Water Column (ft): 5.51			DTW when sampled: 9.15			
DTW (static) (fbTOR): 8.85			One Well Volume (gal): 3.59			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 14.40			Total Volume Purged (gal): 4.0			Purge Method: Low Flow			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1151	0 Initial	0	7.05	21.4	2655	76.9	2.35	-116	SL Turb. Brown
1154	1 9.16	0.5	7.07	19.8	2682	95.0	1.54	-116	"
1157	2 9.16	1.25	7.08	18.5	2684	185	1.38	-126	"
1200	3 9.12	1.75	7.08	19.2	2301	777	1.35	-119	" Turb.
1203	4 9.12	2.25	7.17	19.6	2186	203	1.42	-126	"
1206	5 9.16	2.75	7.16	19.1	2071	>1000	1.35	-122	"
1210	6 9.16	3.5	7.16	20.4	1615	>1000	1.16	-120	"
	7								
	8								
	9								
	10								
Sample Information:									
1220	S1 8.15	4.0	7.16	19.4	1518	193	0.94	-118	"
	S2								

Well No. MW-2			Diameter (inches): 2"			Sample Date / Time: 7/15/21 1255			
Product Depth (fbTOR):			Water Column (ft): 7.77			DTW when sampled: 10.28			
DTW (static) (fbTOR): 9.01			One Well Volume (gal): 1.26			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 16.78			Total Volume Purged (gal): 3.79			Purge Method: Low Flow			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1243	0 Initial	0	7.16	19.9	6065	>1000	1.64	1	Turb. L No odor
1246	1 10.16	1.25	7.28	18.2	4712	546	1.38	-115	"
1248	2 10.28	2.25	7.28	20.8	4710	615	1.11	-106	"
1251	3 10.28	3.25	7.42	17.4	3364	433	1.02	-127	"
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
1255	S1 10.28	4.25	7.44	15.5	3029	153	0.85	-134	"
	S2								

REMARKS:

Note: All water level measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY: TH3

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER FIELD FORM

Project Name: | Date:

Location: | Project No.: | Field Team:

Well No. HMW-3			Diameter (inches): 2"			Sample Date / Time:			
Product Depth (fbTOR):			Water Column (ft): 7.84			DTW when sampled:			
DTW (static) (fbTOR): 8.84			One Well Volume (gal): 1.27			Purpose: ☐ Development ☐ Sample ☐ Purge & Sample			
Total Depth (fbTOR): 16.68			Total Volume Purged (gal): 3.03			Purge Method:			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1320	0 Initial	0	7.27	21.5	3314	72.1	1.17	-164	SL Turb SL Petro
1323	1 9.15	1.0	7.15	18.9	2742	23.5	1.06	-146	Clear "
1325	2 9.15	2.0	7.15	18.3	2481	15.2	1.01	-134	" "
1328	3 9.15	3.0	7.15	18.4	2476	6.17	1.19	-131	" "
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
1333	S1 9.15	4.0	7.16	19.5	2491	3.52	1.34	-126	
	S2								

Well No.			Diameter (inches):			Sample Date / Time:			
Product Depth (fbTOR):			Water Column (ft):			DTW when sampled:			
DTW (static) (fbTOR):			One Well Volume (gal):			Purpose: ☐ Development ☐ Sample ☐ Purge & Sample			
Total Depth (fbTOR):			Total Volume Purged (gal):			Purge Method:			
Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
	0 Initial								
	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1								
	S2								

REMARKS:

Note: All water level measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY:

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

SAMPLE COLLECTION LOG

PROJECT INFORMATION

Project Name: Emerdon School GWM

Project No.: B0441-020-001-001

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: 7/15/21

Time Collected: 850

Date Shipped to Lab:

Collected By: JAB

Sample Type: ☑ POINT ☐ GRAB ☐ COMPOSITE

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

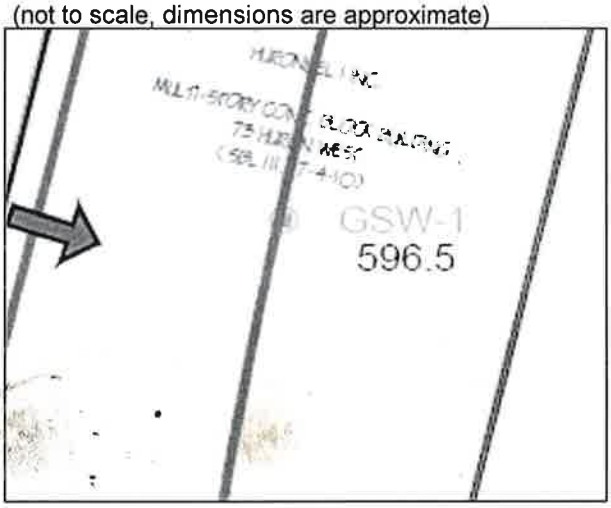
SAMPLING INFORMATION

Depth to Water:

Parameter	First	Last	Units
pH	7.32		units
Temp.	20.5		°C
Cond.	3726		mS
Turbidity	11.2		NTU
Eh / ORP	175		mV
D.O.	2.51		ppm
Odor	None		olfactory
Appearance	clear		visual

LOCATION SKETCH

(not to scale, dimensions are approximate)



SAMPLE DESCRIPTION (appearance, olfactory): None

SAMPLE ANALYSIS (depth, laboratory analysis required):

Sump WL 2.75

ADDITIONAL REMARKS:

PREPARED BY: JAB **DATE:** 7/15/21

ANALYTICAL REPORT

Lab Number:	L2138374
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:	B0441-020-001-001
Report Date:	07/23/21

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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: B0441-020-001-001

Lab Number: L2138374
Report Date: 07/23/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2138374-01	HMW-1	WATER	BUFFALO	07/15/21 09:33	07/16/21
L2138374-02	HMW-2	WATER	BUFFALO	07/15/21 12:55	07/16/21
L2138374-03	HMW-3	WATER	BUFFALO	07/15/21 13:33	07/16/21
L2138374-04	HMW-4	WATER	BUFFALO	07/15/21 11:29	07/16/21
L2138374-05	HMW-5	WATER	BUFFALO	07/15/21 10:16	07/16/21
L2138374-06	HMW-6	WATER	BUFFALO	07/15/21 10:45	07/16/21
L2138374-07	HMW-10	WATER	BUFFALO	07/15/21 12:20	07/16/21
L2138374-08	GSW-1	WATER	BUFFALO	07/15/21 08:50	07/16/21

Project Name:	EMERSON SCHOOL GWM	**Lab Number:**	L2138374
Project Number:	B0441-020-001-001	**Report Date:**	07/23/21

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:**	L2138374
Project Number:	B0441-020-001-001	**Report Date:**	07/23/21

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: Sebastian Corbin

Title: Technical Director/Representative Date: 07/23/21

ORGANICS

VOLATILES

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2138374

Project Number: B0441-020-001-001 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-01
Client ID: HMW-1
Sample Location: BUFFALO

Date Collected: 07/15/21 09:33
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/21/21 22:41
Analyst: NLK

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:** L2138374

Project Number: B0441-020-001-001 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-01 Date Collected: 07/15/21 09:33

Client ID: HMW-1 Date Received: 07/16/21

Sample Location: BUFFALO 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	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	94		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	103		70-130

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001
Lab Number: L2138374
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-02 D
Client ID: HMW-2
Sample Location: BUFFALO

Date Collected: 07/15/21 12:55
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/22/21 00:02
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	10	2.8	4
1,1-Dichloroethane	ND		ug/l	10	2.8	4
Chloroform	ND		ug/l	10	2.8	4
Carbon tetrachloride	ND		ug/l	2.0	0.54	4
1,2-Dichloropropane	ND		ug/l	4.0	0.55	4
Dibromochloromethane	ND		ug/l	2.0	0.60	4
1,1,2-Trichloroethane	ND		ug/l	6.0	2.0	4
Tetrachloroethene	2.4		ug/l	2.0	0.72	4
Chlorobenzene	ND		ug/l	10	2.8	4
Trichlorofluoromethane	ND		ug/l	10	2.8	4
1,2-Dichloroethane	ND		ug/l	2.0	0.53	4
1,1,1-Trichloroethane	ND		ug/l	10	2.8	4
Bromodichloromethane	ND		ug/l	2.0	0.77	4
trans-1,3-Dichloropropene	ND		ug/l	2.0	0.66	4
cis-1,3-Dichloropropene	ND		ug/l	2.0	0.58	4
Bromoform	ND		ug/l	8.0	2.6	4
1,1,2,2-Tetrachloroethane	ND		ug/l	2.0	0.67	4
Benzene	ND		ug/l	2.0	0.64	4
Toluene	ND		ug/l	10	2.8	4
Ethylbenzene	ND		ug/l	10	2.8	4
Chloromethane	ND		ug/l	10	2.8	4
Bromomethane	ND		ug/l	10	2.8	4
Vinyl chloride	ND		ug/l	4.0	0.28	4
Chloroethane	ND		ug/l	10	2.8	4
1,1-Dichloroethene	ND		ug/l	2.0	0.68	4
trans-1,2-Dichloroethene	ND		ug/l	10	2.8	4
Trichloroethene	ND		ug/l	2.0	0.70	4
1,2-Dichlorobenzene	ND		ug/l	10	2.8	4

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2138374

Project Number: B0441-020-001-001 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-02 D Date Collected: 07/15/21 12:55
Client ID: HMW-2 Date Received: 07/16/21
Sample Location: BUFFALO 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	10	2.8	4
1,4-Dichlorobenzene	ND		ug/l	10	2.8	4
Methyl tert butyl ether	ND		ug/l	10	2.8	4
p/m-Xylene	ND		ug/l	10	2.8	4
o-Xylene	ND		ug/l	10	2.8	4
cis-1,2-Dichloroethene	ND		ug/l	10	2.8	4
Styrene	ND		ug/l	10	2.8	4
Dichlorodifluoromethane	ND		ug/l	20	4.0	4
Acetone	ND		ug/l	20	5.8	4
Carbon disulfide	ND		ug/l	20	4.0	4
2-Butanone	ND		ug/l	20	7.8	4
4-Methyl-2-pentanone	ND		ug/l	20	4.0	4
2-Hexanone	ND		ug/l	20	4.0	4
Bromochloromethane	ND		ug/l	10	2.8	4
1,2-Dibromoethane	ND		ug/l	8.0	2.6	4
n-Butylbenzene	4.7	J	ug/l	10	2.8	4
sec-Butylbenzene	ND		ug/l	10	2.8	4
1,2-Dibromo-3-chloropropane	ND		ug/l	10	2.8	4
Isopropylbenzene	48		ug/l	10	2.8	4
p-Isopropyltoluene	ND		ug/l	10	2.8	4
n-Propylbenzene	130		ug/l	10	2.8	4
1,2,3-Trichlorobenzene	ND		ug/l	10	2.8	4
1,2,4-Trichlorobenzene	ND		ug/l	10	2.8	4
1,3,5-Trimethylbenzene	4.0	J	ug/l	10	2.8	4
1,2,4-Trimethylbenzene	710		ug/l	10	2.8	4
Methyl Acetate	ND		ug/l	8.0	0.94	4
Cyclohexane	110		ug/l	40	1.1	4
1,4-Dioxane	ND		ug/l	1000	240	4
Freon-113	ND		ug/l	10	2.8	4
Methyl cyclohexane	42		ug/l	40	1.6	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	91		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	92		70-130

Project Name: EMERSON SCHOOL GWM
Lab Number: L2138374
Project Number: B0441-020-001-001
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-03 D2
Client ID: HMW-3
Sample Location: BUFFALO

Date Collected: 07/15/21 13:33
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/22/21 19:13
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Toluene	1000		ug/l	62	18.	25

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	106		70-130

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2138374

Project Number: B0441-020-001-001 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-03 D
Client ID: HMW-3
Sample Location: BUFFALO

Date Collected: 07/15/21 13:33
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/22/21 00:22
Analyst: NLK

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	1200	E	ug/l	12	3.5	5
Ethylbenzene	230		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:** L2138374

Project Number: B0441-020-001-001 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-03 D Date Collected: 07/15/21 13:33
Client ID: HMW-3 Date Received: 07/16/21
Sample Location: BUFFALO 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	1600		ug/l	12	3.5	5
o-Xylene	550		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	ND		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	6.0	J	ug/l	12	3.5	5
p-Isopropyltoluene	ND		ug/l	12	3.5	5
n-Propylbenzene	6.0	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	140		ug/l	12	3.5	5
1,2,4-Trimethylbenzene	140		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	62		ug/l	50	2.0	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	94		70-130

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2138374

Project Number: B0441-020-001-001 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-04
Client ID: HMW-4
Sample Location: BUFFALO

Date Collected: 07/15/21 11:29
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/22/21 01:03
Analyst: NLK

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	4.5		ug/l	2.5	0.70	1
Ethylbenzene	11		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:** L2138374

Project Number: B0441-020-001-001 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-04 Date Collected: 07/15/21 11:29

Client ID: HMW-4 Date Received: 07/16/21

Sample Location: BUFFALO 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	24		ug/l	2.5	0.70	1
o-Xylene	7.4		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	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	1.6	J	ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	14		ug/l	2.5	0.70	1
p-Isopropyltoluene	0.82	J	ug/l	2.5	0.70	1
n-Propylbenzene	19		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	24		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	95		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	29		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	88		70-130

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2138374

Project Number: B0441-020-001-001 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-05
Client ID: HMW-5
Sample Location: BUFFALO

Date Collected: 07/15/21 10:16
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/21/21 23:01
Analyst: NLK

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	11		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	0.36	J	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:** L2138374

Project Number: B0441-020-001-001 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-05 Date Collected: 07/15/21 10:16

Client ID: HMW-5 Date Received: 07/16/21

Sample Location: BUFFALO 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	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	101		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	104		70-130

Project Name: EMERSON SCHOOL GWM
Lab Number: L2138374
Project Number: B0441-020-001-001
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-06
Client ID: HMW-6
Sample Location: BUFFALO
Date Collected: 07/15/21 10:45
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/21/21 23:22
Analyst: NLK

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	0.44	J	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:** L2138374

Project Number: B0441-020-001-001 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-06 Date Collected: 07/15/21 10:45

Client ID: HMW-6 Date Received: 07/16/21

Sample Location: BUFFALO 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	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	97		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	104		70-130

Project Name: EMERSON SCHOOL GWM
Lab Number: L2138374
Project Number: B0441-020-001-001
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-07 D2
Client ID: HMW-10
Sample Location: BUFFALO

Date Collected: 07/15/21 12:20
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/22/21 19:39
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
p/m-Xylene	1000		ug/l	62	18.	25

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	103		70-130

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001
Lab Number: L2138374
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-07 D
Client ID: HMW-10
Sample Location: BUFFALO

Date Collected: 07/15/21 12:20
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/22/21 00:43
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethane	ND		ug/l	6.2	1.8	2.5
Chloroform	ND		ug/l	6.2	1.8	2.5
Carbon tetrachloride	ND		ug/l	1.2	0.34	2.5
1,2-Dichloropropane	ND		ug/l	2.5	0.34	2.5
Dibromochloromethane	ND		ug/l	1.2	0.37	2.5
1,1,2-Trichloroethane	ND		ug/l	3.8	1.2	2.5
Tetrachloroethene	ND		ug/l	1.2	0.45	2.5
Chlorobenzene	ND		ug/l	6.2	1.8	2.5
Trichlorofluoromethane	ND		ug/l	6.2	1.8	2.5
1,2-Dichloroethane	ND		ug/l	1.2	0.33	2.5
1,1,1-Trichloroethane	ND		ug/l	6.2	1.8	2.5
Bromodichloromethane	ND		ug/l	1.2	0.48	2.5
trans-1,3-Dichloropropene	ND		ug/l	1.2	0.41	2.5
cis-1,3-Dichloropropene	ND		ug/l	1.2	0.36	2.5
Bromoform	ND		ug/l	5.0	1.6	2.5
1,1,2,2-Tetrachloroethane	ND		ug/l	1.2	0.42	2.5
Benzene	ND		ug/l	1.2	0.40	2.5
Toluene	120		ug/l	6.2	1.8	2.5
Ethylbenzene	25		ug/l	6.2	1.8	2.5
Chloromethane	ND		ug/l	6.2	1.8	2.5
Bromomethane	ND		ug/l	6.2	1.8	2.5
Vinyl chloride	ND		ug/l	2.5	0.18	2.5
Chloroethane	ND		ug/l	6.2	1.8	2.5
1,1-Dichloroethene	ND		ug/l	1.2	0.42	2.5
trans-1,2-Dichloroethene	ND		ug/l	6.2	1.8	2.5
Trichloroethene	ND		ug/l	1.2	0.44	2.5
1,2-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5

Project Name: EMERSON SCHOOL GWM **Lab Number:** L2138374

Project Number: B0441-020-001-001 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-07 D Date Collected: 07/15/21 12:20
Client ID: HMW-10 Date Received: 07/16/21
Sample Location: BUFFALO 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	6.2	1.8	2.5
1,4-Dichlorobenzene	ND		ug/l	6.2	1.8	2.5
Methyl tert butyl ether	ND		ug/l	6.2	1.8	2.5
p/m-Xylene	1300	E	ug/l	6.2	1.8	2.5
o-Xylene	260		ug/l	6.2	1.8	2.5
cis-1,2-Dichloroethene	ND		ug/l	6.2	1.8	2.5
Styrene	ND		ug/l	6.2	1.8	2.5
Dichlorodifluoromethane	ND		ug/l	12	2.5	2.5
Acetone	ND		ug/l	12	3.6	2.5
Carbon disulfide	ND		ug/l	12	2.5	2.5
2-Butanone	ND		ug/l	12	4.8	2.5
4-Methyl-2-pentanone	ND		ug/l	12	2.5	2.5
2-Hexanone	ND		ug/l	12	2.5	2.5
Bromochloromethane	ND		ug/l	6.2	1.8	2.5
1,2-Dibromoethane	ND		ug/l	5.0	1.6	2.5
n-Butylbenzene	3.5	J	ug/l	6.2	1.8	2.5
sec-Butylbenzene	7.2		ug/l	6.2	1.8	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	6.2	1.8	2.5
Isopropylbenzene	15		ug/l	6.2	1.8	2.5
p-Isopropyltoluene	6.0	J	ug/l	6.2	1.8	2.5
n-Propylbenzene	53		ug/l	6.2	1.8	2.5
1,2,3-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,2,4-Trichlorobenzene	ND		ug/l	6.2	1.8	2.5
1,3,5-Trimethylbenzene	340		ug/l	6.2	1.8	2.5
1,2,4-Trimethylbenzene	42		ug/l	6.2	1.8	2.5
Methyl Acetate	ND		ug/l	5.0	0.58	2.5
Cyclohexane	200		ug/l	25	0.68	2.5
1,4-Dioxane	ND		ug/l	620	150	2.5
Freon-113	ND		ug/l	6.2	1.8	2.5
Methyl cyclohexane	140		ug/l	25	0.99	2.5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	86		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	83		70-130

Project Name: EMERSON SCHOOL GWM
Lab Number: L2138374
Project Number: B0441-020-001-001
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-08
Client ID: GSW-1
Sample Location: BUFFALO
Date Collected: 07/15/21 08:50
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 07/21/21 23:42
Analyst: NLK

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	190		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	3.0		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	1.2	J	ug/l	2.5	0.70	1
Trichloroethene	7.4		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:** L2138374

Project Number: B0441-020-001-001 **Report Date:** 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-08 Date Collected: 07/15/21 08:50

Client ID: GSW-1 Date Received: 07/16/21

Sample Location: BUFFALO 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	26		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	94		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	99		70-130

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001
Lab Number: L2138374
Report Date: 07/23/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/21/21 18:10
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-08 Batch: WG1526701-5					
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
Project Number: B0441-020-001-001
Lab Number: L2138374
Report Date: 07/23/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/21/21 18:10
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-08 Batch: WG1526701-5					
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: B0441-020-001-001
Lab Number: L2138374
Report Date: 07/23/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/21/21 18:10
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-08 Batch: WG1526701-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	102		70-130

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001
Lab Number: L2138374
Report Date: 07/23/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/22/21 10:48
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03,07 Batch: WG1526953-5					
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
Project Number: B0441-020-001-001
Lab Number: L2138374
Report Date: 07/23/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/22/21 10:48
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03,07 Batch: WG1526953-5					
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
1,4-Dioxane	ND		ug/l	250	61.

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001
Lab Number: L2138374
Report Date: 07/23/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/22/21 10:48
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03,07 Batch: WG1526953-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	110		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001

Lab Number: L2138374
Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG1526701-3 WG1526701-4								
Methylene chloride	100		99		70-130	1		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	97		95		70-130	2		20
Carbon tetrachloride	85		88		63-132	3		20
1,2-Dichloropropane	99		96		70-130	3		20
Dibromochloromethane	72		76		63-130	5		20
1,1,2-Trichloroethane	96		92		70-130	4		20
Tetrachloroethene	100		98		70-130	2		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	110		110		62-150	0		20
1,2-Dichloroethane	96		95		70-130	1		20
1,1,1-Trichloroethane	96		95		67-130	1		20
Bromodichloromethane	83		86		67-130	4		20
trans-1,3-Dichloropropene	85		87		70-130	2		20
cis-1,3-Dichloropropene	88		89		70-130	1		20
Bromoform	61		62		54-136	2		20
1,1,2,2-Tetrachloroethane	94		93		67-130	1		20
Benzene	100		99		70-130	1		20
Toluene	100		100		70-130	0		20
Ethylbenzene	100		100		70-130	0		20
Chloromethane	85		80		64-130	6		20
Bromomethane	83		79		39-139	5		20
Vinyl chloride	110		100		55-140	10		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EMERSON SCHOOL GWM

Project Number: B0441-020-001-001

Lab Number: L2138374

Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG1526701-3 WG1526701-4								
Chloroethane	130		130		55-138	0		20
1,1-Dichloroethene	100		100		61-145	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	98		96		70-130	2		20
1,2-Dichlorobenzene	100		98		70-130	2		20
1,3-Dichlorobenzene	100		99		70-130	1		20
1,4-Dichlorobenzene	100		98		70-130	2		20
Methyl tert butyl ether	94		93		63-130	1		20
p/m-Xylene	100		100		70-130	0		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	100		99		70-130	1		20
Styrene	100		100		70-130	0		20
Dichlorodifluoromethane	100		96		36-147	4		20
Acetone	100		100		58-148	0		20
Carbon disulfide	100		100		51-130	0		20
2-Butanone	79		90		63-138	13		20
4-Methyl-2-pentanone	82		83		59-130	1		20
2-Hexanone	80		81		57-130	1		20
Bromochloromethane	99		98		70-130	1		20
1,2-Dibromoethane	90		90		70-130	0		20
n-Butylbenzene	110		100		53-136	10		20
sec-Butylbenzene	110		100		70-130	10		20
1,2-Dibromo-3-chloropropane	65		71		41-144	9		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EMERSON SCHOOL GWM

Project Number: B0441-020-001-001

Lab Number: L2138374

Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG1526701-3 WG1526701-4								
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	100		100		70-130	0		20
n-Propylbenzene	110		100		69-130	10		20
1,2,3-Trichlorobenzene	95		93		70-130	2		20
1,2,4-Trichlorobenzene	96		94		70-130	2		20
1,3,5-Trimethylbenzene	100		100		64-130	0		20
1,2,4-Trimethylbenzene	100		99		70-130	1		20
Methyl Acetate	90		97		70-130	7		20
Cyclohexane	100		99		70-130	1		20
1,4-Dioxane	74		70		56-162	6		20
Freon-113	110		110		70-130	0		20
Methyl cyclohexane	100		100		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		99		70-130
Toluene-d8	101		101		70-130
4-Bromofluorobenzene	100		99		70-130
Dibromofluoromethane	99		100		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: EMERSON SCHOOL GWM

Project Number: B0441-020-001-001

Lab Number: L2138374

Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03,07 Batch: WG1526953-3 WG1526953-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	110		110		63-132	0		20
1,2-Dichloropropane	98		100		70-130	2		20
Dibromochloromethane	86		88		63-130	2		20
1,1,2-Trichloroethane	86		86		70-130	0		20
Tetrachloroethene	99		100		70-130	1		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	110		110		62-150	0		20
1,2-Dichloroethane	99		100		70-130	1		20
1,1,1-Trichloroethane	100		100		67-130	0		20
Bromodichloromethane	97		98		67-130	1		20
trans-1,3-Dichloropropene	87		87		70-130	0		20
cis-1,3-Dichloropropene	92		97		70-130	5		20
Bromoform	75		78		54-136	4		20
1,1,2,2-Tetrachloroethane	90		94		67-130	4		20
Benzene	110		110		70-130	0		20
Toluene	100		100		70-130	0		20
Ethylbenzene	110		110		70-130	0		20
Chloromethane	100		100		64-130	0		20
Bromomethane	**160**	Q	**160**	Q	39-139	0		20
Vinyl chloride	130		130		55-140	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EMERSON SCHOOL GWM

Project Number: B0441-020-001-001

Lab Number: L2138374

Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03,07 Batch: WG1526953-3 WG1526953-4								
Chloroethane	**140**	Q	**140**	Q	55-138	0		20
1,1-Dichloroethene	110		110		61-145	0		20
trans-1,2-Dichloroethene	120		120		70-130	0		20
Trichloroethene	93		97		70-130	4		20
1,2-Dichlorobenzene	97		100		70-130	3		20
1,3-Dichlorobenzene	98		100		70-130	2		20
1,4-Dichlorobenzene	99		100		70-130	1		20
Methyl tert butyl ether	92		96		63-130	4		20
p/m-Xylene	105		105		70-130	0		20
o-Xylene	105		105		70-130	0		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Styrene	100		100		70-130	0		20
Dichlorodifluoromethane	120		120		36-147	0		20
Acetone	80		81		58-148	1		20
Carbon disulfide	120		120		51-130	0		20
2-Butanone	67		66		63-138	2		20
4-Methyl-2-pentanone	63		63		59-130	0		20
2-Hexanone	61		61		57-130	0		20
Bromochloromethane	110		110		70-130	0		20
1,2-Dibromoethane	88		89		70-130	1		20
n-Butylbenzene	97		100		53-136	3		20
sec-Butylbenzene	110		120		70-130	9		20
1,2-Dibromo-3-chloropropane	68		77		41-144	12		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EMERSON SCHOOL GWM

Project Number: B0441-020-001-001

Lab Number: L2138374

Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03,07 Batch: WG1526953-3 WG1526953-4								
Isopropylbenzene	100		110		70-130	10		20
p-Isopropyltoluene	98		100		70-130	2		20
n-Propylbenzene	100		100		69-130	0		20
1,2,3-Trichlorobenzene	86		90		70-130	5		20
1,2,4-Trichlorobenzene	92		95		70-130	3		20
1,3,5-Trimethylbenzene	93		98		64-130	5		20
1,2,4-Trimethylbenzene	94		98		70-130	4		20
1,4-Dioxane	94		102		56-162	8		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		100		70-130
Toluene-d8	105		103		70-130
4-Bromofluorobenzene	97		98		70-130
Dibromofluoromethane	108		106		70-130

INORGANICS
&
MISCELLANEOUS

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001

Lab Number: L2138374
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-01
Client ID: HMW-1
Sample Location: BUFFALO

Date Collected: 07/15/21 09:33
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	286.		mg CaCO3/L	2.00	NA	1	-	07/21/21 10:04	121,2320B	JB

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001

Lab Number: L2138374
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-02
Client ID: HMW-2
Sample Location: BUFFALO

Date Collected: 07/15/21 12:55
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	246.		mg CaCO3/L	2.00	NA	1	-	07/21/21 10:04	121,2320B	JB

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001

Lab Number: L2138374
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-03
Client ID: HMW-3
Sample Location: BUFFALO

Date Collected: 07/15/21 13:33
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	311.		mg CaCO3/L	2.00	NA	1	-	07/21/21 10:04	121,2320B	JB

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001

Lab Number: L2138374
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-04
Client ID: HMW-4
Sample Location: BUFFALO

Date Collected: 07/15/21 11:29
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	282.		mg CaCO3/L	2.00	NA	1	-	07/21/21 10:04	121,2320B	JB

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001

Lab Number: L2138374
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-05
Client ID: HMW-5
Sample Location: BUFFALO

Date Collected: 07/15/21 10:16
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	255.		mg CaCO3/L	2.00	NA	1	-	07/21/21 10:04	121,2320B	JB

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001

Lab Number: L2138374
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-06
Client ID: HMW-6
Sample Location: BUFFALO

Date Collected: 07/15/21 10:45
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	316.		mg CaCO3/L	2.00	NA	1	-	07/21/21 10:04	121,2320B	JB

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001

Lab Number: L2138374
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-07
Client ID: HMW-10
Sample Location: BUFFALO

Date Collected: 07/15/21 12:20
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	312.		mg CaCO3/L	2.00	NA	1	-	07/21/21 10:04	121,2320B	JB

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001

Lab Number: L2138374
Report Date: 07/23/21

SAMPLE RESULTS

Lab ID: L2138374-08
Client ID: GSW-1
Sample Location: BUFFALO

Date Collected: 07/15/21 08:50
Date Received: 07/16/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Alkalinity, Total	316.		mg CaCO3/L	2.00	NA	1	-	07/21/21 10:04	121,2320B	JB

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001
Lab Number: L2138374
Report Date: 07/23/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-08 Batch: WG1526257-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	07/21/21 10:04	121,2320B	JB

Lab Control Sample Analysis

Batch Quality Control

Project Name: EMERSON SCHOOL GWM

Project Number: B0441-020-001-001

Lab Number: L2138374

Report Date: 07/23/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-08 Batch: WG1526257-2								
Alkalinity, Total	100		-		90-110	-		10

Matrix Spike Analysis
Batch Quality Control

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001

Lab Number: L2138374
Report Date: 07/23/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG1526257-4 QC Sample: L2138238-01 Client ID: MS Sample												
Alkalinity, Total	42.4	100	142	100		-	-		86-116	-		10

Lab Duplicate Analysis

Batch Quality Control

Project Name: EMERSON SCHOOL GWM

Project Number: B0441-020-001-001

Lab Number: L2138374

Report Date: 07/23/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG1526257-3 QC Sample: L2138238-01 Client ID: DUP Sample						
Alkalinity, Total	42.4	43.4	mg CaCO3/L	2		10

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001

Lab Number: L2138374
Report Date: 07/23/21

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(*)
L2138374-01A	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-01B	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-01C	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-01D	Plastic 250ml unpreserved/No Headspace	A	NA		3.4	Y	Absent		ALK-T-2320(14)
L2138374-02A	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-02B	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-02C	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-02D	Plastic 250ml unpreserved/No Headspace	A	NA		3.4	Y	Absent		ALK-T-2320(14)
L2138374-03A	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-03B	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-03C	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-03D	Plastic 250ml unpreserved/No Headspace	A	NA		3.4	Y	Absent		ALK-T-2320(14)
L2138374-04A	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-04B	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-04C	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-04D	Plastic 250ml unpreserved/No Headspace	A	NA		3.4	Y	Absent		ALK-T-2320(14)
L2138374-05A	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-05B	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-05C	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-05D	Plastic 250ml unpreserved/No Headspace	A	NA		3.4	Y	Absent		ALK-T-2320(14)
L2138374-06A	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-06B	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-06C	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)

*Values in parentheses indicate holding time in days

Project Name: EMERSON SCHOOL GWM
Project Number: B0441-020-001-001

Lab Number: L2138374
Report Date: 07/23/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2138374-06D	Plastic 250ml unpreserved/No Headspace	A	NA		3.4	Y	Absent		ALK-T-2320(14)
L2138374-07A	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-07B	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-07C	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-07D	Plastic 250ml unpreserved/No Headspace	A	NA		3.4	Y	Absent		ALK-T-2320(14)
L2138374-08A	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-08B	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-08C	Vial HCl preserved	A	NA		3.4	Y	Absent		NYTCL-8260-R2(14)
L2138374-08D	Plastic 250ml unpreserved/No Headspace	A	NA		3.4	Y	Absent		ALK-T-2320(14)

*Values in parentheses indicate holding time in days

Project Name:	EMERSON SCHOOL GWM	**Lab Number:**	L2138374
Project Number:	B0441-020-001-001	**Report Date:**	07/23/21

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:**	L2138374
Project Number:	B0441-020-001-001	**Report Date:**	07/23/21

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.

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'.

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.

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.)

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 Identified Compounds (TICs).

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.

Report Format: DU Report with 'J' Qualifiers

Project Name:	EMERSON SCHOOL GWM	**Lab Number:**	L2138374
Project Number:	B0441-020-001-001	**Report Date:**	07/23/21

Data Qualifiers

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.

Project Name:	EMERSON SCHOOL GWM	**Lab Number:**	L2138374
Project Number:	B0441-020-001-001	**Report Date:**	07/23/21

REFERENCES

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

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

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 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/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 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
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 332: Perchlorate; **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), **EPA 600/4-81-045**: PCB-Oil.
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

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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

ALPHA Job # L2138374

Client Information
Client: Benchmark Env
Address: 2558 Hamburg Turnpike Lackawanna NY
Phone: (716) 828-8358
Fax: (716) 956-0583
Email: TBirkenstock@turnkey.com

Project Information
Project Name: Emerson School GWM
Project Location: Buffalo NY
Project # B0441-020-001-001
(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

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	TCL+CP-51 VOC 8260	T. Alkalinity	Total # Bottles	Sample Specific Comments
38374-01	HMW-1	7/15/21	933	Water	TAS	X	X	4	
-02	HMW-2	"	1255	"	"	X	X	4	
-03	HMW-3	"	1333	"	"	X	X	4	
-04	HMW-4	"	1129	"	"	X	X	4	
-05	HMW-5	"	1016	"	"	X	X	4	
-06	HMW-6	"	1045	"	"	X	X	4	
-07	MW-10	"	1220	"	"	X	X	4	
-08	GSW-[illegible] 1	"	950	"	"	X	X	4	

Container Type: V P
Preservative: B A

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

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	7/16/21 0800	AAL	7/16/21 1500
[signature] AAL	7/16/21 1538	[signature]	7/17/21 0410

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)