

**2022**

**PERIODIC REVIEW REPORT**

**FOR**

**BUFFALO BUSINESS PARK SITE**

**1800 BROADWAY STREET**

**NYSDEC SITE #V00663-9**

**CITY OF BUFFALO, ERIE COUNTY, NEW YORK**

**Prepared by:**



**C&S ENGINEERS, INC.**

141 ELM STREET

BUFFALO, NEW YORK 14203

**Prepared on Behalf of:**

**BUFFALO BUSINESS PARK, INC.**

1800 BROADWAY STREET, BUILDING #1D

BUFFALO, NEW YORK 14212

**REPORTING PERIOD:**

**SEPTEMBER 1, 2021 TO SEPTEMBER 1, 2022**

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## **ACRONYM LIST**

AAR	ALTERNATIVES ANALYSIS REPORT
BBP	BUFFALO BUSINESS PARK
BCA	BROWNFIELD CLEANUP AGREEMENT
BCP	BROWNFIELD CLEANUP PROGRAM
BGS	BELOW GROUND SURFACE
DD	DECISION DOCUMENT
DER	DEPARTMENT OF ENVIRONMENTAL REMEDIATION
EC	ENGINEERING CONTROLS
HFM	HISTORIC FILL MATERIAL
IC	INSTITUTIONAL CONTROLS
NYSDEC	NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NYSDOH	NEW YORK STATE DEPARTMENT OF HEALTH
O&M	OPERATION AND MAINTENANCE
PAH	POLYCYCLIC AROMATIC HYDROCARBONS
PCBs	POLYCHLORINATED BIPHENYLS
PPM	PARTS PER MILLION

RAOs	REMEDIAL ACTION OBJECTIVES
RAWP	REMEDIAL ACTION WORK PLAN
RI	REMEDIAL INVESTIGATION
SCOs	SOIL CLEANUP OBJECTIVES
SITE	1.004-ACRE PORTION OF THE BUFFALO BUSINESS PARK, BUFFALO, NEW YORK
SMP	SITE MANAGEMENT PLAN
SVOCs	SEMI-VOLATILE ORGANIC COMPOUNDS
UG/L	MICROGRAMS PER LITER
VOCs	VOLATILE ORGANIC COMPOUNDS



## **EXECUTIVE SUMMARY**

C&S Engineers, Inc. (C&S) has prepared this 2022 Periodic Review Report for a 1.413-acre portion of the Buffalo Business Park Site (hereinafter referred to as the Site) located at 1800 Broadway Street in Buffalo, New York.

The Site contains two operable units: Unit 1 was an area of soil contamination which has been remediated by removal of contaminated soils; and Unit 2 is an area of groundwater contamination located in the same area where the soil contamination was located. In addition to the groundwater remedial program, there was concern regarding the potential for vapor intrusion into one of the buildings located south of the area of groundwater contamination.

Remediation of the groundwater contamination at the Site consists of a groundwater pumping system using three wells (MW-3BR, MW-4BR and MW-5 ABR) located within the groundwater contaminant plume. Wells are pumped using appropriate controllers to achieve drawdown of the water table and thus achieve hydraulic capture of contaminated groundwater. Wells are sampled periodically to evaluate if decreases in contaminant levels are being achieved.

The primary goal of the pumping program is to achieve groundwater flow control such that flow of contaminated groundwater does not leave the site but is captured by the pumping system. Based on groundwater contour maps, this goal is being achieved.

Operation of the sub-slab venting system is effectively preventing soil vapors from entering the building and is ongoing.

Areas with remaining contamination will be monitored and maintained as specified in the approved Site Management Plan (SMP).

The SMP was prepared by American Consulting Professionals of New York, PLLC on behalf of Buffalo Business Park, Inc., in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May 2010, and the guidelines provided by the NYSDEC. The SMP addresses the means for implementing the Intuition Controls (ICs) and/or Engineering Controls (ECs) that are required by the Environmental Easement for the Site. A summary of the SMP is provided below.

<p>Site Identification: Buffalo Business Park Site: 1800 Broadway Street, Buffalo, New York</p> <p>VCP Site No. V00663-9</p>	
Institutional Controls:	1. The property may be used for commercial/industrial use.
	2. All ECs must be inspected at a frequency and in a manner defined in the SMP.
	3. The use of groundwater underlying the Site 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.
	4. Compliance with the Department approved Site Management Plan and Periodic Review Reporting is required.
	5. The remedial party or site owner is required to complete and submit a periodic certification of institutional and engineering controls to the Department in accordance with 6NYCRR Part 375-1.8(h)(3).
	6. The potential for vapor intrusion must be evaluated for any buildings developed in the area and any potential impacts that are identified must be monitored or mitigated
Engineering Controls:	1. Vapor Intercept System: Maintain the active SSD system in Building 1A.
	2. Groundwater Pumping System: Groundwater monitoring wells MW4-BR, MW3-BR and MW5A-BR are operated as pumping wells.
Inspections:	
1. Groundwater Pumping System and SSD System inspection	Frequency Annually

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Site Identification: Buffalo Business Park Site: 1800 Broadway Street,  
Buffalo, New York  
VCP Site No. V00663-9

Monitoring:	
1. Groundwater sampling	Annually
Maintenance:	
1. Groundwater Pumping System and SSD System repair	As needed
Reporting:	
1. Periodic Review Report	Annually

The Institutional and Engineering Controls Certification form is provided in **Appendix A**.

## **1** **SITE OVERVIEW**

The Buffalo Business Park property is located in the Buffalo, New York, County of Erie (see **Figure 1**) and is identified as Block 1, Lots 5.1 and 5.2 on the County of Erie Tax Map. The Buffalo Business Park property is an approximately 22 acre area bounded by NYSDOT property to the north and east, Broadway Street to the south, and TOPS Market to the west.

Buffalo Business Park (BBP) entered into a VCA with the NYSDEC to remediate a 1.004-acre portion of property located in Buffalo, New York ("Site"). This VCA required the Remedial Party, Buffalo Business Park, to investigate and remediate contaminated media at the Site.

The Site consists of a 1 Acre portion of the Buffalo Business Park property located at 1800 Broadway in Buffalo, New York. The site is located at the entrance to the property and consists primarily of parking and driveway areas and a portion of the commercial/industrial building fronting on Broadway.

The owner of the site parcels at the time of issuance of this PRR is/are:

Buffalo Business Park, Inc.

1800 Broadway

Buffalo, NY 14212

### **1.1 Geology and Hydrogeology**

Several environmental studies have previously been conducted at BBP from which subsurface conditions have been generally characterized. The overburden materials are approximately 14 feet in thickness at BBP. They generally consist of fill materials that are variable in thickness to a depth of approximately two feet. Fill material is generally described as sands and gravel with some ash, brick, wood and railroad ties which is consistent with its past use as a rail yard. This is underlain by native materials consisting of brown gravelly sands with some silt. This material is laterally variable, but is generally 14 to 16 feet in thickness. Bedrock is at approximately 14 feet below ground surface (BGS), and consists of gray, crystalline Limestone (Onondaga Limestone.)

Groundwater is present in the overburden with groundwater flow direction to the southwest and southeast. Groundwater in bedrock reportedly flows to the southeast; however, the overburden and bedrock hydraulic zones are likely connected given the highly permeable nature of the overburden gravelly sands.

### **1.2 Site History**

The Site and the vicinity were historically used for railroad transport/tracks associated with the Pullman Car Company from 1900 until at least 1950.

Previous investigations identified the presence of VOCs in site soils and groundwater including tetrachloroethene in soil, and tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, methylene chloride and vinyl chloride in groundwater. Based on this information, the site was divided into two operable units for purposes of investigation and remediation:

- Operable Unit #1, consisting of that area of site with defined contaminated soils; and
- Operable Unit #2, consisting of that area of the site with defined groundwater contamination.

In October 2003, a remedial action work plan (RAWP) was prepared to excavate soils from Operable Unit #1 at the site, described as an area of soil contamination. This remedy proposed the excavation of impacted soils and treatment in an ex-situ soil vapor extraction system. This RAWP was submitted to the NYSDEC for review and was subsequently approved on August 10, 2005. The approved remedy was subsequently reviewed and modified to consist of excavation of contaminated soil

with off-site disposal. The revised RAWP was subsequently approved by the NYSDEC on January 10, 2006.

### **1.3 Summary of Selected Remedy**

The remedial program for the Site consists of the following:

- Excavation of contaminated soil was completed in April 2006;
- Pumping of contaminated groundwater to achieve capture (no contaminated groundwater leaving the site) as well as reduction of groundwater contaminant concentrations. The current Groundwater Pumping System was completed in December 2009; and
- Installation and operation of a sub-slab depressurization system in the building was completed in late 2008.

## **2 IC/EC PLAN COMPLIANCE REPORT**

### **2.1 IC/EC Requirements and Compliance**

#### **2.1.1 Institutional Controls**

The institutional controls for this Site are:

- The property may only be used for commercial/industrial use. The long-term Engineering and Institutional Controls included in this SMP must be employed.
- The property may not be used for a higher level of use, such as unrestricted/restricted residential use without additional remediation and amendment of the Deed Restriction, as approved by the NYSDEC.
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP; any excavated soils should be handled as specified in the Soil Management Plan.
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use.
- The potential for vapor intrusion must be evaluated for any buildings developed in the area and any potential impacts that are identified must be monitored or mitigated.
- Vegetable gardens and farming on the property are prohibited.
- The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Restricted Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Restricted Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

#### **2.1.2 Engineering Controls**

The engineering controls for this Site are:

- Vapor Intercept System: The active SSD system will not be discontinued unless prior written approval is granted by the NYSDEC.
- Groundwater Pumping System: Groundwater monitoring wells MW3-BR, MW4-BR and MW5A-BR are operated as pumping wells. The groundwater pumping system will not be discontinued unless prior written approval is granted by the

NYSDEC. In the event that monitoring data indicates that the groundwater pumping system is no longer required, a proposal to discontinue the system will be submitted by Buffalo Business Park. Conditions that warrant discontinuing the groundwater pumping system include contaminant concentrations in groundwater that: (1) reach levels that are consistently below ambient water quality standards, (2) have become asymptotic to a low level over an extended period of time as accepted by the NYSDEC, or (3) the NYSDEC has determined that the groundwater pumping system has reached the limit of its effectiveness. This assessment will be based in part on post-remediation contaminant levels in groundwater collected from monitoring wells located throughout the site. Systems will remain in place and operational until permission to discontinue their use is granted in writing by the NYSDEC.

## **2.2 IC/EC Certification**

As required, the Site Management Periodic Review Report Notice – Institutional and Engineering Controls Certificate Form has been completed and a copy is provided in **Appendix A**.

## **2.3 Review of Institutional Controls**

The following observations, related to the Site's ICs were noted at the time of the site reconnaissance:

- The Site has not changed owners and the land use of the Site has not changed. All institutional controls for this Site are in accordance with requirements of the Environmental Easement.
- No groundwater was observed being used at the property. No potable or groundwater supply wells were observed.
- No new buildings or structures have been constructed at the property.
- No vegetable gardens or farming is being conducted at the property.

## **2.4 Review of Engineering Controls**

The following observations, related to the ECs were noted during the site reconnaissance:

- The remedial systems are operating as designed at MW-3BR, MW-4BR and MW-5ABR. Maintenance performed is routine and not unusual (ex. Pump failure). No changes to this remedial system are recommended at this time.
- The sub-slab venting system was continuously operated during the reporting period. No changes to this remedial system are recommended at this time.
- No excavation or importation of materials occurred to the areas under the Environmental Easement within the certifying period.

### **3 MONITORING PLAN COMPLIANCE REPORT**

#### **3.1 Monitoring Plan Requirements**

The monitoring plan requires that wells (MW-2BR, MW-3BR, MW-4BR, MW -5BR and MW-5ABR) are sampled annually and samples analyzed for VOCs. Annual groundwater sampling was completed on July 20, 2022.

The plan also requires that all wells are measured for groundwater elevation to evaluate groundwater flow during both equilibrium conditions (pumps turned off) and pumping conditions. Groundwater elevations during pumping conditions were measured on June 24, 2022, and at equilibrium conditions on July 20, 2022.

#### **3.2 Summary of Monitoring Completed during Reporting Period**

Copies of the field sampling logs are provided in **Appendix B**. A potentiometric contour map based pumping conditions is provided as **Figure 2**. Equilibrium conditions are shown as **Figure 1**.

2022 groundwater analytical results are included in **Appendix B**. Groundwater results over time are presented in **Graph 1**.

#### **3.3 Comparisons with Remedial Objectives**

There are three principal contaminants present in groundwater: tetrachloroethene, trichloroethene and dichloroethene. Vinyl chloride is also present in some wells at lesser concentrations. Three of these compounds (trichloroethene, dichloroethene and vinyl chloride) are degradation products of tetrachloroethene. Review and comparison of the 2022 groundwater analytical results shows the following:

- **MW-2BR.** Eight volatile organic compounds (VOCs) were present in the groundwater sample. In 2022, Dichloroethene is present at slightly lower concentration of 170 micrograms per liter (ug/l) than in 2021 (190 ug/l). Tetrachloroethene is present at 4.1 ug/l, which is below NY TOGS, and significantly below the previous concentration in 2021 (44 ug/l). Trichloroethene is present at 3.6 ug/l, which is below NY TOGS, and below the previous concentration in 2021 (16 ug/l). Vinyl chloride is present at 46 ug/l which is higher than the concentration detected in 2021 (15ug/l).
- **MW-3BR.** Five VOCs were present in the groundwater sample. In 2022, Dichloroethene was present at slightly lower concentration of 5,820 ug/l than in 2021 (5,900 ug/l). Tetrachloroethene was present at 4,600 ug/l, which is higher than the concentration detected 2021 (3,000 ug/l). Trichloroethene was present at 2,800 ug/l, which is a higher concentration detected 2021 (1,800 ug/l).
- **MW-4BR.** Five VOCs were present in the groundwater. The concentration of Dichloroethene was higher in 2022 (4,009.9 ug/l) compared to the 2021 concentration (2400 ug/l). The 2022 concentration of Tetrachloroethene



significantly decreased (94 ug/l) versus 2021 (4,900 ug/l). In 2022, Trichloroethene significantly decreased (60 ug/l) versus 2021 (1,300 ug/l). Lastly, vinyl chloride was detected at 60 ug/l which is an increase from 2021 (Not detected).

- **MW-5BR.** Six VOCs was present in the groundwater sample. The 2022 concentration of dichloroethene (3,032.2 ug/l) significantly decreased from the 2021 concentration of 4,700 ug/l. Tetrachloroethene is present at 12 ug/l, this concentration is higher than the previous concentration in 2021 (Not detected). Trichloroethene is present at 24 ug/l, this concentration is higher than the previous concentration in 2021 (Not detected). Vinyl chloride is present at 280 ug/l which is higher than the concentration detected in 2021 (Not detected).
- **MW-5ABR.** Six VOCs were present in the groundwater sample. In 2022, Dichloroethene was present at significantly lower concentration of 2,223.8 ug/l than in 2021 (12,000 ug/l). Tetrachloroethene was present at 750 ug/l, which is higher than the concentration detected 2021 (Not detected). Trichloroethene was present at 500 ug/l, which is a higher concentration detected 2021 (320 ug/l). Lastly, vinyl chloride was detected at 45 ug/l which is an increase from 2021 (Not detected).

Field sample logs are attached in **Appendix C**.

### 3.4 Monitoring Deficiencies

There were no monitoring deficiencies in this period. Groundwater elevations were measured during this period on an annual basis on June 24, 2022 and again on July 20, 2022.

### 3.5 Conclusions and Recommendations

Groundwater monitoring results show that the remedial objective of on-site hydraulic capture of contaminated groundwater is being met. Based on the potentiometric data, natural groundwater flow (pumps off) forms a slight ridge on the western boundary of the VCP Site. Groundwater appears to flow to the southeast and southwest. With the pumps on the groundwater flow significantly changes; the ridge is gone and groundwater elevations fall toward the three pumping wells.

Groundwater quality objectives have shown an historic decrease in contaminant levels until 2014, when the contaminant concentrations in groundwater increased at monitoring wells MW-2BR and MW-4BR.

Contaminant concentrations decreased again during the 2015-2016 period; however, contaminant concentrations increased overall again during the 2016-2017 period. In 2018, contaminant concentrations decreased in four of the five wells sampled, and increased in one of the site wells sampled. In 2019, contaminant concentrations again decreased in three of the five wells. In 2020, contaminant concentrations again decreased in three of the five wells sampled and analyzed. In

2021, the types of contaminants and concentrations have decreased in a few wells, most wells showed an increase from the previous sample event.

Sample results from 2022 indicate that Site is continuing to dechlorinate at a variable rate. Based on the historic data CVOC concentrations seem to increase or decrease each year. The levels of CVOCs likely change based on:

- the rate of breakdown of TCE into daughter products;
- the rate of desorption of TCE from the soil; and
- the rate of groundwater flow through the soil to the pumping wells.

We expect CVOC concentrations to continue increase and decrease each year. No changes to the monitoring program are recommended at this time.

## **4 OPERATION & MAINTENANCE (O&M) PLAN COMPLIANCE REPORT**

### **4.1 Components of O&M Plan**

Inspections and data recording were completed as described in the Site Management Plan. There were no deficiencies this recording period.

### **4.2 Summary of O&M Completed During Reporting Period**

O&M activities will be summarized and details of O&M actions will be recorded in the monthly inspection reports that are kept onsite. The sub-slab depressurization blowers were recently inspected. This certified inspection form is attached as **Appendix D**.

- In March 2022 the pump for the carbon tank and check valve needed to be replaced due to a build up of rusty sediment. The same pump size and model was replaced on March 29, 2022. The sediment was removed and placed in a 55-gallon drum and is staged next to the carbon tank for future clean outs.
- In June 2022 the pump in MW-3BR was not working correctly. It was determined that the pump needed to be replaced. The pump was immediately ordered; however, due to supply chain interruptions the pump was not received. The same pump size and model was replaced on November 2, 2022. It is possible that the monitoring well fouled due to a build up of iron bacteria creating a rusty sediment that ruined the pump motor.
- In August 2022 the pump in MW-4BR went offline and was not working. It was determined that the issue was an electrical malfunction. At the time, a new pump was received to replace MW-3BR. Considering that MW-4BR was adjacent to the building, the new pump was installed in MW-4BR. The same pump size and model was replaced on August 2, 2022.
- On August 17, 2022, MW-3BR was purged and flushed out in order to remove sediment that cause the breakdown of the pump. NW Contracting was retained to flush the monitoring well with clean water. Purge water was containerized in

two 55-gallon drums. Water was then pumped into the onsite carbon treatment system. A photographic log of the monitoring well clean out is provided in **Appendix E**.

- If other monitoring wells require cleanout, the procedures used for MW-3BR will be implemented.

### 4.3 Evaluation of Remedial Systems

#### 4.3.1 Groundwater Pumping System

- Buffalo Business Park continues to operate and maintain the groundwater pumping system. Review of the totalizer information for pumping wells MW-3BR, 4BR and 5ABR for the 2020 - 2022 reporting period indicates that these wells operated for most of the year (**Table 3**); except for MW-3BR which was removed in June 2022. The combined number of gallons pumped from the three well totalizers was 372,670, a significant decrease over the last annual reporting period.
- The remedial systems are operating as designed at MW-3BR, MW-4BR and MW-5ABR. Maintenance performed is routine and not unusual (ex. Pump failure). No changes to this remedial system are recommended at this time.
- The groundwater pre-treatment system is operating as designed to meet the BSA discharge limits.
- Buffalo Business Park will receive renewal of the Buffalo Sewer Authority Permit in 2022. As part of the permit renewal, post treatment water samples, from the 500 pound activated carbon system, were collected and analyzed for VOCs and mercury in July 2022. The results showed the system is performing as designed. The analytical results from these sampling events are presented in **Appendix E**.
- The following are typical flow rates observed during the reporting period.

<i>Pumping Well</i>	<i>Average Gallons per Day</i>
MW-3BR	0.9
MW-4BR	0.2
MW-5ABR	0.08

#### 4.3.2 Vapor Intercept System

- The sub-slab venting system is also operating as designed. No changes to this remedial system are recommended.

#### **4.4 O&M Deficiencies**

There are no operational or maintenance deficiencies at this time.

#### **4.5 Conclusions and Recommendations**

The remedial system as designed and operated is capturing contaminated groundwater at the site. There are no recommendations for improvement to the remedial system. No changes to the O&M plan are recommended

### **5 CONCLUSIONS**

#### **5.1 Compliance with Site Management Plan**

The sub-slab venting system was continuously operational during the 2021 - 2022 period.

Buffalo Business Park will comply with all aspects of the SMP (IC/EC; O&M and Monitoring) during the next annual reporting period (2023).

No changes to EC/IC Plan are recommended at this time. The IC/E certification is provided in **Appendix A**.

The requirements of the SMP appear to be satisfied.

#### **5.2 Performance and Effectiveness of the Remedy**

The remedy has been effective in containing groundwater contamination and preventing contamination from leaving the site. Groundwater quality criteria have not been met and pumping should continue.

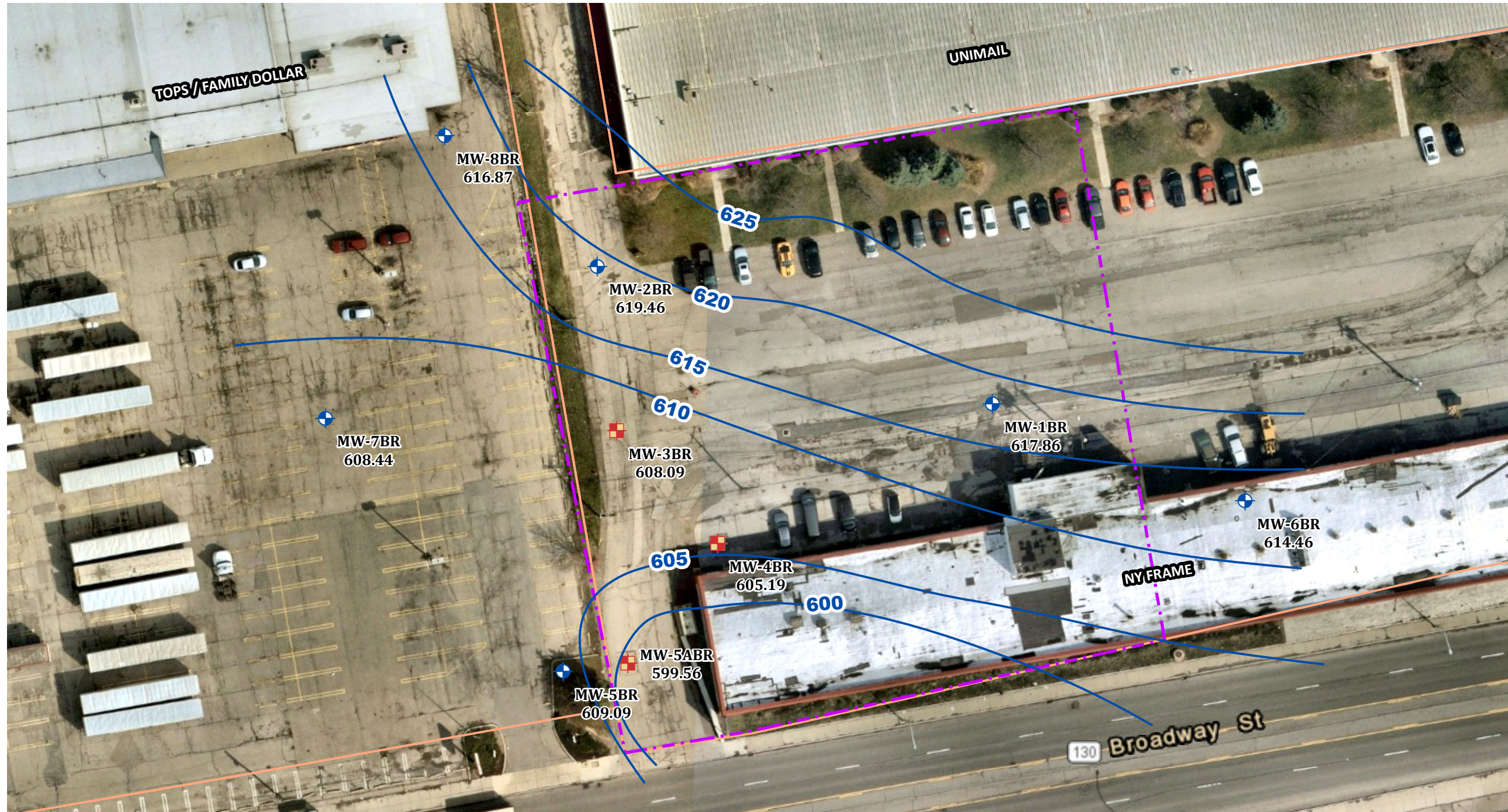
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# FIGURES

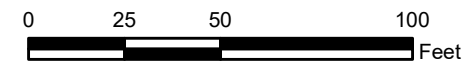
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**Legend**

-  GROUNDWATER MONITORING WELL
-  GROUNDWATER PUMPING WELL
-  VOLUNTEER CLEANUP PROGRAM BOUNDARY
-  PROPERTY BOUNDARY



C&S Engineers, Inc.  
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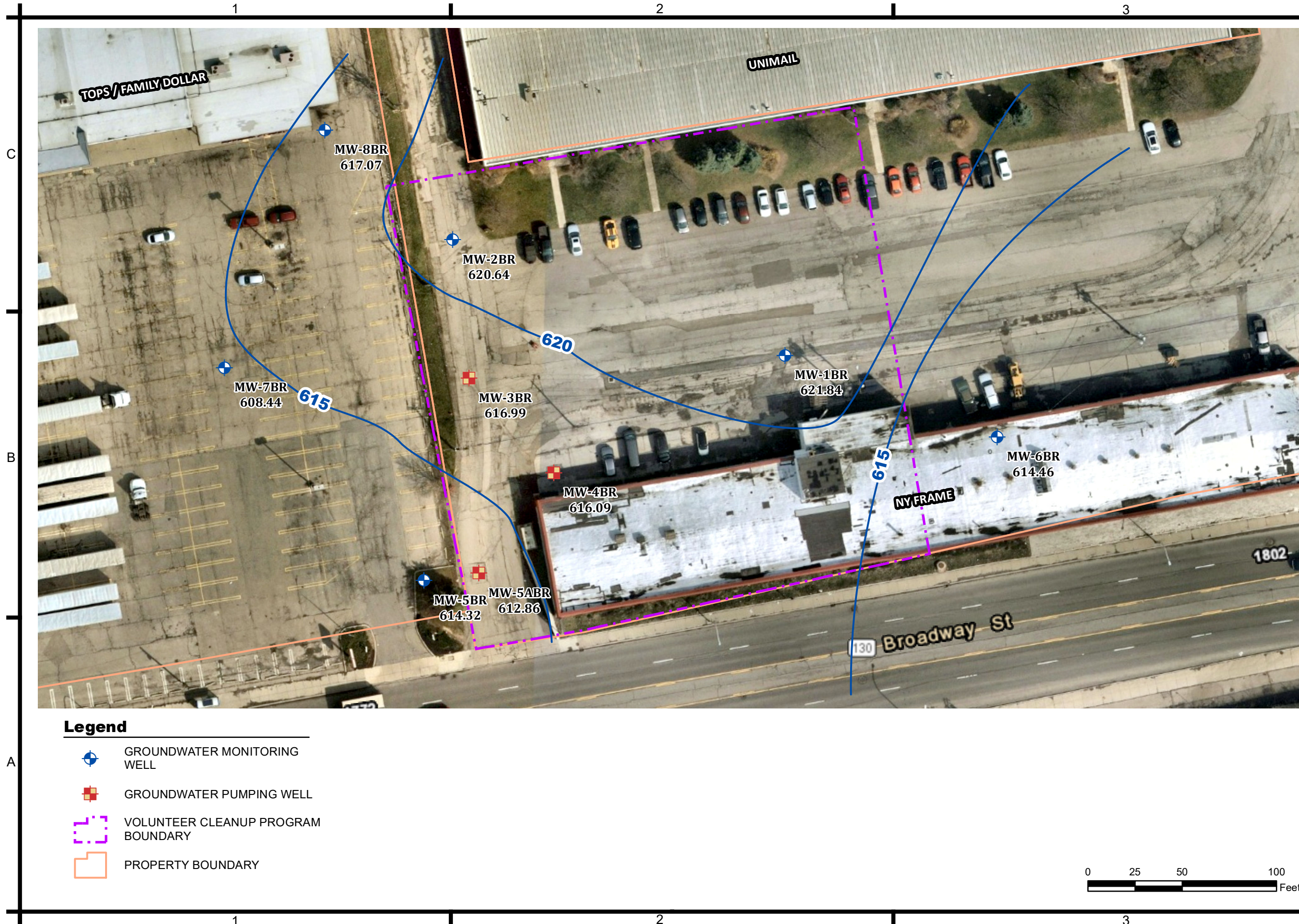
**BUFFALO BUSINESS PARK  
VOLUNTARY CLEANUP PROGRAM  
SITE #V00663-9  
BUFFALO, NEW YORK**

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO:	Y05.001.002	
DATE:	08/11/2021	
DRAWN BY:	C. MARTIN	
DESIGNED BY:	C. MARTIN	
CHECKED BY:	D. RIKER	
NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW		

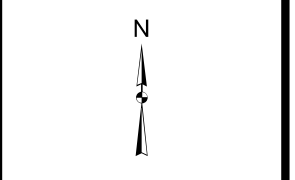
WATER LEVELS  
PUMPS ON

FIGURE 1





**C&S COMPANIES**  
C&S Engineers, Inc.  
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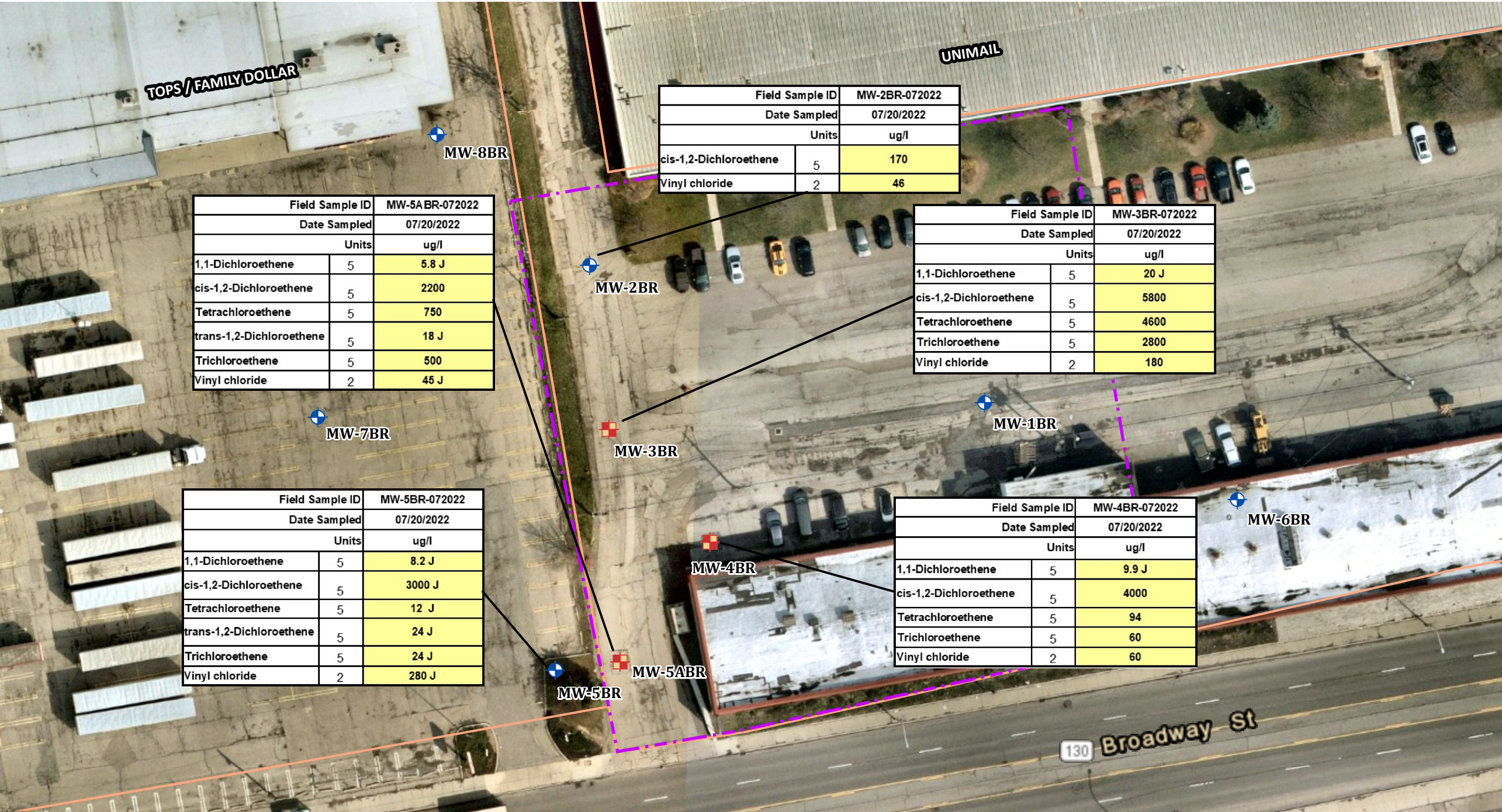
**BUFFALO BUSINESS PARK  
VOLUNTARY CLEANUP PROGRAM  
SITE #V00663-9  
BUFFALO, NEW YORK**

MARK	DATE	DESCRIPTION
REVISIONS		
	PROJECT NO:	Y05.001.002
	DATE:	08/11/2021
	DRAWN BY:	C. MARTIN
	DESIGNED BY:	C. MARTIN
	CHECKED BY:	D. RIKER
NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW		

**WATER LEVELS  
PUMPS OFF**

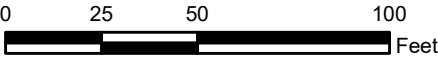
**FIGURE 2**





Legend

- GROUNDWATER MONITORING WELL
- GROUNDWATER PUMPING WELL
- VOLUNTEER CLEANUP PROGRAM BOUNDARY
- PROPERTY BOUNDARY



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N

BUFFALO BUSINESS PARK  
VOLUNTARY CLEANUP PROGRAM  
SITE #V00663-9  
BUFFALO, NEW YORK


2022  
GROUNDWATER  
RESULTS

FIGURE 3



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# TABLES

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**TABLE 1**

**BUFFALO BUSINESS PARK WATER LEVELS**  
**PUMPS TURNED ON**  
**6/24/2022**



WELL NUMBER	RISER ELEVATION (FT)	DEPTH TO WATER (FT)	WATER LEVEL ELEVATION (FT)
MW-1 BR	624.44	6.58	617.86
MW-2 BR	625.04	5.58	619.46
MW-3 BR *	623.99	15.90	608.09
MW-4 BR *	622.79	17.60	605.19
MW-5 ABR *	619.76	20.20	599.56
MW-5 BR	622.42	13.33	609.09
MW-6 BR	623.57	9.11	614.46
MW-7 BR	623.34	14.90	608.44
MW-8 BR	625.87	9.00	616.87

\* Pumping Wells

Groundwater levels were provided by Buffalo Business Park

Monthly groundwater levels are recorded and kept in a log onsite

TABLE 2

**BUFFALO BUSINESS PARK WATER LEVELS**  
**PUMPS TURNED OFF**  
**July 20, 2022**



WELL NUMBER	RISER ELEVATION (FT)	DEPTH TO WATER (FT)	WATER LEVEL ELEVATION (FT)
MW-1 BR	624.44	2.60	621.84
MW-2 BR	625.04	4.40	620.64
MW-3 BR *	623.99	7.00	616.99
MW-4 BR *	622.79	6.70	616.09
MW-5 ABR *	619.76	6.90	612.86
MW-5 BR	622.42	8.10	614.32
MW-6 BR	623.57	9.11	614.46
MW-7 BR	623.34	14.90	608.44
MW-8 BR	625.87	8.80	617.07

\* Pumping Wells

Groundwater levels were provided by Buffalo Business Park

TABLE 3

**PUMPING WELL TREATMENT SYSTEM  
TOTALIZERS BUFFALO BUSINESS PARK**



DATE	MW-4 BR	MW-2 BR	MW-3 BR	MW-5A BR	Treatment System Totalizer
10/1/2009	137,280	NA	NA	NA	
12/15/2009	148,600	--	NA	NA	
9/8/2010	194,590	NA	NA	NA	
9/15/2010	NA	NA	NA	--	
4/27/2011	231,020	1,220	NA	44,170	
5/31/2012	256,870	4,930	NA	116,430	
5/8/2013	289,130	5,180	NA	170,960	
5/15/2014	403,380	5,310	NA	224,850	
1/19/2015	421,440	5,310	NA	254,600	
5/27/2015	421,460	5,310	NA	272,660	
7/17/2015	424,105	NA	NA	279,160	
1/7/2016	424,130	NA	60	279,160	
3/9/2016	424,140	NA	18,650	287,420	
5/26/2016	424,140	NA	107,920	296,980	
9/22/2016	424,220	NA	123,410	297,650	
12/23/2016	58	NA	235,347	305,340	
5/17/2017	19,531	NA	490,000	310,500	
11/15/2018	--	NA	--	--	--
11/29/2018	80,460	NA	687,690	320,500	--
3/19/2019	--	NA	--	--	57,955
8/19/2019	--	NA	--	--	96,495
10/30/2019	80,460	NA	30	64,900	--
11/28/2019	--	NA	--	--	121,350
10/21/2020	130,169	NA	365,940	102,990	535,500
8/24/2021	134,619	NA	787,330	111,910	923,100
9/26/2022	223,760	NA	NA	148,910	372,670

MW-2 BR - pump removed due to poor recharge - 5/27/15

MW-3 BR - pump started - 1/7/16

MW-3 BR - pump removed due to issues - 6/24/22

Totalizer readings are recorded monthly and kept in a log onsite

TABLE 4

HISTORIC GROUNDWATER ANALYTICAL RESULTS  
BUFFALO BUSINESS PARK



Well ID			MW2-BR	MW2-BR	MW2-BR	MW2-BR	MW2-BR	MW2-BR	MW2-BR	MW2-BR	MW2-BR	MW2-BR
Date			5/31/2012	5/9/2013	5/9/2014	5/28/2015	5/27/2016	5/18/2017	11/13/2018	10/30/2019	10/30/2019	8/24/2021
Parameter	Units	Criteria										
1,2-Dichloroethene (cis)	ug/l	5	17	100	2300	4800	2500	1600	450	280	133	190
1,2-Dichloroethene, Total	ug/l			100	2300	4800	2500	1600				
Tetrachloroethene	ug/l	5	20	8.1	5500	18,000	95	42				44
Trichloroethene	ug/l	5	2.2	0.92J	1000	1,600	69					16
Vinyl chloride	ug/l	2							67	25	14.7	15
Total VOC			39	208	11100	29200	5164	3242	517	305	148	265

Well ID			MW3-BR	MW3-BR	MW3-BR	MW3-BR	MW3-BR	MW3-BR	MW3-BR	MW3-BR	MW3-BR	MW3-BR
Date			5/31/2012	5/9/2013	5/9/2014	5/28/2015	5/27/2016	5/18/2017	11/13/2018	10/30/2019	10/22/2020	8/24/2021
Parameter	Units	Criteria										
1,2-Dichloroethene (cis)	ug/l	5	220	1800	520	1,400	1100	1800	5400	5800	2390	5900
1,2-Dichloroethene, Total	ug/l			1800	520	1400	1100	1800				
Tetrachloroethene	ug/l	5	1400	16000	4100	21,000	4400	4300	1300	2800	3170	3000
Trichloroethene	ug/l	5	78	810	180	1,200	630	1100	510	1000	995	1800
Vinyl chloride	ug/l	2							630	240	76.4	
Total VOC			1698	20410	5320	25000	7230	9000	7840	9840	6631	10700

Well ID			MW4-BR	MW4-BR	MW4-BR	MW4-BR	MW4-BR	MW4-BR	MW4-BR	MW4-BR	MW4-BR	MW4-BR
Date			5/31/2012	5/9/2013	5/9/2014	5/28/2015	5/27/2016	5/18/2017	11/13/2018	10/30/2019	10/22/2020	8/24/2021
Parameter	Units	Criteria										
2-Butanone (MEK)										150J		
1,1-Dichloroethene								12J				
1,2-Dichloroethene (cis)	ug/l	5	730	990	1700	890	2900	3300	2500	2300	2760	2400
1,2-Dichloroethene, Total	ug/l			1000	1700	890	2900	3300				
Tetrachloroethene	ug/l	5	13000	11000	12000	20,000	520	7100	5500	1300	1960	4900
Trans-1,2-Dichloroethene							40	56				
Trichloroethene	ug/l	5	1500	1600	2200	2,600	290	2200	1700	870	877	1300
Vinyl chloride	ug/l	2					130				52.5	
Total VOC			15230	14590	17600	24380	6780	15956	9700	4470	5649.5	8600

TABLE 4

HISTORIC GROUNDWATER ANALYTICAL RESULTS  
BUFFALO BUSINESS PARK



Well ID			MW5-BR	MW5-BR	MW5-BR	MW5-BR	MW5-BR	MW5-BR	MW5-BR	MW5-BR	MW5-BR	
Date			5/31/2012	5/9/2013	5/9/2014	5/28/2015	5/27/2016	5/18/2017	11/13/2018	10/30/2019	10/22/2020	8/24/2021
Parameter	Units	Criteria										
1,1-Dichloroethene						15						
1,2-Dichloroethene (cis)	ug/l	5	3500	2100	740	3,000	3700	6300	3100	3500	6080	4700
1,2-Dichloroethene, Total	ug/l			2100	750	3,000	3700	6300				
Tetrachloroethene	ug/l	5	220	320	110	2,100	1500		12000	510	<100	
Trichloroethene	ug/l	5	160	290	77	1,000	1300	190	2700	290	<100	
Vinyl chloride	ug/l	2		100	110	130		130		170	178	
Total VOC			3880	4910	1787	9245	10200	12920	17800	4470	6258	4700

Well ID			MW5-ABR	MW5-ABR	MW5-ABR	MW5-ABR	MW5-ABR	MW5-ABR	MW5-ABR	MW5-ABR	MW5-ABR	MW5-ABR
Date			5/31/2012	5/9/2013	5/9/2014	5/28/2015	5/27/2016	5/18/2017	11/13/2018	10/30/2019	10/22/2020	8/24/2021
Parameter	Units	Criteria										
1,1-Dichloroethene						9.6						
1,2-Dichloroethene (cis)	ug/l	5	1900	870	170	1,500	2100	5100	2800	2900	6070	12000
1,2-Dichloroethene, Total	ug/l			880	170	1,500	2100	5100				
Tetrachloroethene	ug/l	5	8900	1300	410	12,000	4000	180		3900	<100	
Trichloroethene	ug/l	5	2000	370	110	2,300	1400	1400		960	353	320
Vinyl chloride	ug/l	2				76			80	39J	<100	
Total VOC			12800	3420	860	17385.6	9600	11780	2880	7760	6423	12320

TABLE 5

BUFFALO BUSINESS PARK  
GROUNDWATER SUMMARY 2022



	SAMPLE ID:		MW-5BR-072022		DUP-072022		MW-5ABR-072022		MW-4BR-072022		MW-3BR-072022		MW-2BR-072022		TRIP BLANK	
	COLLECTION DATE:		7/20/2022		7/20/2022		7/20/2022		7/20/2022		7/20/2022		7/20/2022		7/20/2022	
	SAMPLE MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
	NY-AWQS	NY-TOGS-GA														
	(ug/l)	(ug/l)	Result	Flg	Result	Flg	Result	Flg	Result	Flg	Result	Flg	Result	Flg	Result	Flg
VOLATILE ORGANICS																
1,1,1-Trichloroethane	5	5	ND		ND		ND		ND		ND		ND		ND	
1,1,2,2-Tetrachloroethane	5	5	ND		ND		ND		ND		ND		ND		ND	
1,1,2-Trichloroethane	1	1	ND		ND		ND		ND		ND		ND		ND	
1,1-Dichloroethane	5	5	ND		ND		ND		ND		ND		ND		ND	
1,1-Dichloroethene	5	5	8.2	J	10	J	5.8	J	9.9	J	20	J	0.43	J	ND	
1,2,4-Trichlorobenzene	5	5	ND		ND		ND		ND		ND		ND		ND	
1,2,4-Trimethylbenzene	5	5	ND		ND		ND		ND		ND		ND		ND	
1,2-Dibromo-3-chloropropane	0.04	0.04	ND	UJ	ND		ND	UJ	ND		ND		ND		ND	
1,2-Dibromoethane	0.0006	0.0006	ND		ND		ND		ND		ND		ND		ND	
1,2-Dichlorobenzene	3	3	ND		ND		ND		ND		ND		ND		ND	
1,2-Dichloroethane	0.6	0.6	ND		ND		ND		ND		ND		ND		ND	
1,2-Dichloropropane	1	1	ND		ND		ND		ND		ND		ND		ND	
1,3,5-Trimethylbenzene	5	5	ND		ND		ND		ND		ND		ND		ND	
1,3-Dichlorobenzene	3	3	ND		ND		ND		ND		ND		ND		ND	
1,4-Dichlorobenzene	3	3	ND		ND		ND		ND		ND		ND		ND	
2-Butanone	50	50	ND		ND		ND		ND		ND		ND		ND	
2-Hexanone	50	50	ND		ND		ND		ND		ND		ND		ND	
4-Methyl-2-pentanone	NA	NA	ND		ND		ND		ND		ND		ND		ND	
Acetone	50	50	ND		ND		ND		ND		ND		ND		2.8	J
Benzene	1	1	ND		ND		ND		ND		ND		0.26	J	ND	
Bromodichloromethane	50	50	ND	UJ	ND		ND	UJ	ND		ND		ND		ND	
Bromoform	50	50	ND		ND		ND		ND		ND		ND		ND	
Bromomethane	5	5	ND	UJ	ND	UJ	ND	UJ	ND	UJ	ND	UJ	ND	UJ	ND	UJ
Carbon disulfide	60	60	ND		ND		ND		ND		ND		ND		ND	
Carbon tetrachloride	5	5	ND		ND		ND		ND		ND		ND		ND	
Chlorobenzene	5	5	ND		ND		ND		ND		ND		ND		ND	
Chloroethane	5	5	ND	UJ	ND		ND	UJ	ND		ND		ND		ND	
Chloroform	7	7	ND		ND		ND		ND		ND		ND		ND	
Chloromethane	NA	NA	ND	UJ	ND	UJ	ND	UJ	ND	UJ	ND	UJ	ND	UJ	ND	UJ
cis-1,2-Dichloroethene	5	5	3000	J	3300		2200		4000		5800		170		ND	
cis-1,3-Dichloropropene	0.4	0.4	ND		ND		ND		ND		ND		ND		ND	
Cyclohexane	NA	NA	ND		ND		ND		ND		ND		1.1	J	ND	
Dibromochloromethane	50	50	ND		ND		ND		ND		ND		ND		ND	
Dichlorodifluoromethane	5	5	ND		ND	UJ	ND		ND	UJ	ND	UJ	ND	UJ	ND	UJ
Ethylbenzene	5	5	ND		ND		ND		ND		ND		ND		ND	
Freon-113	5	5	ND		ND		ND		ND		ND		ND		ND	
Isopropylbenzene	5	5	ND		ND		ND		ND		ND		ND		ND	
Methyl Acetate	NA	NA	ND		ND		ND		ND		ND		ND		ND	
Methyl cyclohexane	NA	NA	ND		ND		ND		ND		ND		0.44	J	ND	
Methyl tert butyl ether	10	10	ND		ND		ND		ND		ND		ND		ND	
Methylene chloride	5	5	ND		ND		ND		ND		ND		ND		ND	
n-Butylbenzene	5	5	ND		ND		ND		ND		ND		ND		ND	
n-Propylbenzene	5	5	ND		ND		ND		ND		ND		ND		ND	
Naphthalene	10	10	ND	UJ	ND		ND	UJ	ND		ND		ND		ND	

TABLE 5

BUFFALO BUSINESS PARK  
GROUNDWATER SUMMARY 2022



	SAMPLE ID:		MW-5BR-072022		DUP-072022		MW-5ABR-072022		MW-4BR-072022		MW-3BR-072022		MW-2BR-072022		TRIP BLANK	
	COLLECTION DATE:		7/20/2022		7/20/2022		7/20/2022		7/20/2022		7/20/2022		7/20/2022		7/20/2022	
	SAMPLE MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
	NY-AWQS	NY-TOGS-GA														
	(ug/l)	(ug/l)	Result	Flg	Result	Flg	Result	Flg	Result	Flg	Result	Flg	Result	Flg	Result	Flg
VOLATILE ORGANICS																
o-Xylene	5	5	ND		ND		ND		ND		ND		ND		ND	
p-Isopropyltoluene	5	5	ND		ND		ND		ND		ND		ND		ND	
p/m-Xylene	5	5	ND		ND		ND		ND		ND		ND		ND	
sec-Butylbenzene	5	5	ND		ND		ND		ND		ND		ND		ND	
Styrene	5	930	ND		ND		ND		ND		ND		ND		ND	
tert-Butylbenzene	5	5	ND		ND		ND		ND		ND		ND		ND	
Tetrachloroethene	5	5	12	J	320	J	750		94		4600		4.1		ND	
Toluene	5	5	ND		ND		ND		ND		ND		ND		ND	
trans-1,2-Dichloroethene	5	5	24	J	ND		18	J	ND		ND		ND		ND	
trans-1,3-Dichloropropene	0.4	0.4	ND		ND		ND		ND		ND		ND		ND	
Trichloroethene	5	5	24	J	310	J	500		60		2800		3.6		ND	
Trichlorofluoromethane	5	5	ND		ND		ND		ND		ND		ND		ND	
Vinyl chloride	2	2	280	J	110	J	45	J	60		180		46		ND	
Total VOC			3348.2		4050		3518.8		4223.9		13400		225.93		2.8	

NY-AWQS: New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.

NY-TOGS-GA: New York TOGS 111 Groundwater Effluent Limitations criteria reflects all addendum to criteria through June 2004.

Qualifier Key  
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.  
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.  
C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.  
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.) I - The lower value for the two columns has been reported due to obvious interference.  
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.  
A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.  
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.  
H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.  
RE - Analytical results are from sample re-extraction.  
R - Analytical results are from sample re-analysis.  
D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.  
P - The RPD between the results for the two columns exceeds the method-specified criteria. U - Not detected at the reported detection limit for the sample.  
M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.  
S - Analytical results are from modified screening analysis.  
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).



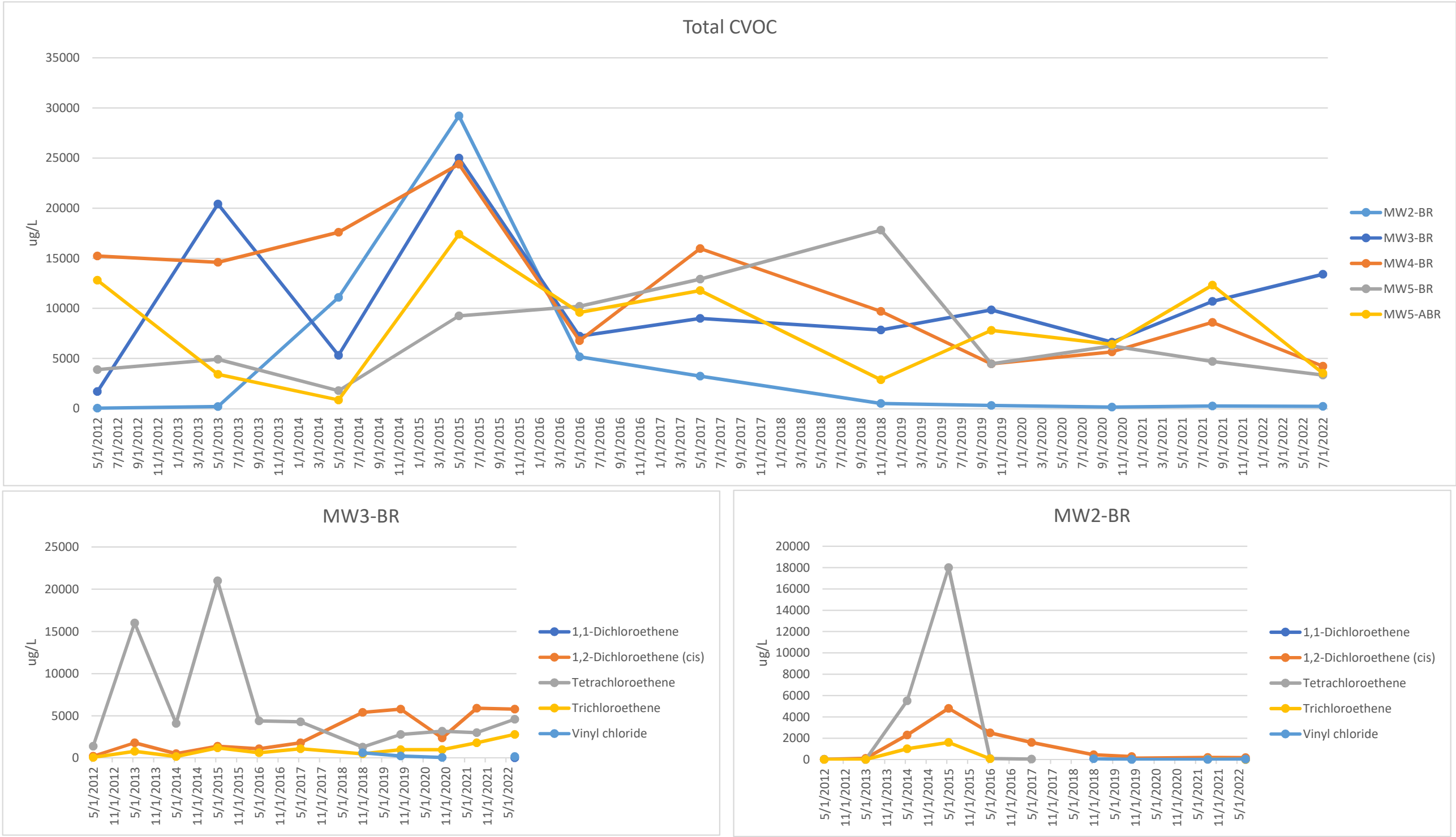
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# GRAPHS

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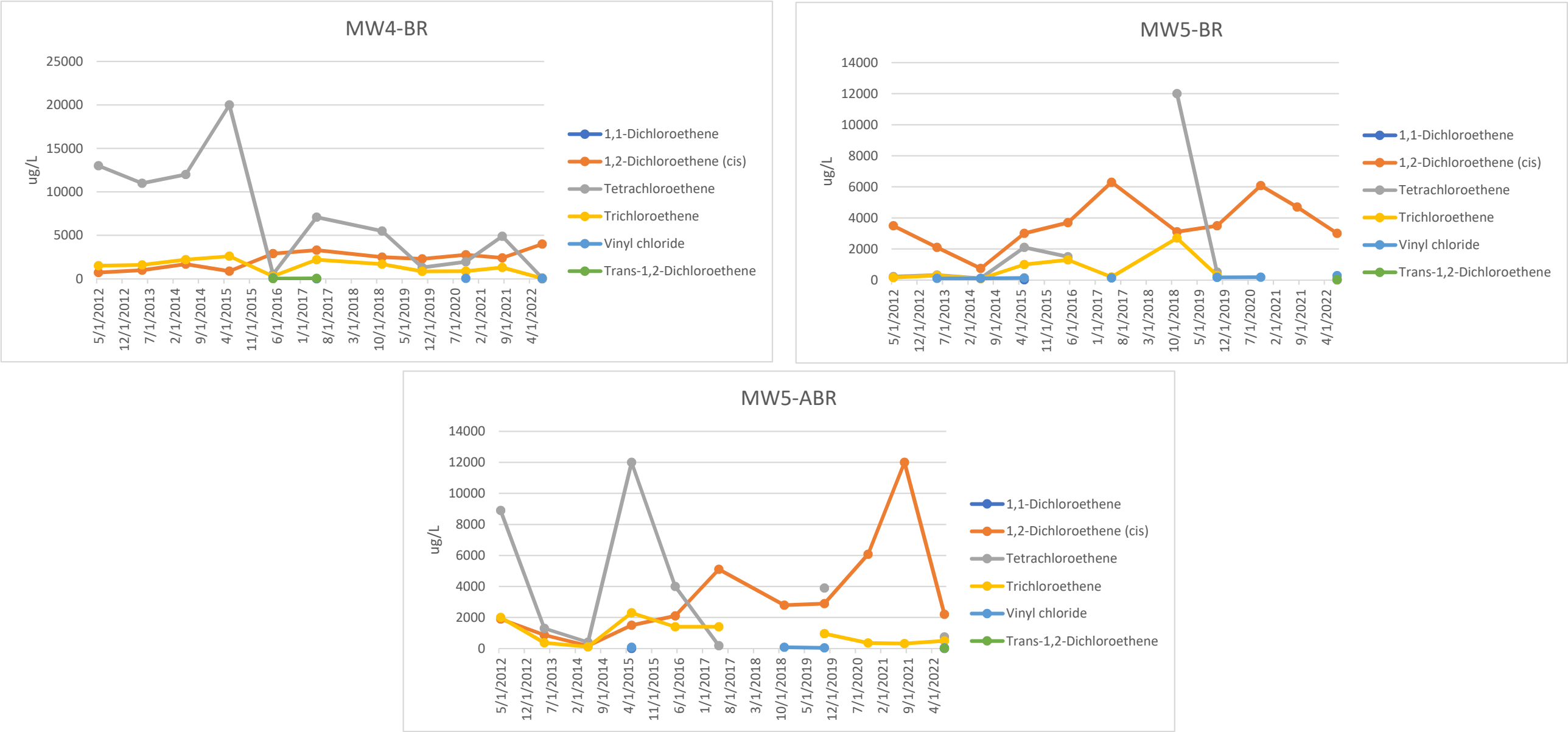
GRAPH 1

BUFFALO BUSINESS PARK SITE  
NYSDEC SITE #V00663-9



GRAPH 1

BUFFALO BUSINESS PARK SITE  
NYSDEC SITE #V00663-9



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# APPENDICES

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## APPENDIX A

### INSTITUTIONAL AND ENGINEERING CONTROLS CERTIFICATION FORM

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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.**            **V00663**

**Site Name** **Buffalo Business Park**

Site Address: 1800 Broadway            Zip Code: 14212-2001

City/Town: Buffalo

County: Erie

Site Acreage: 1.413

Reporting Period: September 01, 2021 to September 01, 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?  
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

**Description of Institutional Controls**ParcelOwnerInstitutional Control**101.19-1-5.1**

GARY CREWSON

Ground Water Use Restriction  
 Site Management Plan  
 Soil Management Plan  
 Ground Water Use Restriction  
 Soil Management Plan  
 Landuse Restriction  
 Monitoring Plan  
 Site Management Plan  
 O&M Plan  
 IC/EC Plan

The deed restriction was filed on 11-19-2010. The Controlled Property (1.4137 acres) is subject to the Site Management Plan. The Controlled Property is the south west corner of the entire Buffalo Business Park property.

## Restrictions:

1. The Controlled Property may be used only for industrial or commercial purposes, excluding day care, child care, and medical care uses.
2. The Groundwater beneath the Controlled Property may not be used for potable or non-potable purposes;
3. The Site Management Plan must be implemented for the Controlled Property;
4. Soils at the Controlled Property shall be managed in accordance with the Site Management plan.

**Description of Engineering Controls**ParcelEngineering Control**101.19-1-5.1**

Groundwater Treatment System  
 Vapor Mitigation

1. SSDS: A sub slab depressurization system (SSDS) is installed in the western end of New York frame building consisting of two active vents.
2. Pumping System: Three bedrock monitoring wells MW4-BR, MW3-BR and MW5A-BR are operated as pumping wells. Recovered groundwater is discharged to BSA.

### 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 complete.

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. V00663

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 Jeff Crewson at 1800 Broadway, Buffalo, NY 14212  
print name print business address

am certifying as Owner (Owner or Remedial Party)

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

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

9/26/22  
Date

## EC CERTIFICATIONS

Box 7

### Qualified Environmental Professional 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 Cody Martin at 141 Elm Street, Suite 100, Buffalo, NY,  
print name print business address

am certifying as a Qualified Environmental Professional for the Owner  
(Owner or Remedial Party)

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

Stamp  
(Required for PE)

9/27/2022  
Date

---

## APPENDIX B

### LABORATORY DATA PACKAGE

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# **DATA USABILITY SUMMARY REPORT (DUSR)**

**Buffalo Business Park  
180 Roadway  
Buffalo, NY  
Project # Y05001002**

**SDG: L2238704**  
6 Water Samples and 1 Trip Blank

Prepared for:

**C&S Companies  
141 Elm Street, Suite 100  
Buffalo, NY 14203  
Attention: Cody Martin**

**September 2022**



*Environmental Data Usability 10028 Deer Park Dr. Dansville, NY 14437 585-991-9156*

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<b>APPENDIX A</b>	Validated Analytical Results
<b>APPENDIX B</b>	Laboratory QC Documentation
<b>APPENDIX C</b>	Validator Qualifications

## *Tables*

Table 4-1	Data Validation Guidance Documents
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### **Summaries of Validated Results**

Table 6-1	VOCs
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## REVIEWER'S NARRATIVE

### C&S Companies SDG L2238704 Buffalo Business Park

The data associated with this Sample Delivery Groups (SDG) L2238704, analyzed by Alpha Analytical, Westborough, MA have been reviewed in accordance with assessment criteria provided by the New York State Department of Environmental Conservation following the review procedures provided in the USEPA Functional Guidelines for evaluating organic and inorganic data.

All analytical results reported by the laboratory are considered valid and acceptable except results that have been qualified as rejected, "R". Results qualified as estimated "J", or as non-detects, "U", are considered usable for the purpose of evaluating water and/or soil quality. However, these qualifiers indicate that the accuracy and/or precision of the analytical result is questionable. A summary of all data that have been qualified and the reasons for qualification are provided in the following data usability summary report (DUSR).

Two facts should be noted by all data users. First, the "R" qualifier means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Values qualified with an "R" should not appear on the final data tables because they cannot be relied upon, even as the last resort. Second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.

Reviewer's Signature: Michael K. Perry Date: 9/12/2022  
Michael K. Perry  
Chemist

## 1.0 EVENT SUMMARY

**SITE:** Buffalo Business Park  
180 Roadway  
Buffalo, NY  
Project #: Y05001002

**SAMPLING DATES:** July 20, 2022

**SAMPLE TYPE:** 6 water samples and 1 trip blank

**LABORATORY:** Alpha Analytical  
Westborough, MA

**SDG No.:** SDGs L2238704

## 2.0 INTRODUCTION

This data usability summary report (DUSR) was prepared in accordance with guidance provided by the New York State Department of Environmental Conservation (NYSDEC). The DUSR is based on a review and evaluation of the laboratory analytical data package. Specifically, the NYSDEC guidance recommends review and evaluation of the following elements of the data package:

Completeness of the data package as defined under the requirements of the NYSDEC Analytical Services Protocols (ASP) Category B or the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) deliverables,

Compliance with established analyte holding times,

Adherence to quality control (QC) limits and specifications for blanks, instrument tuning and calibration, surrogate recoveries, spike recoveries, laboratory duplicate analyses, and other QC criteria,

Adherence to established analytical protocols,

Conformance of data summary sheets with raw analytical data, and

Use of correct data qualifiers.

Data deficiencies, analytical protocol deviations, and quality control problems identified using the review criteria above and their effect on the analytical results are discussed in this report.

### **3.0 SAMPLE AND ANALYSIS SUMMARY**

The data package consists of analytical results for 6 water samples and 1 trip blank collected on 7/20/22. These samples were analyzed for Volatile Organic Compounds (VOCs).

All laboratory analyses were submitted to Alpha Analytical, Westborough, MA and analyzed as SDG L2238704. The analytical results were provided in NYSDEC ASP Category B format, which includes all raw analytical data and laboratory QC data.

### **4.0 GUIDANCE DOCUMENTS AND DATA REVIEW CRITERIA**

The guidance documents appropriate for reviewing laboratory quality control (QC) data and assigning data qualifiers (flags) to analytical results were selected from those listed in Table 4-1. The QC limits established in the documents applicable to this data review were used to assess the quality of the analytical results. In some cases, however, QC limits established internally by the laboratory were taken into account to determine data quality.

The QC criteria considered for assessing the usability of the reported analytical results provided for each analyte type (i.e. VOCs, SVOCs, metals, etc.) are listed in Table 4-2. These criteria may vary with the analytical method utilized by the laboratory. These criteria comply with the guidance recommended in Section 2.0 above.

### **5.0 DATA VALIDATION QUALIFIERS**

The letter qualifiers (flags) used to define data usability are described briefly below. These letters are assigned by the data validator to analytical results having questionable accuracy and/or precision as determined by reviewing the laboratory QC data associated with the analytical results.



**TABLE 4-1****Guidance Used For Validating Laboratory Analytical Data**

<b>Analyte Group</b>	<b>Guidance</b>	<b>Date</b>
Metals (ICP-AES)	USEPA SOP HW-3a, Rev. 1	September 2016
Metals (Hg & CN)	USEPA SOP HW-3c, Rev. 1	September 2016
Volatile Organic Compounds (by Methods 8260B & 8260C)	USEPA SOP HW-24, Rev. 4	September 2014
Semi-Volatile Organic Compounds (by Method 8270D)	USEPA SOP HW-22 Rev. 5	December 2010
Pesticides (by Method 8181B)	USEPA SOP HW-44, Rev. 1.1	December 2010
Chlorinated Herbicides (by Method 8151A)	USEPA SOP HW-17, Rev. 3.1	December 2010
Polychlorinated Biphenyls (PCBs)	USEPA SOP HW-37A, Rev. 0	June 2015
Volatile Organic Compounds (Air) (by Method TO-15)	USEPA SOP HW-31, Rev. 6	September 2016
Per- and PolyFluoroAlkyl Substances (PFAS)	* NYSDEC	January 2021
General Chemistry Parameters	per NYSDEC ASP	July 2005

\* Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs, Appendix I

TABLE 4-2

**QUALITY CONTROL CRITERIA USED FOR VALIDATING  
LABORATORY ANALYTICAL DATA**

<b>VOCs</b>	<b>SVOCs</b>	<b>Pesticides/PCBs</b>	<b>Metals</b>	<b>Gen Chemistry</b>	<b>PFAS</b>
Completeness of Pkg Sample Preservation Holding Time System Monitoring Compounds Lab Control Sample Matrix Spikes Blanks Instrument Tuning Internal Standards Initial Calibration Continuing Calibration Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Preservation Holding Time Surrogate Recoveries Lab Control Sample Matrix Spikes Blanks Instrument Tuning Internal Standards Initial Calibration Continuing Calibration Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Preservation Holding Time Surrogate Recoveries Matrix Spikes Blanks Instrument Calibration & Verification Comparison of duplicate GC column results Analyte ID Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Preservation Holding Time Initial/Continuing Calibration CRDL Standards Blanks Interference Check Sample Spike Recoveries Lab Duplicate Lab Control Sample ICP Serial Dilutions Lab Qualifiers Field Duplicate	Completeness of Pkg Sample Preservation Holding Times Calibration Lab Control Samples Blanks Spike Recoveries Lab Duplicates	Completeness of Pkg Sample Preservation Holding Time Instr Performance Check Initial Calibration Continuing Calibration Blanks Surrogates Lab Fortified Blank Matrix Spikes Internal Standards

**Method TO-15 (Air)**

Completeness of Pkg  
 Sample Preservation  
 Holding Time  
 Canister Certification  
 Instrument Tuning  
 Initial Calibration and  
     Instrument Performance  
 Daily Calibration  
 Blanks  
 Lab Control Sample  
 Field Duplicate

The laboratory may also use various letters and symbols to flag analytical results generated when QC limits were exceeded. The meanings of these flags may differ from those used by the independent data validator. Those used by the laboratory are provided with the analytical results.

**NOTE:** The assignment of data qualifiers by the data reviewer (validator) to laboratory analytical results should not necessarily be interpreted by the data user as a measure of laboratory ability or proficiency. Rather, the qualifiers are intended to provide a measure of data accuracy and precision to the data user, which, for example, may provide a level of confidence in determining whether or not standards or cleanup objectives have been met.

- U** The analyte was analyzed for but was not detected at or above the sample quantitation limit.
- J** The analyte was positively identified; the associated numerical value is the concentration of the analyte in the sample. (The magnitude of any value associated with the result is not determined by data validation).
- J+** The result is an estimated quantity and may be biased high.
- J-** The result is an estimated quantity and may be biased low.
- UJ** The analyte was analyzed for but not detected. The reported quantitation limit is approximate and may inaccurate or imprecise.
- R** The sample result is rejected (i.e., is unusable) due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
- NJ** The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

The validated analytical results are attached to this report. Validation qualifiers (flags) are indicated in red print. Data sheets having qualified data are signed and dated by the data reviewer.

## **6.0 RESULTS OF THE DATA REVIEW**

The results of the data review are summarized in Table 6-1. The table lists the samples where QC criteria were found to exceed acceptable limits and the actions taken to qualify the associated analytical results.

## **7.0 TOTAL USABLE DATA**

For SDG L2238704, seven samples were analyzed and results were reported for 406 analytes. Even though some results were flagged with a “J” as estimated, all results (100 %) are considered usable. See the summary table for the analyses that have been rejected and qualified and the associated QC reasons.

## SDG L2238704

		✓	✓ ✓ ✓	
DUP-072022 MW-4BR-072022 MW-3BR-072022 MW-2BR-072022 Trip Blank	Chloromethane	J detects UJ non-detects	LCS < QC limit	Data are estimated
MW-5BR-072022	cis-1,2-Dichloroethene	J detects UJ non-detects	MS/MSD < QC limit	Data are estimated
MW-5BR-072022	Chloromethane Chloroethane Vinyl chloride Dichlorodifluoromethane Methyl acetate	J detects	MS/MSD > QC limit	Data are estimated
MW-5BR-072022 MW-5ABR-072022	Trichloroethene Bromodichloromethane	J detects UJ non-detects	ICAL RF < minimum0	Data are estimated
DUP-072022 MW-4BR-072022 MW-3BR-072022 MW-2BR-072022 Trip Blank	Dichlorodifluoromethane	J detects UJ non-detects	ICV > QC limit	Data are estimated
DUP-072022 MW-4BR-072022 MW-3BR-072022 MW-2BR-072022 Trip Blank	Chloromethane Bromomethane	J detects UJ non-detects	CCV > QC limit	Data are estimated

SDG L2238704

MW-5BR-072022 MW-5ABR-072022	Chloromethane Vinyl chloride Bromomethane Chloroethane DBCP Naphthalene	J detects UJ non-detects	CCV > QC limit	Data are estimated
---------------------------------	--	-----------------------------	----------------	--------------------

## ACRONYMS

BSP	Blank Spike
CCAL	Continuing Calibration
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
%D	Percent Difference
ICAL	Initial Calibration
ICB	Initial Calibration Blank
IS	Internal Standard
LCS	Laboratory Control Sample
MS/MSD	Matrix Spike/Matrix Spike Duplicate
QA	Quality Assurance
QC	Quality Control
%R	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
%RSD	Percent Relative Standard Deviation
TAL	Target Analyte List (metals)
TCL	Target Compound List (organics)

## *Appendix A*

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### *Validated Analytical Results*





[www.alphalab.com](http://www.alphalab.com)



**Alpha Analytical**

**Laboratory Code: 11148**

**SDG Number: L2238704**

*The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.*

**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Not Specified

**Lab Number:** L2238704  
**Report Date:** 08/03/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2238704-01	MW-5BR-072022	WATER	180 BROADWAY BUFFALO, NY	07/20/22 09:30	07/20/22
L2238704-02	DUP-072022	WATER	180 BROADWAY BUFFALO, NY	07/20/22 09:30	07/20/22
L2238704-03	MW-5ABR-072022	WATER	180 BROADWAY BUFFALO, NY	07/20/22 10:00	07/20/22
L2238704-04	MW-4BR-072022	WATER	180 BROADWAY BUFFALO, NY	07/20/22 10:55	07/20/22
L2238704-05	MW-3BR-072022	WATER	180 BROADWAY BUFFALO, NY	07/20/22 11:20	07/20/22
L2238704-06	MW-2BR-072022	WATER	180 BROADWAY BUFFALO, NY	07/20/22 11:50	07/20/22
L2238704-07	TRIP BLANK	WATER	180 BROADWAY BUFFALO, NY	07/20/22 12:30	07/20/22

**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Not Specified

**Lab Number:** L2238704  
**Report Date:** 08/03/22

**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: *Caithlin Walukh* Report Date: 08/03/22  
Title: Technical Director/Representative



# NEW YORK CHAIN OF CUSTODY

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

Mansfield, MA 02048  
320 Forbes Blvd  
TEL: 508-822-9300  
FAX: 508-822-3268

## 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

7/21/22

ALPHA Job #

62238704

Client Information		Project Information		Deliverables		Billing Information	
Client: C+S Engineers		Project Name: BUFFALO BUSINESS PARK		<input type="checkbox"/> ASP-A <input checked="" type="checkbox"/> ASP-B <input checked="" type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other		<input type="checkbox"/> Same as Client Info PO #	
Address: 131 Elm St. Buffalo NY		Project Location: 180 Broad Way Buffalo NY		Regulatory Requirement		Disposal Site Information	
Phone: 716 796 3520		Project #		<input type="checkbox"/> NY TOGS <input checked="" type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		Please identify below location of applicable disposal facilities. Disposal Facility:	
Fax:		(Use Project name as Project #) <input type="checkbox"/>				<input type="checkbox"/> NJ <input checked="" type="checkbox"/> NY <input type="checkbox"/> Other:	
Email: abuckert@CSCOS.COM		Project Manager: RICH BACKERT					
		ALPHAQuote #:					
		Turn-Around Time					
		Standard <input checked="" type="checkbox"/> Due Date:					
		Rush (only if pre approved) <input type="checkbox"/> # of Days:					
These samples have been previously analyzed by Alpha <input type="checkbox"/>				ANALYSIS			
Other project specific requirements/comments:				Sample Filtration			
DUP/MS/MSD COLLECTED FROM MW-5BR-072022 Please specify Metals or TAL.				<input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)			
				Sample Specific Comments			
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Total Bottles	
		Date	Time				
38704	D1	7/20/22	9:30	GW	RB	x	3
	D2	7/20/22	9:30	GW	RB	y	3
	D1	7/20/22	9:30	GW	RB	y	3
	D1	7/20/22	9:30	GW	RB	y	3
	D3	7/20/22	10:00	GW	RB	y	3
	D4	7/20/22	10:55	GW	RB	y	3
	D5	7/20/22	11:20	GW	RB	y	3
	D6	7/20/22	11:50	GW	RB	y	3
	D7	7/20/22	12:30	GW	RB	y	2
Preservative Code:		Container Code		Westboro: Certification No: MA935		Container Type	
A = None		P = Plastic		Mansfield: Certification No: MA015		Preservative	
B = HCl		A = Amber Glass					
C = HNO <sub>3</sub>		V = Vial					
D = H <sub>2</sub> SO <sub>4</sub>		G = Glass					
E = NaOH		B = Bacteria Cup					
F = MeOH		C = Cube					
G = NaHSO <sub>4</sub>		O = Other					
H = Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>		E = Encore					
K/E = Zn Ac/NaOH		D = BOD Bottle					
O = Other							
Form No: 01-25 HC (rev. 30-Sept-2013)		Relinquished By:		Date/Time		Received By:	
		7/20/22 13:08		7/20/22 13:08		7/20/22 13:08	
		7/20/22 13:08		7/20/22 13:08		7/21/22 0010	

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.)

# **GC/MS 8260**

## **Analysis**

# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Lab ID : L2238704-01D  
 Client ID : MW-5BR-072022  
 Sample Location : 180 BROADWAY BUFFALO, NY  
 Sample Matrix : WATER  
 Analytical Method : 1,8260C  
 Lab File ID : VG220801A06  
 Sample Amount : 0.4 ml  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2238704  
 Project Number :  
 Date Collected : 07/20/22 09:30  
 Date Received : 07/20/22  
 Date Analyzed : 08/01/22 09:17  
 Dilution Factor : 25  
 Analyst : MV  
 Instrument ID : GONZO  
 GC Column : RTX-502.2  
 %Solids : N/A  
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
75-09-2	Methylene chloride	ND	62	18.	U
75-34-3	1,1-Dichloroethane	ND	62	18.	U
67-66-3	Chloroform	ND	62	18.	U
56-23-5	Carbon tetrachloride	ND	12	3.4	U
78-87-5	1,2-Dichloropropane	ND	25	3.4	U
124-48-1	Dibromochloromethane	ND	12	3.7	U
79-00-5	1,1,2-Trichloroethane	ND	38	12.	U
127-18-4	Tetrachloroethene	12	12	4.5	J
108-90-7	Chlorobenzene	ND	62	18.	U
75-69-4	Trichlorofluoromethane	ND	62	18.	U
107-06-2	1,2-Dichloroethane	ND	12	3.3	U
71-55-6	1,1,1-Trichloroethane	ND	62	18.	U
75-27-4	Bromodichloromethane	ND	12	4.8	U JJ
10061-02-6	trans-1,3-Dichloropropene	ND	12	4.1	U
10061-01-5	cis-1,3-Dichloropropene	ND	12	3.6	U
75-25-2	Bromoform	ND	50	16.	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	12	4.2	U
71-43-2	Benzene	ND	12	4.0	U
108-88-3	Toluene	ND	62	18.	U
100-41-4	Ethylbenzene	ND	62	18.	U
74-87-3	Chloromethane	ND	62	18.	U JJ
74-83-9	Bromomethane	ND	62	18.	U JJ
75-01-4	Vinyl chloride	280	25	1.8	J
75-00-3	Chloroethane	ND	62	18.	U JJ
75-35-4	1,1-Dichloroethene	8.2	12	4.2	J

MKP 9/12/2022





# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Lab ID : L2238704-01D  
 Client ID : MW-5BR-072022  
 Sample Location : 180 BROADWAY BUFFALO, NY  
 Sample Matrix : WATER  
 Analytical Method : 1,8260C  
 Lab File ID : VG220801A06  
 Sample Amount : 0.4 ml  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2238704  
 Project Number :  
 Date Collected : 07/20/22 09:30  
 Date Received : 07/20/22  
 Date Analyzed : 08/01/22 09:17  
 Dilution Factor : 25  
 Analyst : MV  
 Instrument ID : GONZO  
 GC Column : RTX-502.2  
 %Solids : N/A  
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier	
		Results	RL	MDL		
156-60-5	trans-1,2-Dichloroethene	24	62	18.	J	J
79-01-6	Trichloroethene	24	12	4.4		J
95-50-1	1,2-Dichlorobenzene	ND	62	18.	U	
541-73-1	1,3-Dichlorobenzene	ND	62	18.	U	
106-46-7	1,4-Dichlorobenzene	ND	62	18.	U	
1634-04-4	Methyl tert butyl ether	ND	62	18.	U	
179601-23-1	p/m-Xylene	ND	62	18.	U	
95-47-6	o-Xylene	ND	62	18.	U	
156-59-2	cis-1,2-Dichloroethene	3000	62	18.		J
100-42-5	Styrene	ND	62	18.	U	
75-71-8	Dichlorodifluoromethane	ND	120	25.	U	
67-64-1	Acetone	ND	120	36.	U	
75-15-0	Carbon disulfide	ND	120	25.	U	
78-93-3	2-Butanone	ND	120	48.	U	
108-10-1	4-Methyl-2-pentanone	ND	120	25.	U	
591-78-6	2-Hexanone	ND	120	25.	U	
106-93-4	1,2-Dibromoethane	ND	50	16.	U	
104-51-8	n-Butylbenzene	ND	62	18.	U	
135-98-8	sec-Butylbenzene	ND	62	18.	U	
98-06-6	tert-Butylbenzene	ND	62	18.	U	
96-12-8	1,2-Dibromo-3-chloropropane	ND	62	18.	U	UJ
98-82-8	Isopropylbenzene	ND	62	18.	U	
99-87-6	p-Isopropyltoluene	ND	62	18.	U	
91-20-3	Naphthalene	ND	62	18.	U	UJ
103-65-1	n-Propylbenzene	ND	62	18.	U	

# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies	Lab Number : L2238704
Project Name : BUFFALO BUSINESS PARK	Project Number :
Lab ID : L2238704-01D	Date Collected : 07/20/22 09:30
Client ID : MW-5BR-072022	Date Received : 07/20/22
Sample Location : 180 BROADWAY BUFFALO, NY	Date Analyzed : 08/01/22 09:17
Sample Matrix : WATER	Dilution Factor : 25
Analytical Method : 1,8260C	Analyst : MV
Lab File ID : VG220801A06	Instrument ID : GONZO
Sample Amount : 0.4 ml	GC Column : RTX-502.2
Level : LOW	%Solids : N/A
Extract Volume (MeOH) : N/A	Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
120-82-1	1,2,4-Trichlorobenzene	ND	62	18.	U
108-67-8	1,3,5-Trimethylbenzene	ND	62	18.	U
95-63-6	1,2,4-Trimethylbenzene	ND	62	18.	U
79-20-9	Methyl Acetate	ND	50	5.8	U
110-82-7	Cyclohexane	ND	250	6.8	U
76-13-1	Freon-113	ND	62	18.	U
108-87-2	Methyl cyclohexane	ND	250	9.9	U



# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Lab ID : L2238704-02D  
 Client ID : DUP-072022  
 Sample Location : 180 BROADWAY BUFFALO, NY  
 Sample Matrix : WATER  
 Analytical Method : 1,8260C  
 Lab File ID : V01220729N24  
 Sample Amount : 0.25 ml  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2238704  
 Project Number :  
 Date Collected : 07/20/22 09:30  
 Date Received : 07/20/22  
 Date Analyzed : 07/30/22 04:04  
 Dilution Factor : 40  
 Analyst : MV  
 Instrument ID : VOA101  
 GC Column : RTX-502.2  
 %Solids : N/A  
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
75-09-2	Methylene chloride	ND	100	28.	U
75-34-3	1,1-Dichloroethane	ND	100	28.	U
67-66-3	Chloroform	ND	100	28.	U
56-23-5	Carbon tetrachloride	ND	20	5.4	U
78-87-5	1,2-Dichloropropane	ND	40	5.5	U
124-48-1	Dibromochloromethane	ND	20	6.0	U
79-00-5	1,1,2-Trichloroethane	ND	60	20.	U
127-18-4	Tetrachloroethene	320	20	7.2	J
108-90-7	Chlorobenzene	ND	100	28.	U
75-69-4	Trichlorofluoromethane	ND	100	28.	U
107-06-2	1,2-Dichloroethane	ND	20	5.3	U
71-55-6	1,1,1-Trichloroethane	ND	100	28.	U
75-27-4	Bromodichloromethane	ND	20	7.7	U
10061-02-6	trans-1,3-Dichloropropene	ND	20	6.6	U
10061-01-5	cis-1,3-Dichloropropene	ND	20	5.8	U
75-25-2	Bromoform	ND	80	26.	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	20	6.7	U
71-43-2	Benzene	ND	20	6.4	U
108-88-3	Toluene	ND	100	28.	U
100-41-4	Ethylbenzene	ND	100	28.	U
74-87-3	Chloromethane	ND	100	28.	U UJ
74-83-9	Bromomethane	ND	100	28.	U UJ
75-01-4	Vinyl chloride	110	40	2.8	J
75-00-3	Chloroethane	ND	100	28.	U
75-35-4	1,1-Dichloroethene	10	20	6.8	J

# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Lab ID : L2238704-02D  
 Client ID : DUP-072022  
 Sample Location : 180 BROADWAY BUFFALO, NY  
 Sample Matrix : WATER  
 Analytical Method : 1,8260C  
 Lab File ID : V01220729N24  
 Sample Amount : 0.25 ml  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2238704  
 Project Number :  
 Date Collected : 07/20/22 09:30  
 Date Received : 07/20/22  
 Date Analyzed : 07/30/22 04:04  
 Dilution Factor : 40  
 Analyst : MV  
 Instrument ID : VOA101  
 GC Column : RTX-502.2  
 %Solids : N/A  
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
156-60-5	trans-1,2-Dichloroethene	ND	100	28.	U
79-01-6	Trichloroethene	310	20	7.0	J
95-50-1	1,2-Dichlorobenzene	ND	100	28.	U
541-73-1	1,3-Dichlorobenzene	ND	100	28.	U
106-46-7	1,4-Dichlorobenzene	ND	100	28.	U
1634-04-4	Methyl tert butyl ether	ND	100	28.	U
179601-23-1	p/m-Xylene	ND	100	28.	U
95-47-6	o-Xylene	ND	100	28.	U
156-59-2	cis-1,2-Dichloroethene	3300	100	28.	
100-42-5	Styrene	ND	100	28.	U
75-71-8	Dichlorodifluoromethane	ND	200	40.	U JJ
67-64-1	Acetone	ND	200	58.	U
75-15-0	Carbon disulfide	ND	200	40.	U
78-93-3	2-Butanone	ND	200	78.	U
108-10-1	4-Methyl-2-pentanone	ND	200	40.	U
591-78-6	2-Hexanone	ND	200	40.	U
106-93-4	1,2-Dibromoethane	ND	80	26.	U
104-51-8	n-Butylbenzene	ND	100	28.	U
135-98-8	sec-Butylbenzene	ND	100	28.	U
98-06-6	tert-Butylbenzene	ND	100	28.	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	100	28.	U
98-82-8	Isopropylbenzene	ND	100	28.	U
99-87-6	p-Isopropyltoluene	ND	100	28.	U
91-20-3	Naphthalene	ND	100	28.	U
103-65-1	n-Propylbenzene	ND	100	28.	U

# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies	Lab Number : L2238704
Project Name : BUFFALO BUSINESS PARK	Project Number :
Lab ID : L2238704-02D	Date Collected : 07/20/22 09:30
Client ID : DUP-072022	Date Received : 07/20/22
Sample Location : 180 BROADWAY BUFFALO, NY	Date Analyzed : 07/30/22 04:04
Sample Matrix : WATER	Dilution Factor : 40
Analytical Method : 1,8260C	Analyst : MV
Lab File ID : V01220729N24	Instrument ID : VOA101
Sample Amount : 0.25 ml	GC Column : RTX-502.2
Level : LOW	%Solids : N/A
Extract Volume (MeOH) : N/A	Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
120-82-1	1,2,4-Trichlorobenzene	ND	100	28.	U
108-67-8	1,3,5-Trimethylbenzene	ND	100	28.	U
95-63-6	1,2,4-Trimethylbenzene	ND	100	28.	U
79-20-9	Methyl Acetate	ND	80	9.4	U
110-82-7	Cyclohexane	ND	400	11.	U
76-13-1	Freon-113	ND	100	28.	U
108-87-2	Methyl cyclohexane	ND	400	16.	U

# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Lab ID : L2238704-03D  
 Client ID : MW-5ABR-072022  
 Sample Location : 180 BROADWAY BUFFALO, NY  
 Sample Matrix : WATER  
 Analytical Method : 1,8260C  
 Lab File ID : VG220801A07  
 Sample Amount : 0.5 ml  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2238704  
 Project Number :  
 Date Collected : 07/20/22 10:00  
 Date Received : 07/20/22  
 Date Analyzed : 08/01/22 09:43  
 Dilution Factor : 20  
 Analyst : MV  
 Instrument ID : GONZO  
 GC Column : RTX-502.2  
 %Solids : N/A  
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
75-09-2	Methylene chloride	ND	50	14.	U
75-34-3	1,1-Dichloroethane	ND	50	14.	U
67-66-3	Chloroform	ND	50	14.	U
56-23-5	Carbon tetrachloride	ND	10	2.7	U
78-87-5	1,2-Dichloropropane	ND	20	2.7	U
124-48-1	Dibromochloromethane	ND	10	3.0	U
79-00-5	1,1,2-Trichloroethane	ND	30	10.	U
127-18-4	Tetrachloroethene	750	10	3.6	
108-90-7	Chlorobenzene	ND	50	14.	U
75-69-4	Trichlorofluoromethane	ND	50	14.	U
107-06-2	1,2-Dichloroethane	ND	10	2.6	U
71-55-6	1,1,1-Trichloroethane	ND	50	14.	U
75-27-4	Bromodichloromethane	ND	10	3.8	U JJ
10061-02-6	trans-1,3-Dichloropropene	ND	10	3.3	U
10061-01-5	cis-1,3-Dichloropropene	ND	10	2.9	U
75-25-2	Bromoform	ND	40	13.	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	3.3	U
71-43-2	Benzene	ND	10	3.2	U
108-88-3	Toluene	ND	50	14.	U
100-41-4	Ethylbenzene	ND	50	14.	U
74-87-3	Chloromethane	ND	50	14.	U JJ
74-83-9	Bromomethane	ND	50	14.	U JJ
75-01-4	Vinyl chloride	45	20	1.4	J
75-00-3	Chloroethane	ND	50	14.	U JJ
75-35-4	1,1-Dichloroethene	5.8	10	3.4	J

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# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Lab ID : L2238704-03D  
 Client ID : MW-5ABR-072022  
 Sample Location : 180 BROADWAY BUFFALO, NY  
 Sample Matrix : WATER  
 Analytical Method : 1,8260C  
 Lab File ID : VG220801A07  
 Sample Amount : 0.5 ml  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2238704  
 Project Number :  
 Date Collected : 07/20/22 10:00  
 Date Received : 07/20/22  
 Date Analyzed : 08/01/22 09:43  
 Dilution Factor : 20  
 Analyst : MV  
 Instrument ID : GONZO  
 GC Column : RTX-502.2  
 %Solids : N/A  
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
156-60-5	trans-1,2-Dichloroethene	18	50	14.	J
79-01-6	Trichloroethene	500	10	3.5	
95-50-1	1,2-Dichlorobenzene	ND	50	14.	U
541-73-1	1,3-Dichlorobenzene	ND	50	14.	U
106-46-7	1,4-Dichlorobenzene	ND	50	14.	U
1634-04-4	Methyl tert butyl ether	ND	50	14.	U
179601-23-1	p/m-Xylene	ND	50	14.	U
95-47-6	o-Xylene	ND	50	14.	U
156-59-2	cis-1,2-Dichloroethene	2200	50	14.	
100-42-5	Styrene	ND	50	14.	U
75-71-8	Dichlorodifluoromethane	ND	100	20.	U
67-64-1	Acetone	ND	100	29.	U
75-15-0	Carbon disulfide	ND	100	20.	U
78-93-3	2-Butanone	ND	100	39.	U
108-10-1	4-Methyl-2-pentanone	ND	100	20.	U
591-78-6	2-Hexanone	ND	100	20.	U
106-93-4	1,2-Dibromoethane	ND	40	13.	U
104-51-8	n-Butylbenzene	ND	50	14.	U
135-98-8	sec-Butylbenzene	ND	50	14.	U
98-06-6	tert-Butylbenzene	ND	50	14.	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	50	14.	U UJ
98-82-8	Isopropylbenzene	ND	50	14.	U
99-87-6	p-Isopropyltoluene	ND	50	14.	U
91-20-3	Naphthalene	ND	50	14.	U UJ
103-65-1	n-Propylbenzene	ND	50	14.	U

# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies	Lab Number : L2238704
Project Name : BUFFALO BUSINESS PARK	Project Number :
Lab ID : L2238704-03D	Date Collected : 07/20/22 10:00
Client ID : MW-5ABR-072022	Date Received : 07/20/22
Sample Location : 180 BROADWAY BUFFALO, NY	Date Analyzed : 08/01/22 09:43
Sample Matrix : WATER	Dilution Factor : 20
Analytical Method : 1,8260C	Analyst : MV
Lab File ID : VG220801A07	Instrument ID : GONZO
Sample Amount : 0.5 ml	GC Column : RTX-502.2
Level : LOW	%Solids : N/A
Extract Volume (MeOH) : N/A	Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
120-82-1	1,2,4-Trichlorobenzene	ND	50	14.	U
108-67-8	1,3,5-Trimethylbenzene	ND	50	14.	U
95-63-6	1,2,4-Trimethylbenzene	ND	50	14.	U
79-20-9	Methyl Acetate	ND	40	4.7	U
110-82-7	Cyclohexane	ND	200	5.4	U
76-13-1	Freon-113	ND	50	14.	U
108-87-2	Methyl cyclohexane	ND	200	7.9	U

# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Lab ID : L2238704-04D  
 Client ID : MW-4BR-072022  
 Sample Location : 180 BROADWAY BUFFALO, NY  
 Sample Matrix : WATER  
 Analytical Method : 1,8260C  
 Lab File ID : V01220729N22  
 Sample Amount : 0.2 ml  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2238704  
 Project Number :  
 Date Collected : 07/20/22 10:55  
 Date Received : 07/20/22  
 Date Analyzed : 07/30/22 03:17  
 Dilution Factor : 50  
 Analyst : MV  
 Instrument ID : VOA101  
 GC Column : RTX-502.2  
 %Solids : N/A  
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
75-09-2	Methylene chloride	ND	120	35.	U
75-34-3	1,1-Dichloroethane	ND	120	35.	U
67-66-3	Chloroform	ND	120	35.	U
56-23-5	Carbon tetrachloride	ND	25	6.7	U
78-87-5	1,2-Dichloropropane	ND	50	6.8	U
124-48-1	Dibromochloromethane	ND	25	7.4	U
79-00-5	1,1,2-Trichloroethane	ND	75	25.	U
127-18-4	Tetrachloroethene	94	25	9.0	
108-90-7	Chlorobenzene	ND	120	35.	U
75-69-4	Trichlorofluoromethane	ND	120	35.	U
107-06-2	1,2-Dichloroethane	ND	25	6.6	U
71-55-6	1,1,1-Trichloroethane	ND	120	35.	U
75-27-4	Bromodichloromethane	ND	25	9.6	U
10061-02-6	trans-1,3-Dichloropropene	ND	25	8.2	U
10061-01-5	cis-1,3-Dichloropropene	ND	25	7.2	U
75-25-2	Bromoform	ND	100	32.	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	25	8.4	U
71-43-2	Benzene	ND	25	8.0	U
108-88-3	Toluene	ND	120	35.	U
100-41-4	Ethylbenzene	ND	120	35.	U
74-87-3	Chloromethane	ND	120	35.	U UJ
74-83-9	Bromomethane	ND	120	35.	U UJ
75-01-4	Vinyl chloride	60	50	3.6	
75-00-3	Chloroethane	ND	120	35.	U
75-35-4	1,1-Dichloroethene	9.9	25	8.4	J

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# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Lab ID : L2238704-04D  
 Client ID : MW-4BR-072022  
 Sample Location : 180 BROADWAY BUFFALO, NY  
 Sample Matrix : WATER  
 Analytical Method : 1,8260C  
 Lab File ID : V01220729N22  
 Sample Amount : 0.2 ml  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2238704  
 Project Number :  
 Date Collected : 07/20/22 10:55  
 Date Received : 07/20/22  
 Date Analyzed : 07/30/22 03:17  
 Dilution Factor : 50  
 Analyst : MV  
 Instrument ID : VOA101  
 GC Column : RTX-502.2  
 %Solids : N/A  
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
156-60-5	trans-1,2-Dichloroethene	ND	120	35.	U
79-01-6	Trichloroethene	60	25	8.8	
95-50-1	1,2-Dichlorobenzene	ND	120	35.	U
541-73-1	1,3-Dichlorobenzene	ND	120	35.	U
106-46-7	1,4-Dichlorobenzene	ND	120	35.	U
1634-04-4	Methyl tert butyl ether	ND	120	35.	U
179601-23-1	p/m-Xylene	ND	120	35.	U
95-47-6	o-Xylene	ND	120	35.	U
156-59-2	cis-1,2-Dichloroethene	4000	120	35.	
100-42-5	Styrene	ND	120	35.	U
75-71-8	Dichlorodifluoromethane	ND	250	50.	U JJ
67-64-1	Acetone	ND	250	73.	U
75-15-0	Carbon disulfide	ND	250	50.	U
78-93-3	2-Butanone	ND	250	97.	U
108-10-1	4-Methyl-2-pentanone	ND	250	50.	U
591-78-6	2-Hexanone	ND	250	50.	U
106-93-4	1,2-Dibromoethane	ND	100	32.	U
104-51-8	n-Butylbenzene	ND	120	35.	U
135-98-8	sec-Butylbenzene	ND	120	35.	U
98-06-6	tert-Butylbenzene	ND	120	35.	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	120	35.	U
98-82-8	Isopropylbenzene	ND	120	35.	U
99-87-6	p-Isopropyltoluene	ND	120	35.	U
91-20-3	Naphthalene	ND	120	35.	U
103-65-1	n-Propylbenzene	ND	120	35.	U

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# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies	Lab Number : L2238704
Project Name : BUFFALO BUSINESS PARK	Project Number :
Lab ID : L2238704-04D	Date Collected : 07/20/22 10:55
Client ID : MW-4BR-072022	Date Received : 07/20/22
Sample Location : 180 BROADWAY BUFFALO, NY	Date Analyzed : 07/30/22 03:17
Sample Matrix : WATER	Dilution Factor : 50
Analytical Method : 1,8260C	Analyst : MV
Lab File ID : V01220729N22	Instrument ID : VOA101
Sample Amount : 0.2 ml	GC Column : RTX-502.2
Level : LOW	%Solids : N/A
Extract Volume (MeOH) : N/A	Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
120-82-1	1,2,4-Trichlorobenzene	ND	120	35.	U
108-67-8	1,3,5-Trimethylbenzene	ND	120	35.	U
95-63-6	1,2,4-Trimethylbenzene	ND	120	35.	U
79-20-9	Methyl Acetate	ND	100	12.	U
110-82-7	Cyclohexane	ND	500	14.	U
76-13-1	Freon-113	ND	120	35.	U
108-87-2	Methyl cyclohexane	ND	500	20.	U

# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Lab ID : L2238704-05D  
 Client ID : MW-3BR-072022  
 Sample Location : 180 BROADWAY BUFFALO, NY  
 Sample Matrix : WATER  
 Analytical Method : 1,8260C  
 Lab File ID : V01220729N21  
 Sample Amount : 0.2 ml  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2238704  
 Project Number :  
 Date Collected : 07/20/22 11:20  
 Date Received : 07/20/22  
 Date Analyzed : 07/30/22 02:54  
 Dilution Factor : 50  
 Analyst : MV  
 Instrument ID : VOA101  
 GC Column : RTX-502.2  
 %Solids : N/A  
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
75-09-2	Methylene chloride	ND	120	35.	U
75-34-3	1,1-Dichloroethane	ND	120	35.	U
67-66-3	Chloroform	ND	120	35.	U
56-23-5	Carbon tetrachloride	ND	25	6.7	U
78-87-5	1,2-Dichloropropane	ND	50	6.8	U
124-48-1	Dibromochloromethane	ND	25	7.4	U
79-00-5	1,1,2-Trichloroethane	ND	75	25.	U
127-18-4	Tetrachloroethene	4600	25	9.0	
108-90-7	Chlorobenzene	ND	120	35.	U
75-69-4	Trichlorofluoromethane	ND	120	35.	U
107-06-2	1,2-Dichloroethane	ND	25	6.6	U
71-55-6	1,1,1-Trichloroethane	ND	120	35.	U
75-27-4	Bromodichloromethane	ND	25	9.6	U
10061-02-6	trans-1,3-Dichloropropene	ND	25	8.2	U
10061-01-5	cis-1,3-Dichloropropene	ND	25	7.2	U
75-25-2	Bromoform	ND	100	32.	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	25	8.4	U
71-43-2	Benzene	ND	25	8.0	U
108-88-3	Toluene	ND	120	35.	U
100-41-4	Ethylbenzene	ND	120	35.	U
74-87-3	Chloromethane	ND	120	35.	U UJ
74-83-9	Bromomethane	ND	120	35.	U UJ
75-01-4	Vinyl chloride	180	50	3.6	
75-00-3	Chloroethane	ND	120	35.	U
75-35-4	1,1-Dichloroethene	20	25	8.4	J

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# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Lab ID : L2238704-05D  
 Client ID : MW-3BR-072022  
 Sample Location : 180 BROADWAY BUFFALO, NY  
 Sample Matrix : WATER  
 Analytical Method : 1,8260C  
 Lab File ID : V01220729N21  
 Sample Amount : 0.2 ml  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2238704  
 Project Number :  
 Date Collected : 07/20/22 11:20  
 Date Received : 07/20/22  
 Date Analyzed : 07/30/22 02:54  
 Dilution Factor : 50  
 Analyst : MV  
 Instrument ID : VOA101  
 GC Column : RTX-502.2  
 %Solids : N/A  
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
156-60-5	trans-1,2-Dichloroethene	ND	120	35.	U
79-01-6	Trichloroethene	2800	25	8.8	
95-50-1	1,2-Dichlorobenzene	ND	120	35.	U
541-73-1	1,3-Dichlorobenzene	ND	120	35.	U
106-46-7	1,4-Dichlorobenzene	ND	120	35.	U
1634-04-4	Methyl tert butyl ether	ND	120	35.	U
179601-23-1	p/m-Xylene	ND	120	35.	U
95-47-6	o-Xylene	ND	120	35.	U
156-59-2	cis-1,2-Dichloroethene	5800	120	35.	
100-42-5	Styrene	ND	120	35.	U
75-71-8	Dichlorodifluoromethane	ND	250	50.	U JJ
67-64-1	Acetone	ND	250	73.	U
75-15-0	Carbon disulfide	ND	250	50.	U
78-93-3	2-Butanone	ND	250	97.	U
108-10-1	4-Methyl-2-pentanone	ND	250	50.	U
591-78-6	2-Hexanone	ND	250	50.	U
106-93-4	1,2-Dibromoethane	ND	100	32.	U
104-51-8	n-Butylbenzene	ND	120	35.	U
135-98-8	sec-Butylbenzene	ND	120	35.	U
98-06-6	tert-Butylbenzene	ND	120	35.	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	120	35.	U
98-82-8	Isopropylbenzene	ND	120	35.	U
99-87-6	p-Isopropyltoluene	ND	120	35.	U
91-20-3	Naphthalene	ND	120	35.	U
103-65-1	n-Propylbenzene	ND	120	35.	U

# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies	Lab Number : L2238704
Project Name : BUFFALO BUSINESS PARK	Project Number :
Lab ID : L2238704-05D	Date Collected : 07/20/22 11:20
Client ID : MW-3BR-072022	Date Received : 07/20/22
Sample Location : 180 BROADWAY BUFFALO, NY	Date Analyzed : 07/30/22 02:54
Sample Matrix : WATER	Dilution Factor : 50
Analytical Method : 1,8260C	Analyst : MV
Lab File ID : V01220729N21	Instrument ID : VOA101
Sample Amount : 0.2 ml	GC Column : RTX-502.2
Level : LOW	%Solids : N/A
Extract Volume (MeOH) : N/A	Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
120-82-1	1,2,4-Trichlorobenzene	ND	120	35.	U
108-67-8	1,3,5-Trimethylbenzene	ND	120	35.	U
95-63-6	1,2,4-Trimethylbenzene	ND	120	35.	U
79-20-9	Methyl Acetate	ND	100	12.	U
110-82-7	Cyclohexane	ND	500	14.	U
76-13-1	Freon-113	ND	120	35.	U
108-87-2	Methyl cyclohexane	ND	500	20.	U

# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Lab ID : L2238704-06  
 Client ID : MW-2BR-072022  
 Sample Location : 180 BROADWAY BUFFALO, NY  
 Sample Matrix : WATER  
 Analytical Method : 1,8260C  
 Lab File ID : V01220729N20  
 Sample Amount : 10 ml  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2238704  
 Project Number :  
 Date Collected : 07/20/22 11:50  
 Date Received : 07/20/22  
 Date Analyzed : 07/30/22 02:30  
 Dilution Factor : 1  
 Analyst : MV  
 Instrument ID : VOA101  
 GC Column : RTX-502.2  
 %Solids : N/A  
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	4.1	0.50	0.18	
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	0.26	0.50	0.16	J
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U UJ
74-83-9	Bromomethane	ND	2.5	0.70	U UJ
75-01-4	Vinyl chloride	46	1.0	0.07	
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	0.43	0.50	0.17	J

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# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Lab ID : L2238704-06  
 Client ID : MW-2BR-072022  
 Sample Location : 180 BROADWAY BUFFALO, NY  
 Sample Matrix : WATER  
 Analytical Method : 1,8260C  
 Lab File ID : V01220729N20  
 Sample Amount : 10 ml  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2238704  
 Project Number :  
 Date Collected : 07/20/22 11:50  
 Date Received : 07/20/22  
 Date Analyzed : 07/30/22 02:30  
 Dilution Factor : 1  
 Analyst : MV  
 Instrument ID : VOA101  
 GC Column : RTX-502.2  
 %Solids : N/A  
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	3.6	0.50	0.18	
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	170	2.5	0.70	
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U JJ
67-64-1	Acetone	ND	5.0	1.5	U
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
104-51-8	n-Butylbenzene	ND	2.5	0.70	U
135-98-8	sec-Butylbenzene	ND	2.5	0.70	U
98-06-6	tert-Butylbenzene	ND	2.5	0.70	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
99-87-6	p-Isopropyltoluene	ND	2.5	0.70	U
91-20-3	Naphthalene	ND	2.5	0.70	U
103-65-1	n-Propylbenzene	ND	2.5	0.70	U

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# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client	: C&S Companies	Lab Number	: L2238704
Project Name	: BUFFALO BUSINESS PARK	Project Number	:
Lab ID	: L2238704-06	Date Collected	: 07/20/22 11:50
Client ID	: MW-2BR-072022	Date Received	: 07/20/22
Sample Location	: 180 BROADWAY BUFFALO, NY	Date Analyzed	: 07/30/22 02:30
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: MV
Lab File ID	: V01220729N20	Instrument ID	: VOA101
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.5	0.70	U
95-63-6	1,2,4-Trimethylbenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U
110-82-7	Cyclohexane	1.1	10	0.27	J
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	0.44	10	0.40	J

# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Lab ID : L2238704-07  
 Client ID : TRIP BLANK  
 Sample Location : 180 BROADWAY BUFFALO, NY  
 Sample Matrix : WATER  
 Analytical Method : 1,8260C  
 Lab File ID : V01220729N19  
 Sample Amount : 10 ml  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2238704  
 Project Number :  
 Date Collected : 07/20/22 12:30  
 Date Received : 07/20/22  
 Date Analyzed : 07/30/22 02:07  
 Dilution Factor : 1  
 Analyst : MV  
 Instrument ID : VOA101  
 GC Column : RTX-502.2  
 %Solids : N/A  
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.14	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.17	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U UJ
74-83-9	Bromomethane	ND	2.5	0.70	U UJ
75-01-4	Vinyl chloride	ND	1.0	0.07	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	U

# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Lab ID : L2238704-07  
 Client ID : TRIP BLANK  
 Sample Location : 180 BROADWAY BUFFALO, NY  
 Sample Matrix : WATER  
 Analytical Method : 1,8260C  
 Lab File ID : V01220729N19  
 Sample Amount : 10 ml  
 Level : LOW  
 Extract Volume (MeOH) : N/A

Lab Number : L2238704  
 Project Number :  
 Date Collected : 07/20/22 12:30  
 Date Received : 07/20/22  
 Date Analyzed : 07/30/22 02:07  
 Dilution Factor : 1  
 Analyst : MV  
 Instrument ID : VOA101  
 GC Column : RTX-502.2  
 %Solids : N/A  
 Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	2.8	5.0	1.5	J
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
104-51-8	n-Butylbenzene	ND	2.5	0.70	U
135-98-8	sec-Butylbenzene	ND	2.5	0.70	U
98-06-6	tert-Butylbenzene	ND	2.5	0.70	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
99-87-6	p-Isopropyltoluene	ND	2.5	0.70	U
91-20-3	Naphthalene	ND	2.5	0.70	U
103-65-1	n-Propylbenzene	ND	2.5	0.70	U

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# Results Summary

## Form 1

### Volatile Organics by GC/MS

Client : C&S Companies	Lab Number : L2238704
Project Name : BUFFALO BUSINESS PARK	Project Number :
Lab ID : L2238704-07	Date Collected : 07/20/22 12:30
Client ID : TRIP BLANK	Date Received : 07/20/22
Sample Location : 180 BROADWAY BUFFALO, NY	Date Analyzed : 07/30/22 02:07
Sample Matrix : WATER	Dilution Factor : 1
Analytical Method : 1,8260C	Analyst : MV
Lab File ID : V01220729N19	Instrument ID : VOA101
Sample Amount : 10 ml	GC Column : RTX-502.2
Level : LOW	%Solids : N/A
Extract Volume (MeOH) : N/A	Injection Volume : N/A

CAS NO.	Parameter	ug/L			Qualifier
		Results	RL	MDL	
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
108-67-8	1,3,5-Trimethylbenzene	ND	2.5	0.70	U
95-63-6	1,2,4-Trimethylbenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U
110-82-7	Cyclohexane	ND	10	0.27	U
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

## *Appendix B*

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### *Laboratory QC Documentation*

# Laboratory Control Sample Summary

## Form 3

### Volatiles

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Matrix : WATER  
 LCS Sample ID : WG1669558-3 Analysis Date : 07/29/22 19:04 File ID : V01220729N01  
 LCSD Sample ID : WG1669558-4 Analysis Date : 07/29/22 19:28 File ID : V01220729N02

Parameter	Laboratory Control Sample			Laboratory Control Duplicate			RPD	Recovery Limits	RPD Limit
	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R			
Methylene chloride	10	10	100	10	10	100	0	70-130	20
1,1-Dichloroethane	10	10	100	10	10	100	0	70-130	20
Chloroform	10	10	100	10	10	100	0	70-130	20
Carbon tetrachloride	10	10	100	10	10	100	0	63-132	20
1,2-Dichloropropane	10	10	100	10	10	100	0	70-130	20
Dibromochloromethane	10	9.7	97	10	10	100	3	63-130	20
1,1,2-Trichloroethane	10	10	100	10	10	100	0	70-130	20
Tetrachloroethene	10	10	100	10	10	100	0	70-130	20
Chlorobenzene	10	10	100	10	10	100	0	75-130	20
Trichlorofluoromethane	10	10	100	10	10	100	0	62-150	20
1,2-Dichloroethane	10	9.9	99	10	9.9	99	0	70-130	20
1,1,1-Trichloroethane	10	10	100	10	10	100	0	67-130	20
Bromodichloromethane	10	9.8	98	10	9.9	99	1	67-130	20
trans-1,3-Dichloropropene	10	10	100	10	10	100	0	70-130	20
cis-1,3-Dichloropropene	10	10	100	10	10	100	0	70-130	20
Bromoform	10	9.6	96	10	9.8	98	2	54-136	20
1,1,2,2-Tetrachloroethane	10	10	100	10	10	100	0	67-130	20
Benzene	10	10	100	10	10	100	0	70-130	20
Toluene	10	10	100	10	10	100	0	70-130	20
Ethylbenzene	10	10	100	10	9.9	99	1	70-130	20
Chloromethane	10	4.8	48	10	4.9	49	2	64-130	20
Bromomethane	10	4.4	44	10	4.7	47	7	39-139	20
Vinyl chloride	10	9.8	98	10	9.6	96	2	55-140	20
Chloroethane	10	11	110	10	11	110	0	55-138	20
1,1-Dichloroethene	10	11	110	10	10	100	10	61-145	20
trans-1,2-Dichloroethene	10	11	110	10	10	100	10	70-130	20



# Laboratory Control Sample Summary

## Form 3

### Volatiles

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Matrix : WATER  
 LCS Sample ID : WG1670386-3 Analysis Date : 08/01/22 07:07 File ID : VG220801A01  
 LCSD Sample ID : WG1670386-4 Analysis Date : 08/01/22 07:33 File ID : VG220801A02

Parameter	Laboratory Control Sample			Laboratory Control Duplicate			RPD	Recovery Limits	RPD Limit
	True (ug/l)	Found (ug/l)	%R	True (ug/l)	Found (ug/l)	%R			
Methylene chloride	10	9.4	94	10	10	100	6	70-130	20
1,1-Dichloroethane	10	11	110	10	12	120	9	70-130	20
Chloroform	10	10	100	10	11	110	10	70-130	20
Carbon tetrachloride	10	9.8	98	10	11	110	12	63-132	20
1,2-Dichloropropane	10	10	100	10	11	110	10	70-130	20
Dibromochloromethane	10	8.8	88	10	9.8	98	11	63-130	20
1,1,2-Trichloroethane	10	9.7	97	10	11	110	13	70-130	20
Tetrachloroethene	10	10	100	10	11	110	10	70-130	20
Chlorobenzene	10	10	100	10	11	110	10	75-130	20
Trichlorofluoromethane	10	10	100	10	11	110	10	62-150	20
1,2-Dichloroethane	10	10	100	10	12	120	18	70-130	20
1,1,1-Trichloroethane	10	9.9	99	10	11	110	11	67-130	20
Bromodichloromethane	10	11	110	10	12	120	9	67-130	20
trans-1,3-Dichloropropene	10	9.6	96	10	10	100	4	70-130	20
cis-1,3-Dichloropropene	10	9.7	97	10	11	110	13	70-130	20
Bromoform	10	8.4	84	10	9.6	96	13	54-136	20
1,1,2,2-Tetrachloroethane	10	9.5	95	10	11	110	15	67-130	20
Benzene	10	10	100	10	11	110	10	70-130	20
Toluene	10	10	100	10	11	110	10	70-130	20
Ethylbenzene	10	10	100	10	11	110	10	70-130	20
Chloromethane	10	12	120	10	12	120	0	64-130	20
Bromomethane	10	12	120	10	12	120	0	39-139	20
Vinyl chloride	10	12	120	10	13	130	8	55-140	20
Chloroethane	10	21	210 Q	10	22	220 Q	5	55-138	20
1,1-Dichloroethene	10	10	100	10	11	110	10	61-145	20
trans-1,2-Dichloroethene	10	10	100	10	11	110	10	70-130	20





# Matrix Spike Sample Summary

## Form 3

### Volatiles

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Client Sample ID : MW-5BR-072022  
 Lab Sample ID : L2238704-01  
 Matrix Spike : WG1670386-6  
 Matrix Spike Dup : WG1670386-7

Lab Number : L2238704  
 Project Number :  
 Matrix : WATER  
 Analysis Date : 08/01/22 09:17  
 MS Analysis Date : 08/01/22 17:36  
 MSD Analysis Date : 08/01/22 18:03

Parameter	Sample Conc. (ug/l)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (ug/l)	Spike Conc. (ug/l)	%R	Spike Added (ug/l)	Spike Conc. (ug/l)	%R			
Methylene chloride	ND	250	260	104	250	260	104	0	70-130	20
1,1-Dichloroethane	ND	250	300	120	250	310	124	3	70-130	20
Chloroform	ND	250	270	108	250	270	108	0	70-130	20
Carbon tetrachloride	ND	250	260	104	250	260	104	0	63-132	20
1,2-Dichloropropane	ND	250	270	108	250	270	108	0	70-130	20
Dibromochloromethane	ND	250	230	92	250	240	96	4	63-130	20
1,1,2-Trichloroethane	ND	250	270	108	250	270	108	0	70-130	20
Tetrachloroethene	12	250	260	99	250	250	95	4	70-130	20
Chlorobenzene	ND	250	250	100	250	250	100	0	75-130	20
Trichlorofluoromethane	ND	250	290	116	250	290	116	0	62-150	20
1,2-Dichloroethane	ND	250	300	120	250	300	120	0	70-130	20
1,1,1-Trichloroethane	ND	250	270	108	250	270	108	0	67-130	20
Bromodichloromethane	ND	250	290	116	250	300	120	3	67-130	20
trans-1,3-Dichloropropene	ND	250	240	96	250	240	96	0	70-130	20
cis-1,3-Dichloropropene	ND	250	240	96	250	240	96	0	70-130	20
Bromoform	ND	250	230	92	250	230	92	0	54-136	20
1,1,2,2-Tetrachloroethane	ND	250	270	108	250	290	116	7	67-130	20
Benzene	ND	250	290	116	250	300	120	3	70-130	20
Toluene	ND	250	260	104	250	260	104	0	70-130	20
Ethylbenzene	ND	250	260	104	250	250	100	4	70-130	20
Chloromethane	ND	250	410	164 C	250	420	168 Q	2	64-130	20
Bromomethane	ND	250	210	84	250	200	80	5	39-139	20



# Matrix Spike Sample Summary

## Form 3

### Volatiles

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Client Sample ID : MW-5BR-072022  
 Lab Sample ID : L2238704-01  
 Matrix Spike : WG1670386-6  
 Matrix Spike Dup : WG1670386-7

Lab Number : L2238704  
 Project Number :  
 Matrix : WATER  
 Analysis Date : 08/01/22 09:17  
 MS Analysis Date : 08/01/22 17:36  
 MSD Analysis Date : 08/01/22 18:03

Parameter	Sample Conc. (ug/l)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (ug/l)	Spike Conc. (ug/l)	%R	Spike Added (ug/l)	Spike Conc. (ug/l)	%R			
Vinyl chloride	280	250	680	160 Q	250	680	160 Q	0	55-140	20
Chloroethane	ND	250	490	196 Q	250	520	208 Q	6	55-138	20
1,1-Dichloroethene	8.2J	250	290	116	250	270	108	7	61-145	20
trans-1,2-Dichloroethene	24J	250	300	120	250	300	120	0	70-130	20
Trichloroethene	24	250	280	102	250	280	102	0	70-130	20
1,2-Dichlorobenzene	ND	250	230	92	250	240	96	4	70-130	20
1,3-Dichlorobenzene	ND	250	240	96	250	240	96	0	70-130	20
1,4-Dichlorobenzene	ND	250	240	96	250	240	96	0	70-130	20
Methyl tert butyl ether	ND	250	260	104	250	270	108	4	63-130	20
p/m-Xylene	ND	500	490	98	500	490	98	0	70-130	20
o-Xylene	ND	500	500	100	500	500	100	0	70-130	20
cis-1,2-Dichloroethene	3000	250	3200	80	250	3100	40 Q	3	70-130	20
Styrene	ND	500	490	98	500	500	100	2	70-130	20
Dichlorodifluoromethane	ND	250	400	160 Q	250	410	164 Q	2	36-147	20
Acetone	ND	250	380	152 Q	250	360	144	5	58-148	20
Carbon disulfide	ND	250	320	128	250	320	128	0	51-130	20
2-Butanone	ND	250	300	120	250	290	116	3	63-138	20
4-Methyl-2-pentanone	ND	250	300	120	250	310	124	3	59-130	20
2-Hexanone	ND	250	300	120	250	300	120	0	57-130	20
1,2-Dibromoethane	ND	250	250	100	250	260	104	4	70-130	20
n-Butylbenzene	ND	250	260	104	250	250	100	4	53-136	20
sec-Butylbenzene	ND	250	250	100	250	240	96	4	70-130	20



# Matrix Spike Sample Summary

## Form 3

### Volatiles

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Client Sample ID : MW-5BR-072022  
 Lab Sample ID : L2238704-01  
 Matrix Spike : WG1670386-6  
 Matrix Spike Dup : WG1670386-7

Lab Number : L2238704  
 Project Number :  
 Matrix : WATER  
 Analysis Date : 08/01/22 09:17  
 MS Analysis Date : 08/01/22 17:36  
 MSD Analysis Date : 08/01/22 18:03

Parameter	Sample Conc. (ug/l)	Matrix Spike Sample			Matrix Spike Duplicate			RPD	Recovery Limits	RPD Limit
		Spike Added (ug/l)	Spike Conc. (ug/l)	%R	Spike Added (ug/l)	Spike Conc. (ug/l)	%R			
tert-Butylbenzene	ND	250	240	96	250	230	92	4	70-130	20
1,2-Dibromo-3-chloropropane	ND	250	220	88	250	230	92	4	41-144	20
Isopropylbenzene	ND	250	240	96	250	240	96	0	70-130	20
p-Isopropyltoluene	ND	250	240	96	250	230	92	4	70-130	20
Naphthalene	ND	250	220	88	250	240	96	9	70-130	20
n-Propylbenzene	ND	250	250	100	250	250	100	0	69-130	20
1,2,4-Trichlorobenzene	ND	250	220	88	250	240	96	9	70-130	20
1,3,5-Trimethylbenzene	ND	250	240	96	250	240	96	0	64-130	20
1,2,4-Trimethylbenzene	ND	250	240	96	250	240	96	0	70-130	20
Methyl Acetate	ND	250	340	136 Q	250	350	140 Q	3	70-130	20
Cyclohexane	ND	250	300	120	250	290	116	3	70-130	20
Freon-113	ND	250	280	112	250	270	108	4	70-130	20
Methyl cyclohexane	ND	250	250	100	250	240J	96	4	70-130	20

# Initial Calibration Summary

## Form 6

### Volatiles

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Instrument ID : GONZO  
 Calibration dates : 07/27/22 15:30 07/27/22 19:24

Lab Number : L2238704  
 Project Number :  
 Ical Ref : ICAL19212

#### Calibration Files

L11 =VG220727N04.D L1 =VG220727N06.D L2 =VG220727N08.D L3 =VG220727N09.D L4 =VG220727N10.D  
 L6 =VG220727N11.D L8 =VG220727N12.D L10 =VG220727N13.D

Compound	L11	L1	L2	L3	L4	L6	L8	L10	Avg	%RSD
40) TP 1,1-Dichloropr		0.156	0.188	0.220	0.219	0.224	0.223	0.225	0.208	12.65
41) TP Benzene	0.496	0.496	0.583	0.642	0.643	0.645	0.644	0.653	0.600	11.33
42) TP Tertiary-Amyl Methyl Ether		0.391	0.438	0.452	0.457	0.481	0.474	0.491	0.455	7.39
43) S 1,2-Dichloroethane-d4	0.331	0.325	0.328	0.333	0.319	0.315	0.311	0.319	0.323	2.45
44) TP 1,2-Dichloroet		0.204	0.224	0.225	0.224	0.228	0.224	0.230	0.223	3.81
47) TP Methyl cyclohe		0.200	0.204	0.291	0.297	0.300	0.302	0.300	0.271	17.44
48) TP Trichloroethene	0.159	0.139	0.154	0.175	0.175	0.171	0.173	0.173	0.165#	8.01
50) TP Dibromomethane		0.079	0.096	0.095	0.095	0.100	0.097	0.101	0.095	7.75
51) TC 1,2-Dichloropr		0.166	0.181	0.175	0.176	0.171	0.173	0.173	0.174	2.77
53) TP 2-Chloroethyl		0.087	0.103	0.111	0.113	0.119	0.117	0.122	0.110	10.88
54) TP Bromodichlorom		0.183	0.195	0.193	0.190	0.191	0.189	0.192	0.190#	1.94
57) TP 1,4-Dioxane		0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002#	4.26
58) TP cis-1,3-Dichlo		0.213	0.257	0.265	0.265	0.274	0.269	0.278	0.260#	8.41
59) I Chlorobenzene-d5	-----ISTD-----									
60) S Toluene-d8	1.286	1.296	1.289	1.277	1.279	1.270	1.265	1.268	1.279	0.85
61) TC Toluene		0.419	0.497	0.517	0.523	0.518	0.518	0.519	0.501	7.41
62) TP 4-Methyl-2-pen		0.077	0.077	0.079	0.081	0.087	0.083	0.086	0.081	5.02
63) TP Tetrachloroethene		0.168	0.199	0.229	0.235	0.234	0.237	0.235	0.220	12.02
65) TP trans-1,3-Dich		0.258	0.292	0.301	0.313	0.327	0.321	0.328	0.306	8.16
67) TP Ethyl methacry		0.262	0.271	0.275	0.279	0.294	0.283	0.294	0.279	4.26
68) TP 1,1,2-Trichlor		0.133	0.139	0.143	0.146	0.153	0.149	0.153	0.145#	5.08
69) TP Chlorodibromom		0.166	0.194	0.199	0.210	0.225	0.222	0.230	0.207	10.78
70) TP 1,3-Dichloropr		0.267	0.287	0.301	0.309	0.319	0.311	0.321	0.302	6.40
71) TP 1,2-Dibromoethane		0.146	0.176	0.176	0.182	0.192	0.187	0.194	0.179#	9.08
72) TP 2-Hexanone		0.160	0.184	0.174	0.176	0.186	0.178	0.188	0.178	5.28
73) TP Chlorobenzene		0.455	0.533	0.558	0.562	0.562	0.561	0.566	0.542	7.40
74) TC Ethylbenzene		0.849	0.932	1.022	1.032	1.019	1.029	1.025	0.987	7.11
75) TP 1,1,1,2-Tetrac		0.173	0.191	0.200	0.208	0.213	0.213	0.217	0.202	7.80
76) TP p/m Xylene		0.309	0.357	0.395	0.402	0.395	0.399	0.393	0.379	9.01
77) TP o Xylene		0.294	0.349	0.385	0.387	0.382	0.384	0.379	0.366	9.32
78) TP Styrene		0.475	0.585	0.623	0.637	0.646	0.646	0.640	0.607	10.26
79) I 1,4-Dichlorobenzene-d4	-----ISTD-----									
80) TP Bromoform		0.155	0.227	0.241	0.251	0.276	0.277	0.291	0.246	18.64
82) TP Isopropylbenzene		1.260	1.527	1.834	1.818	1.796	1.835	1.838	1.701	13.19
83) S 4-Bromofluorobenzene	0.933	0.928	0.943	0.929	0.911	0.895	0.900	0.908	0.918	1.87
84) TP Bromobenzene		0.353	0.433	0.437	0.432	0.444	0.439	0.447	0.427	7.71



# Evaluate Continuing Calibration Report

Data Path : I:\VOLATILES\VOA101\2022\220725NICAL\  
 Data File : V01220725N19.D  
 Acq On : 26 Jul 2022 7:45 am  
 Operator : VOA101:PD  
 Sample : C8260STD10PPB  
 Misc : WG1667457,ICAL  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 26 09:40:37 2022  
 Quant Method : I:\VOLATILES\VOA101\2022\220725NICAL\V101\_220725N\_8260.m  
 Quant Title : VOLATILES BY GC/MS  
 QLast Update : Tue Jul 26 09:35:04 2022  
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Fluorobenzene	1.000	1.000	0.0	126	0.00
2 TP	Dichlorodifluoromethane	0.264	0.181	31.4#	81	0.00
3 TP	Chloromethane	0.573	0.456	20.4#	92	0.00
4 TC	Vinyl chloride	0.334	0.323	3.3	115	0.00
5 TP	Bromomethane	0.136	0.119	12.5	128	0.00
6 TP	Chloroethane	0.177	0.178	-0.6	117	0.00
7 TP	Trichlorofluoromethane	0.354	0.340	4.0	114	0.00
8 TP	Ethyl ether	0.101	0.114	-12.9	141	0.00
10 TC	1,1-Dichloroethene	0.212	0.201	5.2	117	0.00
11 TP	Carbon disulfide	0.584	0.554	5.1	121	0.00
12 TP	Freon-113	0.223	0.223	0.0	119	0.00
13 TP	Iodomethane	* 10.000	0.000	100.0#	0#	-3.22#
14 TP	Acrolein	0.034	0.030	11.8	105	0.00
15 TP	Methylene chloride	0.237	0.228	3.8	122	0.00
16 TP	Isopropyl alcohol	0.00914	0.00764#	16.4	117	0.00
17 TP	Acetone	* 10.000	8.401	16.0	103	0.00
18 TP	trans-1,2-Dichloroethene	0.230	0.223	3.0	121	0.00
19 TP	Methyl acetate	0.155	0.133	14.2	108	0.00
20 TP	Methyl tert-butyl ether	0.479	0.468	2.3	123	0.00
21 TP	tert-Butyl alcohol	0.013	0.013	0.0	122	0.00
22 TP	Diisopropyl ether	1.120	1.013	9.6	110	0.00
23 TP	1,1-Dichloroethane	0.528	0.521	1.3	122	0.00
24 TP	Halothane	0.181	0.175	3.3	119	0.00
25 TP	Acrylonitrile	0.071	0.072	-1.4	128	0.00
26 TP	Ethyl tert-butyl ether	0.711	0.663	6.8	116	0.00
27 TP	Vinyl acetate	0.519	0.447	13.9	106	0.00
28 TP	cis-1,2-Dichloroethene	0.257	0.245	4.7	120	0.00
29 TP	2,2-Dichloropropane	0.321	0.280	12.8	109	0.00
30 TP	Bromochloromethane	0.104	0.105	-1.0	118	0.00
31 TP	Cyclohexane	0.617	0.548	11.2	105	0.00
32 TC	Chloroform	0.422	0.403	4.5	119	0.00
33 TP	Ethyl acetate	0.194	0.184	5.2	112	0.00
34 TP	Carbon tetrachloride	0.331	0.318	3.9	114	0.00
35 TP	Tetrahydrofuran	0.067	0.058	13.4	106	0.00
36 S	Dibromofluoromethane	0.264	0.261	1.1	123	0.00
37 TP	1,1,1-Trichloroethane	0.364	0.368	-1.1	125	0.00
38 TP	2-Butanol	0.012	0.011	8.3	126	0.00
39 TP	2-Butanone	0.090	0.066	26.7#	102	0.00
40 TP	1,1-Dichloropropene	0.333	0.321	3.6	119	0.00

## **Continuing Calibration**

# Calibration Verification Summary

## Form 7

### Volatiles

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Instrument ID : VOA101  
 Lab File ID : V01220729N01  
 Sample No : WG1669558-2  
 Channel :

Lab Number : L2238704  
 Project Number :  
 Calibration Date : 07/29/22 19:04  
 Init. Calib. Date(s) : 07/26/22 07/26/22  
 Init. Calib. Times : 01:51 05:23

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	124	0
Dichlorodifluoromethane	0.264	0.264	-	0	20	117	0
Chloromethane	0.573	0.276	-	51.8*	20	55	0
Vinyl chloride	0.334	0.326	-	2.4	20	114	0
Bromomethane	0.136	0.059	-	56.6*	20	63	0
Chloroethane	0.177	0.199	-	-12.4	20	129	0
Trichlorofluoromethane	0.354	0.367	-	-3.7	20	121	0
Ethyl ether	0.101	0.109	-	-7.9	20	133	0
1,1-Dichloroethene	0.212	0.225	-	-6.1	20	130	0
Carbon disulfide	0.584	0.616	-	-5.5	20	133	0
Freon-113	0.223	0.242	-	-8.5	20	128	0
Acrolein	0.034	0.032	-	5.9	20	109	0
Methylene chloride	0.237	0.248	-	-4.6	20	130	0
Acetone	10	10.141	-	-1.4	20	120	0
trans-1,2-Dichloroethene	0.23	0.245	-	-6.5	20	131	0
Methyl acetate	0.155	0.144	-	7.1	20	116	0
Methyl tert-butyl ether	0.479	0.499	-	-4.2	20	130	0
tert-Butyl alcohol	0.013	0.014	-	-7.7	20	128	0
Diisopropyl ether	1.12	1.089	-	2.8	20	117	0
1,1-Dichloroethane	0.528	0.537	-	-1.7	20	124	0
Halothane	0.181	0.188	-	-3.9	20	126	0
Acrylonitrile	0.071	0.073	-	-2.8	20	128	0
Ethyl tert-butyl ether	0.711	0.752	-	-5.8	20	129	0
Vinyl acetate	0.519	0.52	-	-0.2	20	122	0
cis-1,2-Dichloroethene	0.257	0.266	-	-3.5	20	128	0
2,2-Dichloropropane	0.321	0.353	-	-10	20	136	0
Bromochloromethane	0.104	0.114	-	-9.6	20	127	0
Cyclohexane	0.617	0.634	-	-2.8	20	120	0
Chloroform	0.422	0.428	-	-1.4	20	124	0
Ethyl acetate	0.194	0.191	-	1.5	20	115	0
Carbon tetrachloride	0.331	0.333	-	-0.6	20	117	0
Tetrahydrofuran	0.067	0.056	-	16.4	20	101	0
Dibromofluoromethane	0.264	0.261	-	1.1	20	121	0
1,1,1-Trichloroethane	0.364	0.364	-	0	20	122	0
2-Butanone	0.09	0.077	-	14.4	20	117	0
1,1-Dichloropropene	0.333	0.346	-	-3.9	20	127	0
Benzene	0.977	1.011	-	-3.5	20	127	0
tert-Amyl methyl ether	0.415	0.467	-	-12.5	20	141	0
1,2-Dichloroethane-d4	0.314	0.293	-	6.7	20	115	0
1,2-Dichloroethane	0.326	0.321	-	1.5	20	120	0
Methyl cyclohexane	0.398	0.426	-	-7	20	129	0
Trichloroethene	0.239	0.253	-	-5.9	20	126	0
Dibromomethane	0.121	0.126	-	-4.1	20	127	0

\* Value outside of QC limits.





# Calibration Verification Summary

## Form 7

### Volatiles

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Instrument ID : GONZO  
 Lab File ID : VG220801A01  
 Sample No : WG1670386-2  
 Channel :

Lab Number : L2238704  
 Project Number :  
 Calibration Date : 08/01/22 07:07  
 Init. Calib. Date(s) : 07/27/22 07/27/22  
 Init. Calib. Times : 15:30 19:24

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	54	0
Dichlorodifluoromethane	0.1	0.109	-	0	20	55	0
Chloromethane	0.148	0.181	-	-22.3*	20	65	0
Vinyl chloride	0.13	0.161	-	-23.8*	20	62	0
Bromomethane	0.071	0.086	-	-21.1*	20	73	0
Chloroethane	10	20.913	-	-109.1*	20	99	0
Trichlorofluoromethane	0.198	0.206	-	4	20	56	0
Ethyl ether	0.074	0.065	-	12.2	20	48	0
1,1-Dichloroethene	0.125	0.125	-	0	20	51	0
Carbon disulfide	0.314	0.348	-	-10.8	20	57	0
Freon-113	0.126	0.138	-	-9.5	20	55	0
Acrolein	0.023	0.022	-	4.3	20	53	0
Methylene chloride	0.157	0.148	-	5.7	20	54	0
Acetone	0.05	0.051	-	-2	20	62	0
trans-1,2-Dichloroethene	0.14	0.144	-	-2.9	20	53	0
Methyl acetate	0.118	0.114	-	3.4	20	55	0
Methyl tert-butyl ether	0.428	0.377	-	11.9	20	48	0
tert-Butyl alcohol	0.019	0.014	-	26.3*	20	43	0
Diisopropyl ether	0.533	0.632	-	-18.6	20	62	0
1,1-Dichloroethane	0.282	0.311	-	-10.3	20	57	0
Halothane	0.119	0.116	-	2.5	20	52	0
Acrylonitrile	0.061	0.06	-	1.6	20	55	0
Ethyl tert-butyl ether	0.516	0.522	-	-1.2	20	54	0
Vinyl acetate	0.345	0.462	-	-33.9*	20	78	0 NT
cis-1,2-Dichloroethene	0.164	0.162*	-	1.2	20	52	0
2,2-Dichloropropane	0.236	0.262	-	-11	20	56	0
Bromochloromethane	0.077	0.072*	-	6.5	20	49	0
Cyclohexane	0.284	0.338	-	-19	20	61	0
Chloroform	0.277	0.284	-	-2.5	20	54	0
Ethyl acetate	0.173	0.172	-	0.6	20	57	0
Carbon tetrachloride	0.214	0.21	-	1.9	20	50	0
Tetrahydrofuran	0.055	0.056	-	-1.8	20	55	0
Dibromofluoromethane	0.259	0.256	-	1.2	20	53	0
1,1,1-Trichloroethane	0.245	0.244	-	0.4	20	51	0
2-Butanone	0.092	0.078	-	15.2	20	44	0
1,1-Dichloropropene	0.208	0.222	-	-6.7	20	54	0
Benzene	0.6	0.636	-	-6	20	53	0
tert-Amyl methyl ether	0.455	0.407	-	10.5	20	48	0
1,2-Dichloroethane-d4	0.323	0.351	-	-8.7	20	57	0
1,2-Dichloroethane	0.223	0.234	-	-4.9	20	56	0
Methyl cyclohexane	0.271	0.294	-	-8.5	20	54	0
Trichloroethene	0.165	0.161*	-	2.4	20	50	0
Dibromomethane	0.095	0.091	-	4.2	20	51	0

\* Value outside of QC limits.



# Calibration Verification Summary

## Form 7

### Volatiles

Client : C&S Companies  
 Project Name : BUFFALO BUSINESS PARK  
 Instrument ID : GONZO  
 Lab File ID : VG220801A01  
 Sample No : WG1670386-2  
 Channel :

Lab Number : L2238704  
 Project Number :  
 Calibration Date : 08/01/22 07:07  
 Init. Calib. Date(s) : 07/27/22 07/27/22  
 Init. Calib. Times : 15:30 19:24

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
n-Butylbenzene	1.26	1.445	-	-14.7	20	57	0
1,2-Dichlorobenzene	0.764	0.725	-	5.1	20	50	0
1,2,4,5-Tetramethylbenzene	1.206	1.122	-	7	20	49	0
1,2-Dibromo-3-chloropropan	0.077	0.054	-	29.9*	20	39	0
1,3,5-Trichlorobenzene	0.525	0.505	-	3.8	20	50	0
Hexachlorobutadiene	0.21	0.23	-	-9.5	20	56	0
1,2,4-Trichlorobenzene	0.46	0.419	-	8.9	20	49	0
Naphthalene	1.07	0.786	-	26.5*	20	41	0
1,2,3-Trichlorobenzene	0.393	0.334*	-	15	20	45	0

\* Value outside of QC limits.



## *Appendix C*

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### *Validator Qualifications*

## **KENNETH R. APPLIN**

### **Geochemist/Data Validator**

Ph.D., Geochemistry and Mineralogy, The Pennsylvania State University

M.S., Geochemistry and Mineralogy, The Pennsylvania State University

B.A., Geological Sciences, SUNY at Geneseo, NY

Dr. Applin has over 35 years of experience working with the geochemistry of natural waters. His prior experience includes working as an Assistant Professor of Geology at the University of Missouri-Columbia and as Chief Hydrogeologist and Geochemist with a leading engineering firm in Rochester, NY. In 1993, he established KR Applin and Associates, a small consulting business that focuses on the geochemistry of natural waters, especially as applied to problems involving the contamination of groundwater and surface water.

Dr. Applin is also an experienced analytical data validator and has provided data validation services since 1994 to a variety of clients performing brownfield cleanup projects, hazardous waste remediation, groundwater monitoring at solid waste facilities, and other projects requiring third-party data validation. Dr. Applin has several years of hands-on experience with the laboratory analysis of natural waters and has successfully completed the USEPA Region II certification courses for performing inorganic and organic analytical data validation.

## **MICHAEL K. PERRY**

### **Chemist/Data Validator**

B.S. Chemistry, Georgia State University, Atlanta, GA

A.A.S., Chemical Technology, Alfred State College, Alfred, NY

Mr. Perry has over 30 years of experience in the analytical laboratory business. During his early career, he spent several years as a laboratory analyst performing the analysis of soil, water, and air samples for inorganic and organic chemical parameters. During his last 20 years in the environmental laboratory business, he managed and directed two major analytical laboratories in Rochester, NY. His management responsibilities included oversight of the daily operations of the lab, staff training and supervision, the selection, purchase, and maintenance of analytical instruments, the introduction of new laboratory methods, analytical quality assurance and quality control, data acquisition and management, and other business-related activities.

Mr. Perry has an extensive working knowledge of the methods and procedures used for sampling and analyzing both inorganic and organic analytes in soil, water, and air. He is an accomplished laboratory chemist and is familiar with the analytical methods and procedures established under the USEPA Contract Laboratory Protocols (CLP), the NYSDEC Analytical Services Protocols (ASP), and the NYSDOH Environmental Laboratory Approval Program (ELAP).

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## APPENDIX C

### FIELD SAMPLING & MONITORING LOGS

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C&S Engineers, Inc.  
141 Elm Street Suite 100  
Buffalo, New York 14203  
Phone: 716-847-1630  
www.cscos.com

## Well Sampling Field Data Sheet

### Well Casing Unit Volume

(gal/l.f.)

1 1/4" = 0.08    2" = 0.17    3" = 0.38  
4" = 0.66    6" = 1.5    8" = 2.6

Client Name:

Site Name: BUFFALO BUSINESS PARK

Project No.:

Field Staff: NICH BACKFAT

### WELL DATA

Date		7/20/22	7/20/22		7/20/22				
Well Number		MW-8BR	MW-7BR		MW-5BR				
Diameter (Inches)		2"	2"		2"				
Total Sounded Depth (feet)		15'	15'		15'				
Static Water Level (feet)	DEPTH TO WATER	8.8'	14.9'		9.1'				
H <sub>2</sub> O Column (feet)		6.2'							
Pump Intake (feet)									
Well Volume (gallons)									
Amount to Evacuate (gallons)									
Amount Evacuated (gallons)									

### FIELD READINGS

Date	Stabilization Criteria	7/20/22	7/20/22		7/20/22				
Time		9:00	9:10		9:30				
pH (Std. Units)	+/-0.1				8.32				
Conductivity (mS/cm)	3%				1.66				
Turbidity (NTU)	10%				0.00				
D.O. (mg/L)	10%				2.12				
Temperature (°C) (°F)	3%				16.51°C				
ORP <sup>3</sup> (mV)	+/-10 mv				-256				
Appearance					C				
Free Product (Yes/No)					none				
Odor					none				
Comments	- WELLS MW-8BR + MW-7BR WERE ONLY MEASURED FOR DEPTH TO WATER.								

C = Clear    T = Turbid    ST = Semi Turbid    VT = Very Turbid

PARKING LOT WELL DEPTH TO WATER - 2.46'  
GARAGE WELL DEPTH TO WATER - 9.1'





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Buffalo, New York 14203  
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www.cscos.com

## Well Sampling Field Data Sheet

### Well Casing Unit Volume

(gal/l.f.)

1 1/4" = 0.08    2" = 0.17    3" = 0.38  
4" = 0.66    6" = 1.5    8" = 2.6

Client Name:

Site Name: BUFFALO BUSINESS PARK

Project No.:

Field Staff: DEKA BACKHART

### WELL DATA

Date	7/24/22								
Well Number	MU-5000								
Diameter (inches)	4"								
Total Sounded Depth (feet)	20								
Static Water Level (feet)	6.9								
H <sub>2</sub> O Column (feet)									
Pump Intake (feet)									
Well Volume (gallons)									
Amount to Evacuate (gallons)									
Amount Evacuated (gallons)									

### FIELD READINGS

Date	7/24/22	7/24/22							
Time	9:56 AM	10:00							
pH (Std. Units)	+/-0.1	8.05	7.53						
Conductivity (mS/cm)	3%	.944	.897						
Turbidity (NTU)	10%	0.00	0.00						
D.O. (mg/L)	10%	1.47	5.38						
Temperature (°C) (°F)	3%	19.72°C	18.94°C						
ORP <sup>3</sup> (mV)	+/-10 mv	-156	-53						
Appearance		C	C						
Free Product (Yes/No)		NONE	NONE						
Odor		NONE	NONE						
Comments									

C = Clear    T = Turbid    ST = Semi Turbid    VT = Very Turbid





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Buffalo, New York 14203  
Phone: 716-847-1630  
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## Well Sampling Field Data Sheet

### Well Casing Unit Volume

(gal/l.f.)

1 1/4" = 0.08    2" = 0.17    3" = 0.38  
4" = 0.66    6" = 1.5    8" = 2.6

Client Name:

Site Name:

Project No.:

Field Staff:

BUFFALO BUSINESS PARK

RICH BACHART

### WELL DATA

Date	7/20/22								
Well Number	MW-3BR								
Diameter (inches)	4"								
Total Sounded Depth (feet)	20								
Static Water Level (feet)	7.0'								
H <sub>2</sub> O Column (feet)									
Pump Intake (feet)									
Well Volume (gallons)									
Amount to Evacuate (gallons)									
Amount Evacuated (gallons)									

### FIELD READINGS

Date	7/20/22	7/20/22	7/20/22						
Time	11:10	11:15	11:20						
pH (Std. Units)	7.74	7.94	7.74						
Conductivity (mS/cm)	514	715	720						
Turbidity (NTU)	40.9	47.6	0.00						
D.O. (mg/L)	.87	.68	.65						
Temperature (°C) (°F)	27.16°C	16.50°C	16.18°C						
ORP <sup>3</sup> (mV)	-170	-276	-284						
Appearance	C	C	C						
Free Product (Yes/No)	none	none	none						
Odor	none	none	none						
Comments	-STEVE CLAIMED MW-3BR WAS producing sludge AND pulled the pump out.								

C = Clear    T = Turbid    ST = Semi Turbid    VT = Very Turbid



C&S Engineers, Inc.  
141 Elm Street Suite 100  
Buffalo, New York 14203  
Phone: 716-847-1630  
www.cscos.com

## Well Sampling Field Data Sheet

### Well Casing Unit Volume

(gal/l.f.)

1 1/4" = 0.08    2" = 0.17    3" = 0.38  
4" = 0.66    6" = 1.5    8" = 2.6

Client Name:

Site Name:

Project No.:

Field Staff:

THEODORE BUSINESS PARK

NICK BACKHO

### WELL DATA

Date	7/20/22								
Well Number	MW-462								
Diameter (inches)	4"								
Total Sounded Depth (feet)	20								
Static Water Level (feet)	6.7								
H <sub>2</sub> O Column (feet)									
Pump Intake (feet)									
Well Volume (gallons)									
Amount to Evacuate (gallons)									
Amount Evacuated (gallons)									

### FIELD READINGS

Date	7/20/22	7/20/22	7/20/22	7/20/22					
Time	10:40	10:45	10:50	10:55					
pH (Std. Units)	7.65	7.47	7.47	7.48					
Conductivity (mS/cm)	787	767	772	778					
Turbidity (NTU)	108	24.9	14.9	13.4					
D.O. (mg/L)	9.0	5.3	5.2	5.4					
Temperature (°C) (°F)	26.21°C	24.48°C	24.07°C	23.80°C					
ORP <sup>3</sup> (mV)	+/-10 mv	-171	-188	-194	-196				
Appearance		C	C	C	C				
Free Product (Yes/No)		NONE	NONE	NONE	NONE				
Odor		NONE	NONE	NONE	NONE				
Comments									

C = Clear    T = Turbid    ST = Semi Turbid    VT = Very Turbid



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## Well Sampling Field Data Sheet

### Well Casing Unit Volume

(gal/l.f.)

1 1/4" = 0.08    2" = 0.17    3" = 0.38

4" = 0.66    6" = 1.5    8" = 2.6

Client Name:

Site Name:

BUFFALO BUSINESS PARK

Project No.:

Field Staff:

RICK BACKERT

### WELL DATA

Date	7/20/21								
Well Number	MW-23A								
Diameter (inches)	4"								
Total Sounded Depth (feet)	20								
Static Water Level (feet)	4.4								
H <sub>2</sub> O Column (feet)									
Pump Intake (feet)									
Well Volume (gallons)									
Amount to Evacuate (gallons)									
Amount Evacuated (gallons)									

### FIELD READINGS

Date	7/20/22	7/20/22	7/20/22	7/20/22	7/20/22				
Time	11:35	11:40	11:45	11:50	11:55				
pH (Std. Units)	7.87	7.70	7.70	7.71	7.72				
Conductivity (mS/cm)	564	593	588	590	589				
Turbidity (NTU)	270	128	117	90.8	77.8				
D.O. (mg/L)	.78	.66	.62	.61	.61				
Temperature (°C) (°F)	21.45	18.80°C	19.25°C	19.39°C	19.38°C				
ORP <sup>3</sup> (mV)	-168	-201	-212	-218	-220				
Appearance	C	C	C	C	C				
Free Product (Yes/No)	NONE	NONE	NONE	NONE	NONE				
Odor	NONE	NONE	NONE	NONE	NONE				
Comments	Turbidity began to go up on 8th day the sample								

C = Clear    T = Turbid    ST = Semi Turbid    VT = Very Turbid

## BUFFALO BUSINESS PARK

## CARBON TANK LOG

2021

	JAN	FEB	MAR	APR	MAY	JUN
Date Read:	1-18-21	2-24-21	3-25-21	4-26-21	5-17-21	6-21-21
Totalizer Reading:	0656.5	0701.8	0743.5	0785.3	0815.9	0857.9
Performed By:	SW	SW	SW	SW	SW	SW
Comments:					Changed Carbon 5/29/21 0830.5	
	JUL	AUG	SEP	OCT	NOV	DEC
Date Read:	7-27-21	8-23-21	9-27-21	10-21-21	11-19-21	12-22-21
Totalizer Reading:	0906.1	0923.1	0928.1	0941.6	0984.3	1035.3
Performed By:	SW	SW	SW	SW	SW	SW
Comments:						

7/8/21  
7:35am  
Changed inside  
PUMP @ TANK  
0880.4

## BUFFALO BUSINESS PARK

## GROUND WATER LOG

## WELL #: MW-3BR

2021

	JAN	FEB	MAR	APR	MAY	JUN
Date Read:	1-18-21	2-24-21	3-25-21	4-26-21	5-17-21	6-21-21
Totalizer Reading:	0492.160	0553.170	0588.000	0633.560	0662.870	6703.770
Water Level Height:	14 <sup>3</sup>	14 <sup>3</sup>	15'6	15'	15 <sup>6</sup>	15 <sup>3</sup>
Performed By:	SW	SW	SW	SW	SW	
Comments:						
	JUL	AUG	SEP	OCT	NOV	DEC
Date Read:	7-27-21	8-22-21	9-27-21	10-21-21	11-19-21	12-22-21
Totalizer Reading:	0752.850	0787.300	0806.530	0842.110	0883.090	0926.97
Water Level Height:	15 <sup>3</sup>	15'	14 <sup>9</sup>	14 <sup>2</sup>	14 <sup>8</sup>	14 <sup>4</sup>
Performed By:						
Comments:						

**BUFFALO BUSINESS PARK**

**GROUND WATER LOG**

**WELL #: MW-4BR**

**2021**

	JAN	FEB	MAR	APR	MAY	JUN
Date Read:	1-18-21	2-24-21	3-25-21	4-26-21	5-17-21	6-21-21
Totalizer Reading:	0130.180	130.180	N/A	130.480	130.580	0131.680
Water Level Height:	12 <sup>6</sup>	12 <sup>4</sup>	12 <sup>2</sup>	16 <sup>5</sup>	20	22 <sup>18</sup>
Performed By:	SW		SW	SW	SW	SW
Comments:		PUMP NOT WORKING REMOVED PUMP	PUMP ORDERED DELAYED DUE TO COVID	NEW PUMP AND OUTLET INSTALLED		
	JUL	AUG	SEP	OCT	NOV	DEC
Date Read:	7-27-21	8-22-21	9-27-21	10-21-22	11-19-21	12-22-21
Totalizer Reading:	0131.760	0134.610	0149.850	189.100	0192.510	0196.080
Water Level Height:	20 <sup>3</sup>	19 <sup>6</sup>	21 <sup>7</sup>	21 <sup>5</sup>	20 <sup>4</sup>	20 <sup>2</sup>
Performed By:						
Comments:						

CHANGED MID PUMP IN  
N.Y.K.  
11-19-21  
Home Depot  
PUMP #  
LT 250A

## BUFFALO BUSINESS PARK

## GROUND WATER LOG

WELL #: MW-5ABR

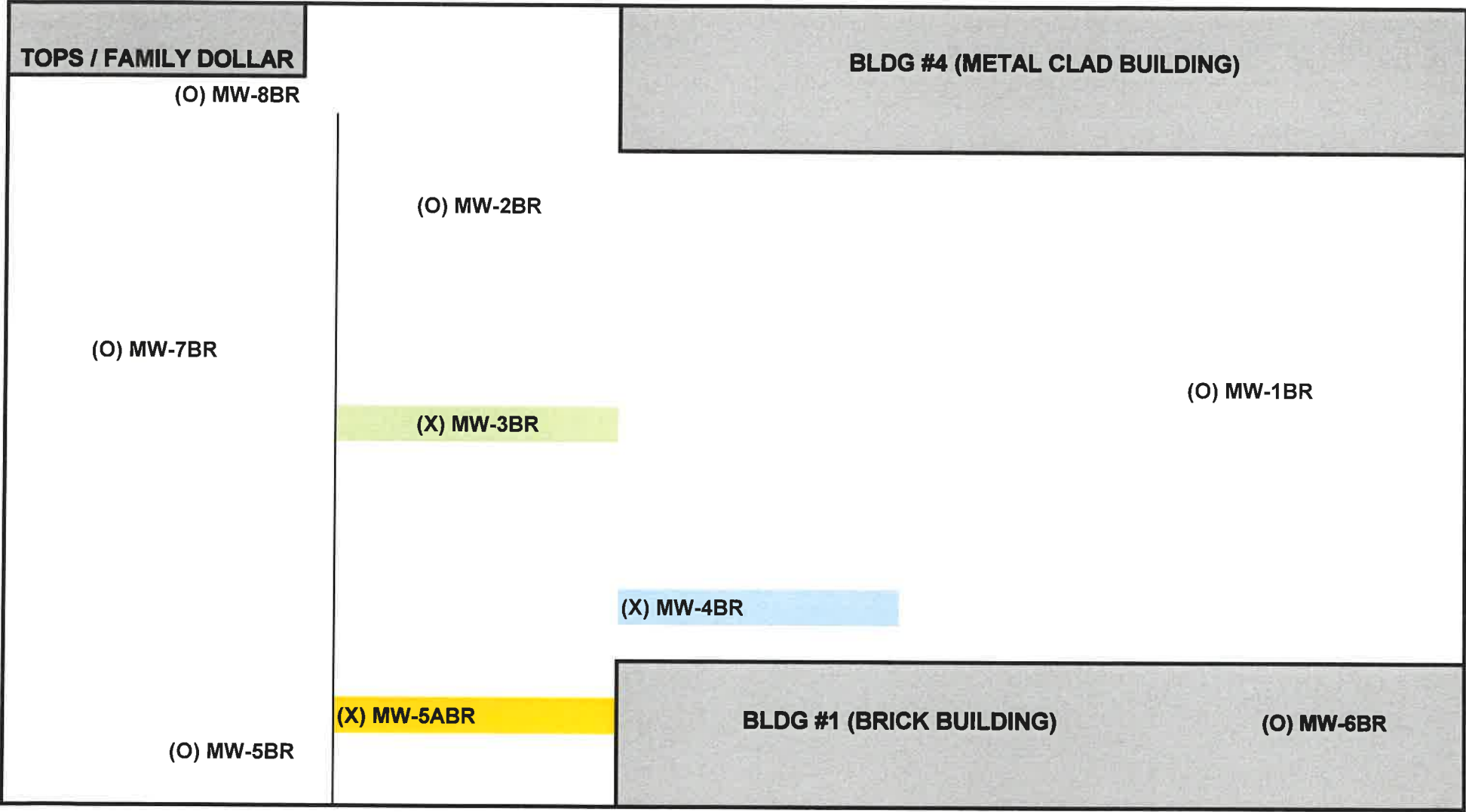
2021

	JAN	FEB	MAR	APR	MAY	JUN
Date Read:	1-18-21	2-21-21	3-25-21	4-26-21	5-27-21	6-21-21
Totalizer Reading:	0106.330	107.210	107.650	0108.380	0108.940	0109.6000
Water Level Height:	11' 1"	11' 8"	11' 9"	11' 4"	12' 7"	12' 8"
Performed By:	SW	SW	SW	SW	SW	SW
Comments:						
	JUL	AUG	SEP	OCT	NOV	DEC
Date Read:	7-27-21	8-23-21	9-27-21	10-21-21	11-19-21	12-22-21
Totalizer Reading:	0110.920	0111.920	0112.410	0113.130	114.290	116.070
Water Level Height:	19' 6"	18' 7"	21' 4"	20' 9"	18' 3"	17' 6"
Performed By:						
Comments:						



**BUFFALO BUSINESS PARK - WELL SITE MAP**

**JANUARY 2020**



Complex Entrance  
at 1800 Broadway  
Buffalo NY, 14212

(O) MONITORING WELL  
(X) PUMPING WELL - TURNED ON



**BUFFALO BUSINESS PARK**

**CARBON TANK LOG**

**2022**

	JAN	FEB	MAR	APR	MAY	JUN
Date Read:	1-24-22	2-21-22	3-23-22	4-25-22	5-25-22	6-24-22
Totalizer Reading:	1086.4	1128.9	1185.2	1237.9	1286.4	1331.6
Performed By:		<i>[Signature]</i>	<i>[Signature]</i>			<i>[Signature]</i>
Comments:						
	JUL	AUG	SEP	OCT	NOV	DEC
Date Read:	7-20-22	8-24-22	9-26-22	10-21-22		
Totalizer Reading:	1337.9	1353.6	1369.4	1382.8		
Performed By:						
Comments:						

\* Cody here  
8-9-22  
BSA Samples

3-29-22

Installed New Pump @ Carbon  
Tank, Installed new check valve

@ Carbon Tank, Carbon Tank  
Had crust which caused pump to  
burn out - water could not  
drain in tank, debris from  
tank cleaning in sealed  
55gal drum. Approximately  
4 5gal bucket in drum

Sh

3-29-22



Pump # model # THD1035

## BUFFALO BUSINESS PARK

## GROUND WATER LOG

WELL #: MW-3BR

2022

	JAN	FEB	MAR	APR	MAY	JUN
Date Read:	1-24-22	2-21-22	3-23-22	4-25-22	5-25-22	6-24-22
Totalizer Reading:	0990.930	1004.400	1046.180	1088.620	1105.380	1105.380
Water Level Height:	143	152	151	148	163	159
Performed By:						
Comments:						pulled pump today.
	JUL	AUG	SEP	OCT	NOV	DEC
Date Read:	7-20-22	*See ATTACHED	9-26-22	10-21-22		
Totalizer Reading:	Still waiting	NOTE	1105.380	1105.380		
Water Level Height:	7.0 ON PUMP NO CHANGES in reading		8'1"	7'2"		
Performed By:						
Comments:			Still waiting ON PUMP from Manufacturer	Still waiting ON PUMP from Manufacturer		
			Per: NICOLE SEIWEAT PUMPS	9/20/22	Sweeds 10-11-22	

Well #: MW-3BR

WED Aug 17<sup>th</sup>

NW Contracting on site to wash out  
well 3. Waste water then pumped into  
55 gallon drums. Pumped then into carbon  
TANK. Approx. 100 gallons of water then  
washed drums & pump approx 30 gal clean  
water into tank, drums then put  
into storage for use on carbon tank cleanout



R

## BUFFALO BUSINESS PARK

## GROUND WATER LOG

WELL #: MW-4BR

2022

	JAN	FEB	MAR	APR	MAY	JUN
Date Read:	11-24-22	2-21-22	2-23-22	4-25-22	5-25-22	6-24-22
Totalizer Reading:	0199.650	0202.210	0205.040	0207.680	0208.770	0210.300
Water Level Height:	19 <sup>2</sup>	18 <sup>8</sup>	17 <sup>3</sup>	21 <sup>9</sup>	24 <sup>5</sup>	17 <sup>6</sup>
Performed By:						
Comments:						
	JUL	AUG	SEP	OCT	NOV	DEC
Date Read:	7-20-22	8-24-22	9-26-22	10-21-22		
Totalizer Reading:	0210.300	0218.00	0225.760	0232.780		
Water Level Height:	6 <sup>7</sup>	19 <sup>4</sup>	20 <sup>8</sup>	17 <sup>5</sup>		
Performed By:	Body on					
Comments:	Site for	Installed new				
	water	pump See note*				
	samples					

Well #: MW-4BR

TUES Aug 2nd - 2022

TALKED to Co. & from C.S. about  
WELL MW4BR PUMP NOT WORKING needs  
to go for service. (maybe under warranty),  
Co. said to use new pump for well # 3BR  
to keep wells pumping.

Sent pump to Stewart Eng. in Rochester N.Y.  
8-2-22 by U.P.S.

## BUFFALO BUSINESS PARK

## GROUND WATER LOG

WELL #: MW-5ABR

2022

	JAN	FEB	MAR	APR	MAY	JUN
Date Read:	1-24-22	1-21-22	3-23-22	4-25-22	5-25-22	6-24-22
Totalizer Reading:	117.770	0120.450	123.520	126.330	0128.630	130.700
Water Level Height:	17'	15.2	13.2	16.3	15.9	20.2
Performed By:	Sm					
Comments:						
	JUL	AUG	SEP	OCT	NOV	DEC
Date Read:	7-20-22	8-24-22	9-26-22	10-22-22		
Totalizer Reading:	0136.270	0142.570	0148.910	0154.320 <del>402</del>		
Water Level Height:	6.9	17.9	18.2	10.2		
Performed By:						
Comments:	Back on					
	Site for					
	WATER Samples					

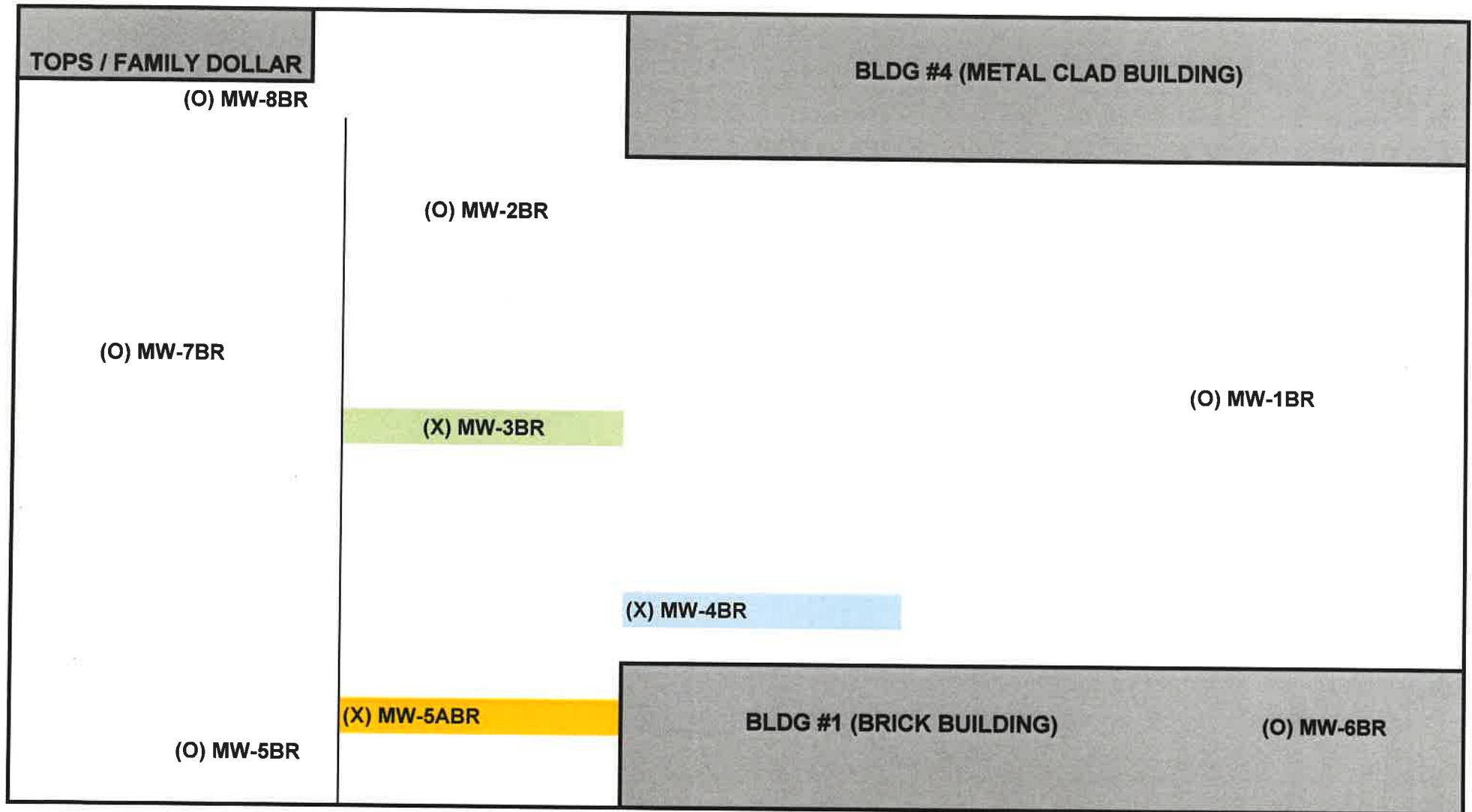
## 2022

	JAN	FEB	MAR	APR	MAY	JUN
Date Read:			3-29-22			
Totalizer Reading:			Installed			
Water Level Height:			New Pump in shop w/ check valve & cleaned CARBON TANK			
Performed By:			Debris in SS gal drum			
Comments:			CARBON TANK Readings - 1194.2			
	JUL	AUG	SEP	OCT	NOV	DEC
Date Read:		Aug 17th				
Totalizer Reading:		N.W. Containing on site to clean well 3 from sludge put 110 gal dirty water in 55 gal drums				
Water Level Height:		pumped into Carbon TANK				
Performed By:		Approx. 150 gal w/1r washout included.				
Comments:						



# BUFFALO BUSINESS PARK - WELL SITE MAP

JANUARY 2022



Complex Entrance  
at 1800 Broadway  
Buffalo NY, 14212

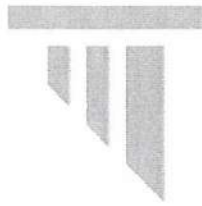
(O) MONITORING WELL  
(X) PUMPING WELL - TURNED ON

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## APPENDIX D

### SUB-SLAB DEPRESSURIZATION SYSTEM INSPECTION CERTIFICATION

---



## studio T3

2495 Main Street, Suite 301  
Buffalo, NY 14214  
phone: (716) 803-6400  
fax: (716) 810-9504

August 17, 2022

Buffalo Business Park  
ATTN: Gary Crewson  
1800 Broadway, Bldg. 1D  
Buffalo, New York 14212  
Reference: **SSDS System Site Inspections**

Dear Mr. Crewson,

I completed an inspection of both sub-slab depressurization systems (SSDS) at the Buffalo Business Park in Buffalo, New York on Wednesday, August 17, 2022 at 10:30 AM. The inspection results are summarized in the table below:

BUFFALO BUSINESS PARK SSDS INSPECTIONS - 8/17/22						
ADDRESS	REFERENCE #	VACUUM	ELECTRIC POWER	PIPING	DRAW	SUCTION
1800 BROADWAY - BLDG 1A	B-1	OPERATIONAL	ON	INTACT	SATISFACTORY	AUDIBLE
1800 BROADWAY - BLDG 1A	B-2	OPERATIONAL	ON	INTACT	SATISFACTORY	AUDIBLE

Based on the results both of the soil vapor extraction systems are functional and operating optimally.

Please do not hesitate to contact me with any questions regarding the above.

Andrew Terragnoli, P.E.



---

## APPENDIX E

### BSA DISCHARGE PERMIT RENEWAL SAMPLING

---



**C&S Companies**  
141 Elm Street  
Suite 100  
Buffalo, NY 14203  
p: (716) 847-1630  
f: (716) 847-1454  
www.cscos.com

February 15, 2022

Traserra Adams, J.D.  
Legal Investigator  
Industrial Waste Section  
Buffalo Sewer Authority  
Foot of Ferry Street  
90 West Ferry  
Buffalo, New York 14213-1799

**Re: Buffalo Business Park Semi-Annual Self-Monitoring Report  
February 15, 2022**

Dear Ms. Adams:

Pursuant to guidelines described in the Buffalo Sewer Authority Permit #22-01-BU124, Buffalo Business Park (BBP) is providing this semi-annual self-monitoring report which provides the analytical results of a post treatment system water (effluent) sample that was collected on February 2, 2022. In addition, a reading from the system totalizer is also provided.

#### **TREATMENT SYSTEM CARBON CHANGE OUT**

The spent carbon in the 500 gallon treatment canister was removed and replaced with new activated carbon on May 27, 2021. The spent carbon was tested and disposed of as hazardous waste.

#### **ANALYTICAL RESULTS**

A post treatment water sample was collected on the morning of February 2, 2022 for laboratory analysis. The sample was subsequently hand delivered to Alpha Analytical for analysis as follows:

- USEPA Method 4500 for pH;
- USEPA Method 245.1 for mercury; and
- USEPA 624.1 for volatile organic compounds.

The pH of the sample was analyzed at 6.90.

Mercury was not detected (ND) in the water sample that was analyzed.

There were no volatile organic compounds (VOCs) detected in the water sample collected from the treatment system above the detection limit except for trichloroethene detected at 0.00034 mg/L. **Table 1** provides a summary of key compounds historically detected in groundwater at the site. The laboratory analytical data package is attached as **Appendix A**.

### VOLUMETRIC INFORMATION

The totalizer coming into the onsite treatment system was read on February 2, 2022 to provide volumetric information. The volume of groundwater treated since the start of treatment operations was 1,096,600 gallons. The totalizer reading for the last reporting period (August 2021) was 897,700 gallons. Therefore, a total of 198,900 gallons of groundwater were treated and discharged to the BSA during this reporting period. A photo of the totalizer reading is provided as **Appendix B**.

Should you have any questions regarding this letter or require additional information, please feel free to contact the undersigned.

Sincerely,

**C&S ENGINEERS, INC.**



Daniel E. Riker, P.G.  
Department Manager



Cody A. Martin  
Project Environmental Scientist

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# CERTIFICATION

### **CERTIFICATION STATEMENT**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Official: Jeffrey Crewson

Title: VP of operations

Signature: 

Date: 2/15/22



# TABLES

TABLE 1

**BUFFALO BUSINESS PARK  
TREATMENT SYSTEM RESULTS COMPARED TO BSA CRITERIA  
FEBRUARY 2022**



Parameter	BSA Discharge Limit	Post-Treatment Sample Feb. 2022
<b>VOCs - mg/l</b>		
Tetrachloroethene	0.267	ND
trans-1,2-Dichloroethene	0.285	ND
Trichloroethene	0.712	0.00034 J
<b>Metals - mg/l</b>		
Mercury	0.0008	ND
<b>General Chemistry - SU</b>		
pH	5.0 12.0	6.9

ND indicates analyte was not detected.

Blank space indicates analyte was not analyzed for in that sample.

\*+ - LCS and/or LCSD is outside acceptance limits, high biased.

^+ - Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.

B - Compound was found in the blank and sample.

F1 - MS and/or MSD recovery exceeds control limits.

F2 - MS/MSD RPD exceeds control limits

H - Sample was prepped or analyzed beyond the specified holding time

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

vs - Reported analyte concentrations are below 200 ug/kg and may be biased low due to the sample not being collected according to 5035A-L low-level specifications.

# **APPENDIX A**

## **LABORATORY ANALYTICAL PACKAGE**



## ANALYTICAL REPORT

Lab Number:	L2205487
Client:	C&S Companies 141 Elm Street, Suite 100 Buffalo, NY 14203
ATTN:	Cody Martin
Phone:	(716) 847-1630
Project Name:	BUFFALO BUSINESS PARK
Project Number:	Y03.001.001
Report Date:	02/09/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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).

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



**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Y03.001.001

**Lab Number:** L2205487  
**Report Date:** 02/09/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2205487-01	BSA- 020222	WATER	Not Specified	02/02/22 08:30	02/02/22
L2205487-02	TRIP BLANK	WATER	Not Specified	02/02/22 00:00	02/02/22

**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Y03.001.001

**Lab Number:** L2205487  
**Report Date:** 02/09/22

### 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:** BUFFALO BUSINESS PARK  
**Project Number:** Y03.001.001

**Lab Number:** L2205487  
**Report Date:** 02/09/22

**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.

**Sample Receipt**

L2205487-02: A sample identified as "TRIP BLANK" was received, but not listed on the Chain of Custody. This sample was not analyzed.

**Volatile Organics by Method 624**

The WG1601655-3 LCS recovery, associated with L2205487-01, is above the acceptance criteria for acrolein (145%); however, the associated sample is non-detect to the RL for this target analyte. The results of the original analysis are reported.

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:

*Melissa Sturgis* Melissa Sturgis

Title: Technical Director/Representative

Date: 02/09/22

# ORGANICS



# **VOLATILES**

**Project Name:** BUFFALO BUSINESS PARK

**Project Number:** Y03.001.001

**Lab Number:** L2205487

**Report Date:** 02/09/22

**SAMPLE RESULTS**

**Lab ID:** L2205487-01

**Client ID:** BSA- 020222

**Sample Location:** Not Specified

**Date Collected:** 02/02/22 08:30

**Date Received:** 02/02/22

**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Water

**Analytical Method:** 128,624.1

**Analytical Date:** 02/03/22 14:21

**Analyst:** GT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Volatile Organics by GC/MS - Westborough Lab**

Methylene chloride	ND		ug/l	1.0	0.56	1
1,1-Dichloroethane	ND		ug/l	1.5	0.40	1
Chloroform	ND		ug/l	1.0	0.38	1
Carbon tetrachloride	ND		ug/l	1.0	0.24	1
1,2-Dichloropropane	ND		ug/l	3.5	0.46	1
Dibromochloromethane	ND		ug/l	1.0	0.27	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.34	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.35	1
Tetrachloroethene	ND		ug/l	1.0	0.26	1
Chlorobenzene	ND		ug/l	3.5	0.30	1
1,2-Dichloroethane	ND		ug/l	1.5	0.47	1
1,1,1-Trichloroethane	ND		ug/l	2.0	0.29	1
Bromodichloromethane	ND		ug/l	1.0	0.28	1
trans-1,3-Dichloropropene	ND		ug/l	1.5	0.31	1
cis-1,3-Dichloropropene	ND		ug/l	1.5	0.34	1
1,3-Dichloropropene, Total	ND		ug/l	1.5	0.31	1
Bromoform	ND		ug/l	1.0	0.22	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.20	1
Benzene	ND		ug/l	1.0	0.38	1
Toluene	ND		ug/l	1.0	0.31	1
Ethylbenzene	ND		ug/l	1.0	0.28	1
Chloromethane	ND		ug/l	5.0	1.0	1
Bromomethane	ND		ug/l	5.0	1.2	1
Vinyl chloride	ND		ug/l	1.0	0.38	1
Chloroethane	ND		ug/l	2.0	0.37	1
1,1-Dichloroethene	ND		ug/l	1.0	0.31	1
trans-1,2-Dichloroethene	ND		ug/l	1.5	0.33	1
Trichloroethene	0.34	J	ug/l	1.0	0.33	1



**Project Name:** BUFFALO BUSINESS PARK

**Project Number:** Y03.001.001

**Lab Number:** L2205487

**Report Date:** 02/09/22

**SAMPLE RESULTS**

**Lab ID:** L2205487-01

**Client ID:** BSA- 020222

**Sample Location:** Not Specified

**Date Collected:** 02/02/22 08:30

**Date Received:** 02/02/22

**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Organics by GC/MS - Westborough Lab</b>						
1,2-Dichlorobenzene	ND		ug/l	5.0	0.28	1
1,3-Dichlorobenzene	ND		ug/l	5.0	0.27	1
1,4-Dichlorobenzene	ND		ug/l	5.0	0.29	1
Acrolein	ND		ug/l	8.0	1.8	1
Acrylonitrile	ND		ug/l	10	0.33	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	83		60-140
Fluorobenzene	108		60-140
4-Bromofluorobenzene	92		60-140

**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Y03.001.001

**Lab Number:** L2205487  
**Report Date:** 02/09/22

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 128,624.1  
**Analytical Date:** 02/03/22 11:14  
**Analyst:** GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1601655-4					
Methylene chloride	ND		ug/l	1.0	0.56
1,1-Dichloroethane	ND		ug/l	1.5	0.40
Chloroform	ND		ug/l	1.0	0.38
Carbon tetrachloride	ND		ug/l	1.0	0.24
1,2-Dichloropropane	ND		ug/l	3.5	0.46
Dibromochloromethane	ND		ug/l	1.0	0.27
1,1,2-Trichloroethane	ND		ug/l	1.5	0.34
2-Chloroethylvinyl ether	ND		ug/l	10	0.35
Tetrachloroethene	ND		ug/l	1.0	0.26
Chlorobenzene	ND		ug/l	3.5	0.30
1,2-Dichloroethane	ND		ug/l	1.5	0.47
1,1,1-Trichloroethane	ND		ug/l	2.0	0.29
Bromodichloromethane	ND		ug/l	1.0	0.28
trans-1,3-Dichloropropene	ND		ug/l	1.5	0.31
cis-1,3-Dichloropropene	ND		ug/l	1.5	0.34
1,3-Dichloropropene, Total	ND		ug/l	1.5	0.31
Bromoform	ND		ug/l	1.0	0.22
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.20
Benzene	ND		ug/l	1.0	0.38
Toluene	ND		ug/l	1.0	0.31
Ethylbenzene	ND		ug/l	1.0	0.28
Chloromethane	ND		ug/l	5.0	1.0
Bromomethane	ND		ug/l	5.0	1.2
Vinyl chloride	ND		ug/l	1.0	0.38
Chloroethane	ND		ug/l	2.0	0.37
1,1-Dichloroethene	ND		ug/l	1.0	0.31
trans-1,2-Dichloroethene	ND		ug/l	1.5	0.33
Trichloroethene	ND		ug/l	1.0	0.33
1,2-Dichlorobenzene	ND		ug/l	5.0	0.28

**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Y03.001.001

**Lab Number:** L2205487  
**Report Date:** 02/09/22

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 128,624.1  
**Analytical Date:** 02/03/22 11:14  
**Analyst:** GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1601655-4					
1,3-Dichlorobenzene	ND		ug/l	5.0	0.27
1,4-Dichlorobenzene	ND		ug/l	5.0	0.29
Acrolein	ND		ug/l	8.0	1.8
Acrylonitrile	ND		ug/l	10	0.33

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	99		60-140
Fluorobenzene	116		60-140
4-Bromofluorobenzene	89		60-140

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Y03.001.001

**Lab Number:** L2205487  
**Report Date:** 02/09/22

Parameter	LCS		LCSD		%Recovery		RPD	
	%Recovery	Qual	%Recovery	Qual	Limits	Qual	RPD	Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1601655-3								
Methylene chloride	90		-		60-140	-	-	28
1,1-Dichloroethane	110		-		50-150	-	-	49
Chloroform	105		-		70-135	-	-	54
Carbon tetrachloride	100		-		70-130	-	-	41
1,2-Dichloropropane	110		-		35-165	-	-	55
Dibromochloromethane	80		-		70-135	-	-	50
1,1,2-Trichloroethane	90		-		70-130	-	-	45
2-Chloroethylvinyl ether	120		-		1-225	-	-	71
Tetrachloroethene	75		-		70-130	-	-	39
Chlorobenzene	80		-		65-135	-	-	53
1,2-Dichloroethane	115		-		70-130	-	-	49
1,1,1-Trichloroethane	105		-		70-130	-	-	36
Bromodichloromethane	90		-		65-135	-	-	56
trans-1,3-Dichloropropene	80		-		50-150	-	-	86
cis-1,3-Dichloropropene	90		-		25-175	-	-	58
Bromoform	80		-		70-130	-	-	42
1,1,2,2-Tetrachloroethane	100		-		60-140	-	-	61
Benzene	110		-		65-135	-	-	61
Toluene	85		-		70-130	-	-	41
Ethylbenzene	95		-		60-140	-	-	63
Chloromethane	120		-		1-205	-	-	60
Bromomethane	115		-		15-185	-	-	61
Vinyl chloride	110		-		5-195	-	-	66

# Lab Control Sample Analysis

Batch Quality Control

Project Name: BUFFALO BUSINESS PARK  
Project Number: Y03.001.001

Lab Number: L2205487  
Report Date: 02/09/22

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1601655-3								
Chloroethane	100		-		40-160	-		78
1,1-Dichloroethene	100		-		50-150	-		32
trans-1,2-Dichloroethene	100		-		70-130	-		45
Trichloroethene	90		-		65-135	-		48
1,2-Dichlorobenzene	75		-		65-135	-		57
1,3-Dichlorobenzene	75		-		70-130	-		43
1,4-Dichlorobenzene	85		-		65-135	-		57
Acrolein	145	Q	-		60-140	-		30
Acrylonitrile	128		-		60-140	-		60

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	96				60-140
Fluorobenzene	109				60-140
4-Bromofluorobenzene	87				60-140

## METALS



**Project Name:** BUFFALO BUSINESS PARK

**Project Number:** Y03.001.001

**Lab Number:** L2205487

**Report Date:** 02/09/22

**SAMPLE RESULTS**

**Lab ID:** L2205487-01

**Client ID:** BSA- 020222

**Sample Location:** Not Specified

**Date Collected:** 02/02/22 08:30

**Date Received:** 02/02/22

**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
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**Total Metals - Mansfield Lab**

Mercury, Total	ND		mg/l	0.00020	0.00009	1	02/03/22 17:26	02/07/22 10:08	EPA 245.1	3,245.1	AC
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**Project Name:** BUFFALO BUSINESS PARK

**Lab Number:** L2205487

**Project Number:** Y03.001.001

**Report Date:** 02/09/22

## Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1601217-1									
Mercury, Total	ND	mg/l	0.00020	0.00009	1	02/03/22 17:26	02/07/22 09:45	3,245.1	AC

### Prep Information

Digestion Method: EPA 245.1



## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** BUFFALO BUSINESS PARK

**Lab Number:** L2205487

**Project Number:** Y03.001.001

**Report Date:** 02/09/22

Parameter	LCS		LCSD		%Recovery		RPD		RPD Limits	
	%Recovery	Qual	%Recovery	Qual	%Recovery	Limits	RPD	Qual	RPD Limits	
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1601217-2										
Mercury, Total	88		-		85-115		-			

# **Matrix Spike Analysis** Batch Quality Control

**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Y03.001.001

**Lab Number:** L2205487  
**Report Date:** 02/09/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1601217-3 QC Sample: L2205269-01 Client ID: MS Sample									
Mercury, Total	ND	0.005	0.00446	89	-	-	70-130	-	20

## Lab Duplicate Analysis

*Batch Quality Control*

**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Y03.001.001

**Lab Number:** L2205487  
**Report Date:** 02/09/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01	QC Batch ID: WG1601217-4	QC Sample: L2205269-01		Client ID: DUP Sample		
Mercury, Total	ND	ND	mg/l	NC		20

# **INORGANICS & MISCELLANEOUS**

**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Y03.001.001

**Lab Number:** L2205487  
**Report Date:** 02/09/22

### SAMPLE RESULTS

**Lab ID:** L2205487-01  
**Client ID:** BSA- 020222  
**Sample Location:** Not Specified

**Date Collected:** 02/02/22 08:30  
**Date Received:** 02/02/22  
**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										
pH (H)	6.9		SU	-	NA	1	-	02/03/22 18:09	121,4500H+-B	AS



# Lab Control Sample Analysis

Batch Quality Control

Project Name: BUFFALO BUSINESS PARK

Project Number: Y03.001.001

Lab Number: L2205487

Report Date: 02/09/22

Parameter	LCS		LCSD		%Recovery		RPD		RPD Limits	
	%Recovery	Qual	%Recovery	Qual	%Recovery	Limits	RPD	Qual	RPD Limits	
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1601255-1										
pH	100		-		99-101		-			5



## Lab Duplicate Analysis

*Batch Quality Control*

**Project Name:** BUFFALO BUSINESS PARK

**Project Number:** Y03.001.001

**Lab Number:** L2205487

**Report Date:** 02/09/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s):	01	QC Batch ID: WG1601255-2	QC Sample: L2205389-01	Client ID: DUP Sample		
pH	7.7	7.6	SU	1		5

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

CoolerA

Custody SealAbsent

Container Information		Initial			Final		Temp		Frozen		Analysis(*)
Container ID	Container Type	Cooler	pH	pH	deg C	Pres	Seal	Date/Time			
L2205487-01A	Vial Na2S2O3 preserved	A	NA		2.2	Y	Absent				624.1(3)
L2205487-01B	Vial Na2S2O3 preserved	A	NA		2.2	Y	Absent				624.1(3)
L2205487-01C	Vial Na2S2O3 preserved	A	NA		2.2	Y	Absent				624.1(3)
L2205487-01D	Plastic 120ml unpreserved	A	7	7	2.2	Y	Absent				PH-4500(.01)
L2205487-01E	Plastic 250ml HNO3 preserved	A	<2	<2	2.2	Y	Absent				HG-U(28)
L2205487-02A	Vial Na2S2O3 preserved	A	NA	NA	2.2	Y	Absent				ARCHIVE()
L2205487-02B	Vial Na2S2O3 preserved	A	NA	NA	2.2	Y	Absent				ARCHIVE()

## 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:** BUFFALO BUSINESS PARK

**Lab Number:** L2205487

**Project Number:** Y03.001.001

**Report Date:** 02/09/22

### 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:** BUFFALO BUSINESS PARK

**Lab Number:** L2205487

**Project Number:** Y03.001.001

**Report Date:** 02/09/22

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

*Report Format: DU Report with 'J' Qualifiers*



**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Y03.001.001

**Lab Number:** L2205487  
**Report Date:** 02/09/22

### REFERENCES

- 3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 128 Method 624.1: Purgeables by GC/MS, EPA 821-R-16-008, December 2016.

### 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, NO<sub>2</sub>, NO<sub>3</sub>.

### 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, SM4500CI-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.





**APPENDIX B**  
**PHOTOGRAPH OF SYSTEM TOTALIZER**





**C&S Companies**  
141 Elm Street  
Suite 100  
Buffalo, NY 14203  
p: (716) 847-1630  
f: (716) 847-1454  
www.cscos.com

September 1, 2022

Traserra Adams, J.D.  
Legal Investigator  
Industrial Waste Section  
Buffalo Sewer Authority  
Foot of Ferry Street  
90 West Ferry  
Buffalo, New York 14213-1799

**Re: Buffalo Business Park Semi-Annual Self-Monitoring Report  
August 9, 2022**

Dear Ms. Adams:

Pursuant to guidelines described in the Buffalo Sewer Authority Permit #22-01-BU124, Buffalo Business Park (BBP) is providing this semi-annual self-monitoring report which provides the analytical results of a post treatment system water (effluent) sample that was collected on August 9, 2022. In addition, a reading from the system totalizer is also provided.

**TREATMENT SYSTEM CARBON CHANGE OUT**

The carbon in the 500-gallon treatment canister was not replaced during this reporting period.

**ANALYTICAL RESULTS**

A post treatment water sample was collected on the morning of February 2, 2022 for laboratory analysis. The sample was subsequently hand delivered to Alpha Analytical for analysis as follows:

- USEPA Method 4500 for pH;
- USEPA Method 245.1 for mercury; and
- USEPA 624.1 for volatile organic compounds.

The pH of the sample was analyzed at 7.2.

Mercury was not detected (ND) in the water sample that was analyzed.

There were no volatile organic compounds (VOCs) detected in the water sample collected from the treatment system above the detection limit except for tetrachloroethene detected at 0.00044 mg/L, trans-1,2-dichloroethene detected at 0.0022 mg/L, and trichloroethene detected at 0.00034 mg/L. **Table 1** provides a summary of key compounds historically detected in groundwater at the site. The laboratory analytical data package is attached as **Appendix A**.

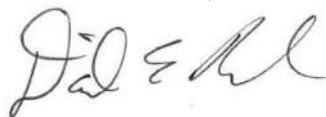
### **VOLUMETRIC INFORMATION**

The totalizer coming into the onsite treatment system was read on August 9, 2022 to provide volumetric information. The volume of groundwater treated since the start of treatment operations was 1,342,900 gallons. The totalizer reading for the last reporting period (February 2022) was 1,096,600 gallons. Therefore, a total of 246,300 gallons of groundwater were treated and discharged to the BSA during this reporting period. A photo of the totalizer reading is provided as **Appendix B**.

Should you have any questions regarding this letter or require additional information, please feel free to contact the undersigned.

Sincerely,

**C&S ENGINEERS, INC.**



Daniel E. Riker, P.G.  
Department Manager



Cody A. Martin  
Project Environmental Scientist

f:\project\y05 - buffalo business park\y05001002 - smp support\planning-study\reports\march self-monitoring report\self-monitoring report.docx

# CERTIFICATION

**CERTIFICATION STATEMENT**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Official: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

# TABLES

TABLE 1

**BUFFALO BUSINESS PARK  
TREATMENT SYSTEM RESULTS COMPARED TO BSA CRITERIA  
SEPTEMBER 2022**



Parameter	BSA Discharge Limit	Post-Treatment Sample Aug. 2022
<b>VOCs - mg/l</b>		
Tetrachloroethene	0.267	0.00044 J
trans-1,2-Dichloroethene	0.285	0.0022
Trichloroethene	0.712	0.00170
<b>Metals - mg/l</b>		
Mercury	0.0008	ND
<b>General Chemistry - SU</b>		
pH	5.0 12.0	7.2

ND indicates analyte was not detected.

Blank space indicates analyte was not analyzed for in that sample.

\*+ - LCS and/or LCSD is outside acceptance limits, high biased.

^+ - Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.

B - Compound was found in the blank and sample.

F1 - MS and/or MSD recovery exceeds control limits.

F2 - MS/MSD RPD exceeds control limits

H - Sample was prepped or analyzed beyond the specified holding time

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

vs - Reported analyte concentrations are below 200 ug/kg and may be biased low due to the sample not being collected according to 5035A-L low-level specifications.



# **APPENDIX A**

## **LABORATORY ANALYTICAL PACKAGE**



## ANALYTICAL REPORT

Lab Number:	L2242655
Client:	C&S Companies 141 Elm Street, Suite 100 Buffalo, NY 14203
ATTN:	Cody Martin
Phone:	(716) 847-1630
Project Name:	BUFFALO BUSINESS PARK
Project Number:	Y05.001.001
Report Date:	08/23/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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](http://www.alphalab.com)



**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Y05.001.001

**Lab Number:** L2242655  
**Report Date:** 08/23/22

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2242655-01	BSA-080922	WATER	Not Specified	08/09/22 09:30	08/09/22
L2242655-02	TRIP BLANK	WATER	Not Specified	08/09/22 00:00	08/09/22

**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Y05.001.001

**Lab Number:** L2242655  
**Report Date:** 08/23/22

### 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:** BUFFALO BUSINESS PARK  
**Project Number:** Y05.001.001

**Lab Number:** L2242655  
**Report Date:** 08/23/22

**Case Narrative (continued)**

Report Submission

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

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

Authorized Signature:

*Tiffani Morrissey* - Tiffani Morrissey

Title: Technical Director/Representative

Date: 08/23/22

# ORGANICS

# **VOLATILES**

**Project Name:** BUFFALO BUSINESS PARK**Lab Number:** L2242655**Project Number:** Y05.001.001**Report Date:** 08/23/22**SAMPLE RESULTS**

Lab ID: L2242655-01

Date Collected: 08/09/22 09:30

Client ID: BSA-080922

Date Received: 08/09/22

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 128,624.1

Analytical Date: 08/11/22 00:33

Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	1.0	0.56	1
1,1-Dichloroethane	ND		ug/l	1.5	0.40	1
Chloroform	ND		ug/l	1.0	0.38	1
Carbon tetrachloride	ND		ug/l	1.0	0.24	1
1,2-Dichloropropane	ND		ug/l	3.5	0.46	1
Dibromochloromethane	ND		ug/l	1.0	0.27	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.34	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.35	1
Tetrachloroethene	0.44	J	ug/l	1.0	0.26	1
Chlorobenzene	ND		ug/l	3.5	0.30	1
1,2-Dichloroethane	ND		ug/l	1.5	0.47	1
1,1,1-Trichloroethane	ND		ug/l	2.0	0.29	1
Bromodichloromethane	ND		ug/l	1.0	0.28	1
trans-1,3-Dichloropropene	ND		ug/l	1.5	0.31	1
cis-1,3-Dichloropropene	ND		ug/l	1.5	0.34	1
1,3-Dichloropropene, Total	ND		ug/l	1.5	0.31	1
Bromoform	ND		ug/l	1.0	0.22	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.20	1
Benzene	ND		ug/l	1.0	0.38	1
Toluene	ND		ug/l	1.0	0.31	1
Ethylbenzene	ND		ug/l	1.0	0.28	1
Chloromethane	ND		ug/l	5.0	1.0	1
Bromomethane	ND		ug/l	5.0	1.2	1
Vinyl chloride	ND		ug/l	1.0	0.38	1
Chloroethane	ND		ug/l	2.0	0.37	1
1,1-Dichloroethene	ND		ug/l	1.0	0.31	1
trans-1,2-Dichloroethene	2.2		ug/l	1.5	0.33	1
Trichloroethene	1.7		ug/l	1.0	0.33	1



**Project Name:** BUFFALO BUSINESS PARK**Lab Number:** L2242655**Project Number:** Y05.001.001**Report Date:** 08/23/22**SAMPLE RESULTS**

Lab ID: L2242655-01

Date Collected: 08/09/22 09:30

Client ID: BSA-080922

Date Received: 08/09/22

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichlorobenzene	ND		ug/l	5.0	0.28	1
1,3-Dichlorobenzene	ND		ug/l	5.0	0.27	1
1,4-Dichlorobenzene	ND		ug/l	5.0	0.29	1
Acrolein	ND		ug/l	8.0	1.8	1
Acrylonitrile	ND		ug/l	10	0.33	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	101		60-140
Fluorobenzene	96		60-140
4-Bromofluorobenzene	98		60-140

**Project Name:** BUFFALO BUSINESS PARK**Lab Number:** L2242655**Project Number:** Y05.001.001**Report Date:** 08/23/22**SAMPLE RESULTS**

Lab ID: L2242655-02

Date Collected: 08/09/22 00:00

Client ID: TRIP BLANK

Date Received: 08/09/22

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 128,624.1

Analytical Date: 08/10/22 05:25

Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	1.0	0.56	1
1,1-Dichloroethane	ND		ug/l	1.5	0.40	1
Chloroform	ND		ug/l	1.0	0.38	1
Carbon tetrachloride	ND		ug/l	1.0	0.24	1
1,2-Dichloropropane	ND		ug/l	3.5	0.46	1
Dibromochloromethane	ND		ug/l	1.0	0.27	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.34	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.35	1
Tetrachloroethene	ND		ug/l	1.0	0.26	1
Chlorobenzene	ND		ug/l	3.5	0.30	1
1,2-Dichloroethane	ND		ug/l	1.5	0.47	1
1,1,1-Trichloroethane	ND		ug/l	2.0	0.29	1
Bromodichloromethane	ND		ug/l	1.0	0.28	1
trans-1,3-Dichloropropene	ND		ug/l	1.5	0.31	1
cis-1,3-Dichloropropene	ND		ug/l	1.5	0.34	1
1,3-Dichloropropene, Total	ND		ug/l	1.5	0.31	1
Bromoform	ND		ug/l	1.0	0.22	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.20	1
Benzene	ND		ug/l	1.0	0.38	1
Toluene	ND		ug/l	1.0	0.31	1
Ethylbenzene	ND		ug/l	1.0	0.28	1
Chloromethane	ND		ug/l	5.0	1.0	1
Bromomethane	ND		ug/l	5.0	1.2	1
Vinyl chloride	ND		ug/l	1.0	0.38	1
Chloroethane	ND		ug/l	2.0	0.37	1
1,1-Dichloroethene	ND		ug/l	1.0	0.31	1
trans-1,2-Dichloroethene	ND		ug/l	1.5	0.33	1
Trichloroethene	ND		ug/l	1.0	0.33	1

**Project Name:** BUFFALO BUSINESS PARK**Lab Number:** L2242655**Project Number:** Y05.001.001**Report Date:** 08/23/22**SAMPLE RESULTS****Lab ID:** L2242655-02**Date Collected:** 08/09/22 00:00**Client ID:** TRIP BLANK**Date Received:** 08/09/22**Sample Location:** Not Specified**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichlorobenzene	ND		ug/l	5.0	0.28	1
1,3-Dichlorobenzene	ND		ug/l	5.0	0.27	1
1,4-Dichlorobenzene	ND		ug/l	5.0	0.29	1
Acrolein	ND		ug/l	8.0	1.8	1
Acrylonitrile	ND		ug/l	10	0.33	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	108		60-140
Fluorobenzene	90		60-140
4-Bromofluorobenzene	100		60-140

Project Name: BUFFALO BUSINESS PARK

Lab Number: L2242655

Project Number: Y05.001.001

Report Date: 08/23/22

### Method Blank Analysis Batch Quality Control

Analytical Method: 128,624.1  
 Analytical Date: 08/10/22 04:54  
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1673822-4					
Methylene chloride	ND		ug/l	1.0	0.56
1,1-Dichloroethane	ND		ug/l	1.5	0.40
Chloroform	ND		ug/l	1.0	0.38
Carbon tetrachloride	ND		ug/l	1.0	0.24
1,2-Dichloropropane	ND		ug/l	3.5	0.46
Dibromochloromethane	ND		ug/l	1.0	0.27
1,1,2-Trichloroethane	ND		ug/l	1.5	0.34
2-Chloroethylvinyl ether	ND		ug/l	10	0.35
Tetrachloroethene	ND		ug/l	1.0	0.26
Chlorobenzene	ND		ug/l	3.5	0.30
1,2-Dichloroethane	ND		ug/l	1.5	0.47
1,1,1-Trichloroethane	ND		ug/l	2.0	0.29
Bromodichloromethane	ND		ug/l	1.0	0.28
trans-1,3-Dichloropropene	ND		ug/l	1.5	0.31
cis-1,3-Dichloropropene	ND		ug/l	1.5	0.34
1,3-Dichloropropene, Total	ND		ug/l	1.5	0.31
Bromoform	ND		ug/l	1.0	0.22
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.20
Benzene	ND		ug/l	1.0	0.38
Toluene	ND		ug/l	1.0	0.31
Ethylbenzene	ND		ug/l	1.0	0.28
Chloromethane	ND		ug/l	5.0	1.0
Bromomethane	ND		ug/l	5.0	1.2
Vinyl chloride	ND		ug/l	1.0	0.38
Chloroethane	ND		ug/l	2.0	0.37
1,1-Dichloroethene	ND		ug/l	1.0	0.31
trans-1,2-Dichloroethene	ND		ug/l	1.5	0.33
Trichloroethene	ND		ug/l	1.0	0.33
1,2-Dichlorobenzene	ND		ug/l	5.0	0.28

**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Y05.001.001

**Lab Number:** L2242655  
**Report Date:** 08/23/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 128,624.1  
 Analytical Date: 08/10/22 04:54  
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1673822-4					
1,3-Dichlorobenzene	ND		ug/l	5.0	0.27
1,4-Dichlorobenzene	ND		ug/l	5.0	0.29
Acrolein	ND		ug/l	8.0	1.8
Acrylonitrile	ND		ug/l	10	0.33

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	107		60-140
Fluorobenzene	94		60-140
4-Bromofluorobenzene	98		60-140

Project Name: BUFFALO BUSINESS PARK

Lab Number: L2242655

Project Number: Y05.001.001

Report Date: 08/23/22

### Method Blank Analysis Batch Quality Control

Analytical Method: 128,624.1  
 Analytical Date: 08/10/22 17:11  
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1674146-4					
Methylene chloride	ND		ug/l	1.0	0.56
1,1-Dichloroethane	ND		ug/l	1.5	0.40
Chloroform	ND		ug/l	1.0	0.38
Carbon tetrachloride	ND		ug/l	1.0	0.24
1,2-Dichloropropane	ND		ug/l	3.5	0.46
Dibromochloromethane	ND		ug/l	1.0	0.27
1,1,2-Trichloroethane	ND		ug/l	1.5	0.34
2-Chloroethylvinyl ether	ND		ug/l	10	0.35
Tetrachloroethene	ND		ug/l	1.0	0.26
Chlorobenzene	ND		ug/l	3.5	0.30
1,2-Dichloroethane	ND		ug/l	1.5	0.47
1,1,1-Trichloroethane	ND		ug/l	2.0	0.29
Bromodichloromethane	ND		ug/l	1.0	0.28
trans-1,3-Dichloropropene	ND		ug/l	1.5	0.31
cis-1,3-Dichloropropene	ND		ug/l	1.5	0.34
1,3-Dichloropropene, Total	ND		ug/l	1.5	0.31
Bromoform	ND		ug/l	1.0	0.22
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.20
Benzene	ND		ug/l	1.0	0.38
Toluene	ND		ug/l	1.0	0.31
Ethylbenzene	ND		ug/l	1.0	0.28
Chloromethane	ND		ug/l	5.0	1.0
Bromomethane	ND		ug/l	5.0	1.2
Vinyl chloride	ND		ug/l	1.0	0.38
Chloroethane	ND		ug/l	2.0	0.37
1,1-Dichloroethene	ND		ug/l	1.0	0.31
trans-1,2-Dichloroethene	ND		ug/l	1.5	0.33
Trichloroethene	ND		ug/l	1.0	0.33
1,2-Dichlorobenzene	ND		ug/l	5.0	0.28

**Project Name:** BUFFALO BUSINESS PARK  
**Project Number:** Y05.001.001

**Lab Number:** L2242655  
**Report Date:** 08/23/22

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 128,624.1  
 Analytical Date: 08/10/22 17:11  
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1674146-4					
1,3-Dichlorobenzene	ND		ug/l	5.0	0.27
1,4-Dichlorobenzene	ND		ug/l	5.0	0.29
Acrolein	ND		ug/l	8.0	1.8
Acrylonitrile	ND		ug/l	10	0.33

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	102		60-140
Fluorobenzene	99		60-140
4-Bromofluorobenzene	99		60-140

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** BUFFALO BUSINESS PARK

**Project Number:** Y05.001.001

**Lab Number:** L2242655

**Report Date:** 08/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1673822-3								
Methylene chloride	95		-		60-140	-		28
1,1-Dichloroethane	90		-		50-150	-		49
Chloroform	90		-		70-135	-		54
Carbon tetrachloride	100		-		70-130	-		41
1,2-Dichloropropane	85		-		35-165	-		55
Dibromochloromethane	110		-		70-135	-		50
1,1,2-Trichloroethane	105		-		70-130	-		45
2-Chloroethylvinyl ether	115		-		1-225	-		71
Tetrachloroethene	130		-		70-130	-		39
Chlorobenzene	110		-		65-135	-		53
1,2-Dichloroethane	85		-		70-130	-		49
1,1,1-Trichloroethane	95		-		70-130	-		36
Bromodichloromethane	115		-		65-135	-		56
trans-1,3-Dichloropropene	120		-		50-150	-		86
cis-1,3-Dichloropropene	125		-		25-175	-		58
Bromoform	100		-		70-130	-		42
1,1,2,2-Tetrachloroethane	95		-		60-140	-		61
Benzene	85		-		65-135	-		61
Toluene	125		-		70-130	-		41
Ethylbenzene	115		-		60-140	-		63
Chloromethane	110		-		1-205	-		60
Bromomethane	65		-		15-185	-		61
Vinyl chloride	110		-		5-195	-		66



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** BUFFALO BUSINESS PARK

**Project Number:** Y05.001.001

**Lab Number:** L2242655

**Report Date:** 08/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1673822-3								
Chloroethane	100		-		40-160	-		78
1,1-Dichloroethene	105		-		50-150	-		32
trans-1,2-Dichloroethene	90		-		70-130	-		45
Trichloroethene	90		-		65-135	-		48
1,2-Dichlorobenzene	110		-		65-135	-		57
1,3-Dichlorobenzene	110		-		70-130	-		43
1,4-Dichlorobenzene	110		-		65-135	-		57
Acrolein	82		-		60-140	-		30
Acrylonitrile	78		-		60-140	-		60

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	102				60-140
Fluorobenzene	81				60-140
4-Bromofluorobenzene	93				60-140

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** BUFFALO BUSINESS PARK

**Project Number:** Y05.001.001

**Lab Number:** L2242655

**Report Date:** 08/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1674146-3								
Methylene chloride	95		-		60-140	-		28
1,1-Dichloroethane	100		-		50-150	-		49
Chloroform	100		-		70-135	-		54
Carbon tetrachloride	100		-		70-130	-		41
1,2-Dichloropropane	100		-		35-165	-		55
Dibromochloromethane	95		-		70-135	-		50
1,1,2-Trichloroethane	100		-		70-130	-		45
2-Chloroethylvinyl ether	105		-		1-225	-		71
Tetrachloroethene	105		-		70-130	-		39
Chlorobenzene	105		-		65-135	-		53
1,2-Dichloroethane	100		-		70-130	-		49
1,1,1-Trichloroethane	100		-		70-130	-		36
Bromodichloromethane	100		-		65-135	-		56
trans-1,3-Dichloropropene	95		-		50-150	-		86
cis-1,3-Dichloropropene	105		-		25-175	-		58
Bromoform	90		-		70-130	-		42
1,1,2,2-Tetrachloroethane	90		-		60-140	-		61
Benzene	100		-		65-135	-		61
Toluene	110		-		70-130	-		41
Ethylbenzene	110		-		60-140	-		63
Chloromethane	110		-		1-205	-		60
Bromomethane	85		-		15-185	-		61
Vinyl chloride	110		-		5-195	-		66

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** BUFFALO BUSINESS PARK

**Project Number:** Y05.001.001

**Lab Number:** L2242655

**Report Date:** 08/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1674146-3								
Chloroethane	110		-		40-160	-		78
1,1-Dichloroethene	105		-		50-150	-		32
trans-1,2-Dichloroethene	100		-		70-130	-		45
Trichloroethene	100		-		65-135	-		48
1,2-Dichlorobenzene	100		-		65-135	-		57
1,3-Dichlorobenzene	100		-		70-130	-		43
1,4-Dichlorobenzene	100		-		65-135	-		57
Acrolein	78		-		60-140	-		30
Acrylonitrile	85		-		60-140	-		60

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	103				60-140
Fluorobenzene	96				60-140
4-Bromofluorobenzene	101				60-140

## **METALS**

**Project Name:** BUFFALO BUSINESS PARK**Lab Number:** L2242655**Project Number:** Y05.001.001**Report Date:** 08/23/22**SAMPLE RESULTS**

Lab ID: L2242655-01

Date Collected: 08/09/22 09:30

Client ID: BSA-080922

Date Received: 08/09/22

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Mercury, Total	ND		mg/l	0.00020	0.00009	1	08/11/22 12:02	08/11/22 21:58	EPA 245.1	3,245.1	DMB



Project Name: BUFFALO BUSINESS PARK

Lab Number: L2242655

Project Number: Y05.001.001

Report Date: 08/23/22

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1673632-1										
Mercury, Total	0.00017	J	mg/l	0.00020	0.00009	1	08/11/22 12:02	08/11/22 21:22	3,245.1	DMB

### Prep Information

Digestion Method: EPA 245.1



**Lab Control Sample Analysis****Batch Quality Control****Project Name:** BUFFALO BUSINESS PARK**Project Number:** Y05.001.001**Lab Number:** L2242655**Report Date:** 08/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1673632-2								
Mercury, Total	115		-		85-115	-		

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** BUFFALO BUSINESS PARK

**Lab Number:** L2242655

**Project Number:** Y05.001.001

**Report Date:** 08/23/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1673632-3 QC Sample: L2242858-01 Client ID: MS Sample												
Mercury, Total	0.00015J	0.005	0.00514	103		-	-		70-130	-		20



**Lab Duplicate Analysis**  
*Batch Quality Control***Project Name:** BUFFALO BUSINESS PARK**Project Number:** Y05.001.001**Lab Number:** L2242655**Report Date:** 08/23/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1673632-4 QC Sample: L2242858-01 Client ID: DUP Sample						
Mercury, Total	0.00015J	0.00009J	mg/l	NC		20

# **INORGANICS & MISCELLANEOUS**

**Project Name:** BUFFALO BUSINESS PARK**Project Number:** Y05.001.001**Lab Number:** L2242655**Report Date:** 08/23/22**SAMPLE RESULTS****Lab ID:** L2242655-01**Client ID:** BSA-080922**Sample Location:** Not Specified**Date Collected:** 08/09/22 09:30**Date Received:** 08/09/22**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										
pH (H)	7.2		SU	-	NA	1	-	08/10/22 12:29	121,4500H+-B	KS



**Lab Control Sample Analysis****Batch Quality Control****Project Name:** BUFFALO BUSINESS PARK**Project Number:** Y05.001.001**Lab Number:** L2242655**Report Date:** 08/23/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1673458-1								
pH	100		-		99-101	-		5

**Lab Duplicate Analysis**  
*Batch Quality Control***Project Name:** BUFFALO BUSINESS PARK**Project Number:** Y05.001.001**Lab Number:** L2242655**Report Date:** 08/23/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1673458-2 QC Sample: L2242655-01 Client ID: BSA-080922						
pH (H)	7.2	7.2	SU	0		5

**Project Name:** BUFFALO BUSINESS PARK**Lab Number:** L2242655**Project Number:** Y05.001.001**Report Date:** 08/23/22**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information****Cooler**                      **Custody Seal**

A                                  Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2242655-01A	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1(3)
L2242655-01B	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1(3)
L2242655-01C	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1(3)
L2242655-01D	Plastic 120ml unpreserved	A	7	7	3.8	Y	Absent		PH-4500(.01)
L2242655-01E	Plastic 250ml HNO3 preserved	A	<2	<2	3.8	Y	Absent		HG-U(28)
L2242655-02A	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1(3)
L2242655-02B	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1(3)

**Project Name:** BUFFALO BUSINESS PARK**Lab Number:** L2242655**Project Number:** Y05.001.001**Report Date:** 08/23/22

## 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.

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### Footnotes

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

### Terms

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

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

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

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

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

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

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

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

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

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**Data Qualifiers**

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.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

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### REFERENCES

- 3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 128 Method 624.1: Purgeables by GC/MS, EPA 821-R-16-008, December 2016.

### 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.



**Alpha Analytical, Inc.**Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

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**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, NO<sub>2</sub>, NO<sub>3</sub>.**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, SM4500CI-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.

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# **APPENDIX B**

## **PHOTOGRAPH OF SYSTEM TOTALIZER**

**\*PULSAFEEDER**

X100

U.S. GALLONS

1 3 4 2 5



Multi Jet  
Model FPM



NSF  
Certified to Standard  
D-158



122°F

X0.01

