MAY 2021

GROUNDWATER MONITORING REPORT

FOR
FORMER MOBIL SERVICE STATION 99-MST - 979 MAIN STREET (1001 MAIN STREET) BCP SITE NO. C915260 CITY OF BUFFALO, ERIE COUNTY, NEW YORK

Prepared by:

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ACRONYM LIST

C&S	C&S Engineers, Inc.
NYSDEC	New York State Department of Environmental Conservation
LUST	Leaking Underground Storage Tank
BCP	Brownfield Cleanup Program
SPH	Separate Phase Hydrocarbons
RI/IRM	Remedial Investigation / Interim Remedial Measures
BTEX	Benzene, Toluene, Ethylbenzene and Toluene
LNAPL	Light Non Aqueous Phase Liquid
VOC	Volatile Organic Compounds
SCO	Soil Cleanup Objectives
PID	Photo-Ionization Detector

1. INTRODUCTION

C&S Engineers, Inc. (C&S) has prepared this Groundwater Monitoring Report for the former Mobil Service Station 99-MST - 979 Main Street (1001 Main Street) (hereinafter referred to as the Site) located at 1001 Main Street in Buffalo, New York.

The Site was remediated in accordance with Brownfield Cleanup Agreement (BCA) Index #C915260-03-12, Site #C915260, which was executed on June 15, 2012 and last amended on August 7, 2012. A figure showing the Site location and boundaries is provided in **Figure 1** and **Figure 2**.

Remedial activities consisted of installing steel shoring around the property and removing contaminated soil and groundwater to 26 – 40 feet below ground surface. After completion of the remedial work, some contamination remained in the subsurface at this Site. A Site Management Plan (SMP) was prepared on November 28, 2014 to manage remaining groundwater contamination at the Site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36.

Petroleum contaminated groundwater is present within a discontinuous layer of coarse sand and gravel located between 32 and 35 feet below ground surface. This layer generally ranges from 6 inches to three feet thick, provides a preferential pathway for groundwater flow, and is confined within dense silt and fine sand present above and below the groundwater bearing zone.

During the remedial efforts, seven groundwater monitoring wells were installed prior to the installation of the two floors of underground parking. These monitoring wells were used to monitor the effectiveness of in-situ chemical injections.

SUBSURFACE CONDITIONS

1.1. Geology

Geologic information is based on observations made during site excavations for the Site remedial efforts, as well as numerous previous studies such as the *Supplemental Subsurface Investigation and Quarterly Groundwater Monitoring Report*, (December 9, 2008, Groundwater & Environmental Service, Inc.) and the *Geotechnical Engineering Report, 1001 Main Street Medical Office Building, Buffalo New York*; (November 2010; McMahon and Mann Consulting Engineers).

The Site contained urban fill of varying depths. Fill depths ranged from 3 feet of parking lot subgrade and mixed stone to more urban fill ranging from 6 -12 feet of bricks concrete and miscellaneous building rubble, which at times was contained within old building basements.

Underlying the fill were native deposits of fine dense sand with silt with discrete clay lenses. Within this formation is a discrete, discontinuous water bearing zone comprised of coarse sand and fine to medium gravel. This zone is generally found between 32 and 35 feet bgs and ranging in thickness between 6-inches to several feet (GES, 2008).

Below this zone is the dry to moist fine sand and silt formation extends to nearly 70 feet bgs. Below this massive sand and silt formation is a coarse sand and gravel layer that grades to a sand, gravel; and clay till formation. Underlying the overburden is a grey cherty limestone formation at approximately 90 feet bgs (M&M, 2010).

1.2. Hydrogeology

The principal groundwater bearing zone beneath the Site is located within the coarse sand and gravel layer that is generally present between 32 and 35 feet bgs. This layer is of variable thickness (generally six inches to three feet) but is horizontally discontinuous. The layer is located within the central and northeastern portions of the Site, but does not extend completely to the southern, northwestern or southeastern areas of the Site (GES, 2008) and is confined by the dense fine sands and silt above and below the groundwater bearing zone.

Groundwater beneath the Site flows from the west to the northeast, following the depositional area of the confined groundwater bearing zone.

1.3. Contaminant Transport

Petroleum from leaking underground storage tanks (LUSTs) formerly located at a Mobil Service Station at the corner of Main and High Streets spilled petroleum products into the subsurface soils and groundwater for over 30 years. The main release area is located in the approximate area of the former LUSTs where contaminated soils were observed from 10 feet below ground surface (BGS) to approximately 20 feet BGS grade.

From the main release area, historic migration of petroleum product entered into a semi-confined coarse sand and gravel lens observed approximately 32 to 35 feet BGS. The water table is present within this semi-confined coarse sand and gravel lens. This lens varies in thickness (1/2 to 3 feet) and extends to the northeast, confined laterally to the east and west. Petroleum product within this lens generally moved horizontally across the Site with groundwater flow.

Because of low carbon in the fine sand silt and gravel formations, breakdown of benzene, toluene, ethylbenzene and xylene (BTEX) compounds was slow. Dissolved BTEX, once entering the groundwater bearing zone was transported via localized, preferential groundwater flow to the northeast corner of the Site (following the location of the sand/gravel lens).

2. ISCO TREATMENT

The remedial method selected for the Site was in-situ chemical oxidation (ISCO) using RegenOX manufactured by Regenesis. RegenOX is sodium percarbonate formulated to degrade petroleum hydrocarbons through direct oxidation and through the generation of free radical compounds which will also oxidize contaminants. RegenOx produces minimal heat and pressure and is non-corrosive, making it a relatively safe chemical oxidant that is compatible for use in direct contact with underground infrastructure such as utilities, tanks, piping, and communication lines. This was an important characteristic when selecting the ISCO product due to the close proximity of the monitoring wells to the earth retention sheeting for the Conventus Building.

The amount of RegenOX used was calculated based on Conventus Site specific data and professional experience of C&S and Regenesis. RegenOX was mixed with tap water in 55 gallon drums at a concentration of 100 pounds of RegenOX with 110 gallons of water for each location.

In-situ treatment consisted of gravity-feeding a chemical oxidizer mixed with water directly into monitoring wells, BCP-MW-3, BCP-MW-4, BCP-MW-5, and BCP-MW-6,. Groundwater samples were collected approximately three months after treatment. The first ISCO treatment was conducted on December 12, 2013.

Evaluation of the gravity fed treatments determined this method was not effective at reducing groundwater contaminants. A work plan for increasing the amount of treatment solution using pressure injections was developed. Borings were advanced in the lower floor of underground parking to apply in-situ treatments under pressure directly into the contaminated sand and gravel lens. The sections below describe the methods used to conduct two in-situ treatment events on January 5 to January 8 of 2021.

The ISCO solution was directly injected into the soil in 12 borings in the sub-basement. Three borings were advanced adjacent to each monitoring wells listed below:

- BCP-MW-3
- BCP-MW-5
- BCP-MW-4
- BCP-MW-6

Each injection boring had to be carefully located to avoid hitting utilities located underneath the floor, with the intent of being within 10 to 15 feet of each monitoring well. Each injection boring was advanced into the coarse sand and gravel layer, approximately 15 feet below the concrete floor.

The ISCO solution was pumped from the mixing station to a truck mounted geo-probe and into the subsurface. The mix of RegenOX and water was injected under pressure in each boring, and the 12 injection borings received approximately 100 pounds of RegenOx. Additionally, 100 pounds of ISCO material was gravity fed directly into each monitoring well. A total of 1,600 pounds of RegenOx was used for each treatment event. For two treatments, a total of 3,200 pounds of RegenOX was used. These large treatment events resulted in mixed results; some locations showed an increase in contaminant concentrations, likely due to additional petroleum desorption, other locations indicated a significant decrease of petroleum contaminants.

The current ISCO treatment method is smaller pressurized injections around each target location on a quarterly schedule. A total of six temporary PVC injection points were installed around BCP-MW-6 and BCP-MW-5. Each quarterly treatment injects a total of 800 pounds (130 pounds per injection point) of chemical oxidant. Groundwater monitoring is conducted biannually.

For this reporting period, the last in-situ treatment was completed on January 5 to January 8 of 2021.

GROUNDWATER MONITORING

2.1. Groundwater Sampling Events

Previously, groundwater samples were collected from the wells on following dates:

- September 20, 2013
- March 19, 2014
- May 22, 2014
- March 11, 2015
- June 17, 2015
- August 3, 2015
- October 7, 2015
- December 14, 2015
- January 27, 2016
- March 22, 2016
- June 3, 2016
- October 25, 2016
- December 8, 2016
- January 20, 2017
- May 17, 2017
- July 5, 2017
- November 2, 2017
- August 18, 2018
- November 30, 2018
- July 30, 2019
- December 4, 2019
- March 31, 2020
- November 25, 2020

For this reporting period, the groundwater sampling was completed on May 14, 2021.

2.2. Groundwater Sampling Methods

Before purging the wells, water levels were measured using an electric water level sounder capable of measuring to the 0.01-foot accuracy. Peristaltic or bladder pumps using manufacturer-specified tubing was used for purging and sampling groundwater. Calibration, purging and sampling procedures was performed as specified by the USEPA[1] for low-flow sampling. Decontamination was conducted after each well is sampled to reduce the likelihood of cross contamination. Groundwater sampling equipment including the in-well pump, flow cell and water level meter was cleaned with Alconox, a phosphate free cleaner.

[1] U.S. EPA Region 1 Low Stress (low-flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, January 19, 2010.

Samples were collected for VOCs in three 40 ml glass vials. Groundwater filled each vial until it formed a meniscus and no air bubbles were inside the vial. The cap was placed on the vial and turned over to check if any air bubbles were in the sample. Groundwater samples were kept at 4°C until the laboratory took custody of the samples.

2.3. Groundwater Levels

Groundwater levels were measured from the top of the monitoring well casing an electric water level sounder capable of measuring to the 0.01-foot accuracy. Lidar data, downloaded from the New York State GIS Clearinghouse, was used to obtain ground elevations for each monitoring well. The Lidar dataset, developed in 2008, covers Erie County and achieves a vertical accuracy of 18.5 cm on open bare terrain and 37.0 cm for obscured areas. Groundwater elevations for each monitoring well are provided in **Table 3-1** below.

Table 3-1: Monitoring Well Ground Elevations

MONITORING WELL ID	*GROUND ELEVATION (FT.)*	*WATER LEVEL (FT.)*	*GROUNDWATER ELEVATION (FT.)*
BCP-MW-1	663.465	33.5	629.965
BCP-MW-3	663.465	32.5	630.965
BCP-MW-4	663.465	32.9	631.165
BCP-MW-5	663.465	33.4	630.245
BCP-MW-6	663.465	33.5	629.965
BCP-MW-7	663.465	35.85	627.615

Note: Ground elevations from Lidar Dataset.

Figure 3 presents groundwater elevation contours.

2.4. BTEX Monitoring

Table 3-2 attached to the end of this report presents detected VOC concentrations from December 2012 to May 2021. **Figure 4** presents total BTEX concentrations from each monitoring well. Lab analytical reports are provided in **Appendix A**.

BCP-MW-1

Total BTEX concentrations in this well after sampling showed 0 ug/L. This trend has been consistent since the sampling event that took place in October of 2016.

BCP-MW-2

BCP-MW-2 was installed adjacent to the source area that was backfilled with flowable fill. Since its installation, this well has been dry. NYSDEC requested the well be modified to evaluate if groundwater underneath the flowable fill mass contains residual contamination. On October 7, 2015 Nature's Way Environmental installed a 1-inch PVC well through the existing BCP-MW-2 to a final depth of 50 feet bgs. The modified well has remained dry.

BCP-MW-3

MW-3 had a total VOC concentration of 4.8 ug/l which is the same from the previous sampling event that had a total VOC concentration of 4.9 ug/l. The total BTEX concentration in MW-3 continued to stay at 0 ug/l, which was consistent with the March 2020 sampling event.

BCP-MW-4

The May 14, 2021 sampling event for MW-4 showed a slight increase in total VOC levels as well as total BTEX concentrations. The total VOC concentration for MW-4 was 2,100.5 ug/L and total BTEX showed a concentration of 1,548.5 ug/L compared to the previous sampling event that showed a total VOC concentration of 1,706.8 ug/l and total BTEX concentration of 1,264.8 ug/l.

BCP-MW-5

The initial BTEX concentration of MW-5 was 17,670 ug/L in September of 2013. The May 14, 2021 sampling event for MW-5 showed a significant decrease in total VOC levels as well as total BTEX concentrations. The total VOC concentration for MW-5 was 2,864 ug/L and total BTEX showed a concentration of 2,325.8 ug/L compared to the previous sampling event that showed a total VOC concentration of 7,272.4 ug/l and total BTEX concentration of 6,026.4 ug/l.

BCP-MW-6

This sampling event showed an decrease in concentrations from the previous sampling even. The total VOC concentration for MW-6 was 5 ug/L and total BTEX showed a concentration of 0 ug/L compared to the previous sampling event that showed a total VOC concentration of 43.6 ug/l and total BTEX concentration of 21.7 ug/l.

BCP-MW-7

In the most recent sampling event on May 14, 2021 the decreasing concentration trend continued with total VOC concentrations as well as total BTEX concentrations, which both had concentrations of 0 ug/l. This sampling event is consistent with the previous sampling event in November 2020 that also had a total BTEX concentration of 0 ug/l.

3. CONCLUSION AND RECOMMENDATIONS

The January 2021 injection event appeared to be successful in most wells but slightly inefficient in two of the other wells. This could have a correlation with the time period between when the wells were injected and when the samples were collected from the wells. After the chemical oxidant treatment, petroleum contamination still exists in three monitoring wells. C&S recommends the following:

- Perform another quarterly in-situ treatments within two groundwater monitoring wells BCP-MW-4 and BCP-MW-5.
- Bi-annual groundwater sampling on all monitoring wells located on the Conventus site.

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TABLES

Table 1 - Groundwater Analytical Results
Summary of Detected Compounds
Former Mobil Station 99-MST 979 Main Street (1001 Main Street) Brownfield Cleanup

		Sample Name	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1
		Date Collected	9/20/2013	3/19/2014	5/22/2014	3/11/2015	6/17/2015	8/3/2014	12/15/2015	3/22/2016	6/3/2016	10/25/2016	12/8/2016	1/20/2017	5/17/2017	7/5/2017	11/2/2017	8/16/2018	11/29/2018	7/30/2019	12/12/2019	3/31/2020	11/25/2020	5/14/2021
		Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG
		Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
NYSDEC Ambient Water Quality Standards & Guidance Values																								
Volatile Organic Compound	**Surface Water**	**Groundwater**																						
1,2-DICHLOROBENZENE	3	3	ND	ND	ND			ND		ND										ND		ND		ND
1,2-DICHLOROETHANE	0.6	0.6	ND	ND	ND			ND		ND										.15 J		ND		ND
1,2-DICHLOROPROPANE	1	1	ND	ND	ND			ND		ND												ND		ND
1,3-DICHLOROBENZENE	3	3	ND	ND	ND			ND		ND										ND		ND		ND
2-HEXANONE	50	50	ND	ND	ND		ND	ND	3.5	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	50	50	ND	ND	ND		ND	ND	ND	ND	ND	ND			ND	5.1	ND	ND	1.8J	2.4 J	1.7	ND	ND	1.8
BENZENE	1	1	ND	ND	ND		**35**	**39**	**5.7**	**1.4**	0.72	ND			ND	ND	0.33	ND	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	50	50	ND	ND	ND			ND		ND		ND				ND	ND	ND	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	5	5	ND	ND	ND			ND		ND		ND				ND	ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	5	5	ND	ND	ND		2	1.5	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE (CUMENE)	5	5	ND	ND	ND		1.3	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL ETHYL KETONE (2-BUTANONE)	50	50	ND	ND	ND		ND	45	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	5	5	ND	ND	ND		ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	5	5	ND	ND	ND		**19**	**38**	0.55	ND	ND	ND			ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE (TCE)	5	5	ND	ND	ND		ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	1	1	ND	ND	ND		ND	ND	ND	0.33 J	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
XYLENES, TOTAL	5	5	ND	ND	ND		**6.4**	4.2	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	10	10	ND	ND	ND		ND	ND	ND	0.33 J	ND	ND			ND	ND	ND	ND	4.3	ND	ND	ND	ND	1.4
No Standard																								
CARBON DISULFIDE			ND	ND	0.94		ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE			ND	ND	ND		35	59	61	51	72	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYL ISOBUTYL KETONE			ND	ND	ND		ND	13	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLCYCLOHEXANE			ND	ND	0.47		3.2	17	15	11	ND	ND			ND	ND	ND	1.5	.88J	ND	ND	ND	ND	ND
Total VOCs			**0**	**0**	**1.41**	**-**	**101.90**	**216.70**	**85.75**	**63.40**	**72.72**	**0**			**-**	**5.1**	**1.4**	**1.5**	**6.98**	**2.55**	**1.7**	**0**	**0**	**0**
Total BTEX			**0**	**0**	**0**	**-**	**62**	**83**	**6**	**1.4**	**0.7**	**0**			**0.0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Non-Standard VOC List																								
1,3,5-TRIMETHYLBENZENE	5	5														ND	ND		ND		ND		ND	ND
1,2,4,5-TETRAMETHYLBENZENE	5	5														ND	ND		ND		ND		ND	ND
1,2,4-TRIMETHYLBENZENE	5	5														ND	ND		ND		ND		ND	1.6
SEC-BUTYLBENZENE	5	5														ND	ND		ND		ND		ND	ND
N-PROPYLBENZENE	5	5														ND	ND		ND		ND		ND	ND
N-BUTYLBENZENE	5	5														ND	ND		ND		ND		ND	ND
P-ISOPROPYLTOLUENE																ND	ND		ND		ND		ND	ND
1,4-DIETHYLBENZENE																ND	ND		ND		ND		ND	ND

Notes:

Not Sampled

1) Blank space = analyte concentration not reported

2) BCP MW-2 was dry and not sampled

3) For the March 11, 2015 monitoring event well MW-1, MW-5, MW-6 and MW-7 were dry or not enough water was inside the well for a representative sample.

4) WG = groundwater

Table 1 - Groundwater Analytical Results
Summary of Detected Compounds
Former Mobil Station 99-MST 979 Main Street (1001 Main Street) Brownfield Cleanup

		Sample Name	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3
		Date Collected	9/20/2013	3/19/2014	5/22/2014	3/11/2015	6/17/2015	8/3/2015	12/15/2015	1/27/2015	3/22/2016	6/3/2016	10/25/2016	12/8/2016	1/20/2017	5/17/2017	7/5/2017	11/2/2017	8/16/2018	11/29/2018	7/30/2019	12/12/2019	3/31/2020	11/25/2020	5/14/2021
		Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG
		Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
NYSDEC Ambient Water Quality Standards & Guidance Values																									
Volatile Organic Compound	**Surface Water**	**Groundwater**																							
1,2-DICHLOROBENZENE	3	3	ND	ND	ND																				
1,2-DICHLOROETHANE	0.6	0.6	ND	ND	ND																				
1,2-DICHLOROPROPANE	1	1	ND	ND	ND																				
1,3-DICHLOROBENZENE	3	3	ND	ND	ND																				
2-HEXANONE	50	50	ND	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	50	50	ND	**98**	ND	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**166**	ND	2.3	24.0	**2.1 J**	ND	ND	ND	3.8
BENZENE	1	1	**6,600**	**4,500**	**4,700**	**3,700**	**4,300**	**4,100**	**2,100**	**2,200**	**1,900**	**3,100**	**1,390**	**635**	**363**	**451**	**3**	**364**	ND	ND	ND	0.2J	ND	ND	ND
DIBROMOCHLOROMETHANE	50	50	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	5	5	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	5	5	**1,200**	**1,600**	**1,500**	**1,600**	**1,500**	**1,700**	**1,400**	**1,600**	**1,600**	**610**	**194**	**899**	**517**	**197**	2.4	**384**	ND	ND	ND	1.1 J	ND	ND	ND
ISOPROPYLBENZENE (CUMENE)	5	5	ND	**37**	ND	**32**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**8.7**	ND	ND	ND	ND	ND	ND	ND
METHYL ETHYL KETONE (2-BUTANONE)	50	50	ND	**71**	ND	6.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	**201**	**51.4**	**51.4**	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	**35**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	5	5	**110**	**150**	**150**	**110**	**110**	**130**	**100**	**110**	**110**	**67**	**39.4**	**74.5**	**38.4**	**22.6**	1.6	**34.8**	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE (TCE)	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
XYLENES, TOTAL	5	5	**3,700**	**3,600**	**3,200**	**4200**	**4000**	**3900**	**2200**	**2600**	**2200**	**2100**	**806.3**	**1430**	**949**	**639**	**7.1**	**930.0**	ND	ND	ND	1.3 J	ND	ND	ND
NAPHTHALENE	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**14**	**357**	ND	ND	ND	ND	ND	1.5 J	ND
No Standard																									
CARBON DISULFIDE			ND	ND	ND	0.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE			120	320	270	390	330	210	100	93	110	170	ND	ND	ND	ND	ND	60.5	ND	ND	ND	ND	ND	3.4 J	1
METHYL ISOBUTYL KETONE			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLCYCLOHEXANE			ND	130	150	120	160	96	34	33	36 J	170	47.7	ND	ND	29.5	ND	33.4	ND	ND	ND	ND	ND	ND	ND
Total VOCs			**11,730**	**10,506**	**9,970**	**10,179**	**10,400**	**10,136**	**5,934**	**6,636**	**5,920**	**6,252**	**2,477**	**3,038**	**1,867**	**1,540**	**254**	**2,224**	**2.3**	**24.0**	**2.1**	**2.6**	**0**	**4.9**	**4.8**
Total BTEX			**11,610**	**9,850**	**9,550**	**9,610**	**9,910**	**9,830**	**5,800**	**6,510**	**5,810**	**5,877**	**2,430**	**3,038**	**1,867**	**1,310**	**14**	**1,713**	-	-	-	**2.6**	**0**	**0**	**0.0**
Non-Standard VOC List																									
1,3,5-TRIMETHYLBENZENE	5	5															ND	**133**	**133**	ND	ND	ND	ND	ND	ND
1,2,4,5-TETRAMETHYLBENZENE	5	5															ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5	5															4.9	**737**	**737**	ND	ND	1.2 J	0.88J	ND	ND
SEC-BUTYLBENZENE	5	5															ND	ND	ND	ND	ND	ND	ND	ND	ND
N-PROPYLBENZENE	5	5															ND	ND	ND	ND	ND	ND	ND	ND	ND
N-BUTYLBENZENE	5	5															ND	ND	ND	ND	ND	ND	ND	ND	ND
P-ISOPROPYLTOLUENE																	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DIETHYLBENZENE																	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Not Sampled

1) Blank space = analyte concentration not reported

2) BCP MW-2 was dry and not sampled

3) For the March 11, 2015 monitoring event well MW-1, MW-5, MW-6 and MW-7 were dry or not enough water was inside the well for a representative sample.

4) WG = groundwater

Table 1 - Groundwater Analytical Results
Summary of Detected Compounds
Former Mobil Station 99-MST 979 Main Street (1001 Main Street) Brownfield Cleanup

		Sample Name	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4
		Date Collected	9/20/2013	3/19/2014	5/22/2014	3/11/2015	6/17/2015	8/3/2015	12/15/2015	1/27/2016	3/22/2016	6/3/2016	10/25/2016	12/8/2016	1/20/2017	5/17/2017	7/5/2017	11/17/2017	8/16/2018	11/29/2018	7/30/2019	12/12/2019	3/31/2020	11/25/2020	5/14/2021
		Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG
		Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
NYSDEC Ambient Water Quality Standards & Guidance Values																									
Volatile Organic Compound	**Surface Water**	**Groundwater**																							
1,2-DICHLOROBENZENE	3	3	ND	ND	ND																				
1,2-DICHLOROETHANE	0.6	0.6	ND	ND	ND																				
1,2-DICHLOROPROPANE	1	1	ND	ND	ND																	1.0 J		ND	
1,3-DICHLOROBENZENE	3	3	ND	ND	ND																				
2-HEXANONE	50	50	ND	ND	ND	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	50	50	10	**250**	**170**	**67**	ND	**210**	ND	ND	ND	ND	ND	ND	ND	ND	38.2	10	1.6	ND	ND	ND	ND	ND	ND
BENZENE	1	1	**42**	**29**	**15**	**26**	**24**	**242**	ND	**21**	ND	**21**	**9.57**	**12.8**	**10.2**	**10.8**	**1.3**	**97.0**	**45.0**	**36.0**	**6.7**	**6.4**	**7.6**	**7.8**	**8.5**
DIBROMOCHLOROMETHANE	50	50	ND	ND	ND																	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	5	5	ND	ND	ND																	ND	ND	ND	ND
ETHYLBENZENE	5	5	4.7	**34**	**32**	**560**	**1,000**	**680**	**1,100**	**1300**	**1,400**	**1400**	**1,000**	**1170**	**1,300**	**1220**	**28**	**1.8**	ND	**170**	**2.0 J**	**460**	**810**	**870**	**1100**
ISOPROPYLBENZENE (CUMENE)	5	5	ND	ND	ND	**9.8**	**15.0**	**26**	ND	ND	ND	ND	**19**	**30.3**	**28.7**	ND	2.3	ND	ND	**8.3**	**1.3 J**	**19**	**28**	**34**	**28**
METHYL ETHYL KETONE (2-BUTANONE)	50	50	ND	ND	ND	ND	8.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.9	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	5	5	ND	ND	1 J	ND	ND	ND	ND	**52**	ND	**42**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	5	5	1.1	**190**	**110**	**53**	**57**	**140**	**180**	**270**	**150**	**97**	**62.4**	**130**	**133**	**92.2**	**9.8**	ND	ND	**15**	ND	**11**	**46**	**29**	**22**
TRICHLOROETHYLENE (TCE)	5	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	1	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
XYLENES, TOTAL	5	5	**29**	**180**	**160**	**800**	**1,200**	**3100**	**1,800**	**2600**	**2,100**	**1800**	**1,160**	**1892**	**1,944**	**1289.7**	**24.5**	ND	ND	**83.6**	ND	**157.3**	**534 J**	**358 J**	**418**
NAPHTHALENE	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	ND	ND	**36**	ND	**99**	**230**	**230**	**320**
No Standard																									
CARBON DISULFIDE			ND	ND	1.9 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE			8.2	11	7	170	170	110	160	220	250	340	189	259	276	235	276	5.5	ND	24	.41 J	60	100	140	160
METHYL ISOBUTYL KETONE			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLCYCLOHEXANE			7.5	3.7	3.1	87	92	69	86	100	110	140	85.1	110	123	99.7	123	2.4	0.47	8.9	ND	8	22J	38 J	44
Total VOCs			**102.5**	**697.7**	**497.1**	**1,774.5**	**2,566.5**	**4,577.0**	**3,326.0**	**4,563.0**	**4,010.0**	**3,840.0**	**2,525.5**	**3,604.1**	**3,814.9**	**2,947.4**	**511.9**	**116.7**	**47.1**	**381.8**	**10.4**	**821.7**	**1,777.6**	**1,706.8**	**2,100.5**
Total BTEX			**76.8**	**433**	**317**	**1,439**	**2,281**	**4,162**	**3,080**	**4,191**	**3,650**	**3,318**	**2,232**	**3,205**	**3,387**	**2,613**	**64**	**99**	**45**	**304.6**	**8.7**	**634.7**	**1,397.60**	**1,264.80**	**1,548.50**
Non-Standard VOC List																									
1,3,5-TRIMETHYLBENZENE	5	5															2	ND	ND	1.4 J	ND	ND	7.0J	11 J	8.4
1,2,4,5-TETRAMETHYLBENZENE	5	5															1.1	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5	5															1.1	ND	ND	**150**	ND	**470**	**1100**	**1300**	**1500**
SEC-BUTYLBENZENE	5	5															ND	ND	ND	1.5 J	ND	2.9 J	ND	ND	ND
N-PROPYLBENZENE	5	5															2.3	ND	ND	**37**	ND	**86**	**150**	**170**	**160**
N-BUTYLBENZENE	5	5															1.7	ND	ND	2.2 J	ND	4.1 J	**10J**	**12 J**	**9.7**
P-ISOPROPYLTOLUENE																	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DIETHYLBENZENE																	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Not Sampled

1) Blank space = analyte concentration not reported

2) BCP MW-2 was dry and not sampled

3) For the March 11, 2015 monitoring event well MW-1, MW-5, MW-6 and MW-7 were dry or not enough water was inside the well for a representative sample.

4) WG = groundwater

Table 1 - Groundwater Analytical Results
Summary of Detected Compounds
Former Mobil Station 99-MST 979 Main Street (1001 Main Street) Brownfield Cleanup

		Sample Name	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5
		Date Collected	9/20/2013	3/19/2014	5/22/2014	3/11/2015	6/17/2015	8/3/2015	12/15/2015	1/27/2016	3/22/2016	6/3/2016	10/25/2016	12/8/2016	1/20/2017	5/17/2017	7/5/2017	11/2/2017	8/16/2018	11/29/2018	7/30/2019	12/12/2019	3/31/2020	11/25/2020	5/14/2021
		Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG
		Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
NYSDEC Ambient Water Quality Standards & Guidance Values																									
Volatile Organic Compound	**Surface Water**	**Groundwater**																							
1,2-DICHLOROBENZENE	3	3	ND	ND	ND																				
1,2-DICHLOROETHANE	0.6	0.6	ND	ND	ND																				
1,2-DICHLOROPROPANE	1	1	ND	ND	ND																				
1,3-DICHLOROBENZENE	3	3	ND	ND	ND																				
2-HEXANONE	50	50	11	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		2.7 J	ND	ND	ND	ND
ACETONE	50	50	ND	**520**	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.3	ND	41	**69 J**	44	**97 J**	ND	43 J	45 J
BENZENE	1	1	**5,600**	**4,800**	**4,900**		**3,700**	**4,100**	**1,800**	**1,800**	**1,700**	**1,600**	**899**	**949**	**682**	**428**	**574**	**283**	**86**	**26**	**3.3**	**8.9 J**	**5.8J**	**3.4 J**	**5.8J**
DIBROMOCHLOROMETHANE	50	50	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	5	5	ND	ND	ND		ND		ND		ND		ND		ND		ND		ND		ND	ND	ND	ND	ND
ETHYLBENZENE	5	5	**1,900**	**1,600**	**1,600**		**2,800**	**2,600**	**1,600**	**1,900**	**2,200**	**2,200**	**1,490**	**1,450**	**2,070**	**584**	**534**	**1,660**	**1,500**	**810**	**520 E**	**1200**	**1,700**	**1,700**	**770**
ISOPROPYLBENZENE (CUMENE)	5	5	**28**	**29**	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**13.6**	ND	**20**	**16 J**	**23**	**24 J**	**30J**	**33 J**	**13 J**
METHYL ETHYL KETONE (2-BUTANONE)	50	50	10	**350**	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.1	ND	ND		ND	ND	ND	ND	ND
METHYLENE CHLORIDE	5	5	ND	ND	ND		ND	ND	ND	ND	**77**	**96**	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND
TOLUENE	5	5	**170**	**220**	**310**		**290**	**290**	**70**	**80**	**88**	**77**	**68.5**	**84.9**	**86.6**	ND	**36.2**	**82.0**	**66.0**	**39 J**	**38.0**	**42 J**	**49J**	**48 J**	**16 J**
TRICHLOROETHYLENE (TCE)	5	5	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		**.22 J**	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	1	1	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND
XYLENES, TOTAL	5	5	**10,000**	**6,800**	**8,300**		**9,100**	**10,000**	**2,600**	**3,100**	**3,300**	**2,800**	**2,271.3**	**2,152.2**	**3,394.7**	**3,000.7**	**4,520.0**	**5,610.0**	**5,461.0**	**4,066.0**	**1879 E**	**3373**	**5,086.0**	**4,275**	**1,534.0**
NAPHTHALENE	10	10	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**730**	**1,030**	**620**	**1,100**		**1100**	**940**	**820**	**430**
No Standard																								ND	
CARBON DISULFIDE			ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	ND	ND		1.2 J	ND	ND	ND	ND
CYCLOHEXANE			230	340	240		430	260	230	250	280	430	198	148	257	ND	257	238	150	130 J	140	220	250	240	130
METHYL ISOBUTYL KETONE			23	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		3.0 J	ND	ND	ND	ND
METHYLCYCLOHEXANE			100	170	150		190	130	92	100	100	140	67.5	58.4	92.8	49	92.8	106	70	82 J	65	96	110J	110 J	60 J
Total VOCs			**18,072**	**14,829**	**15,500**	-	**16,510**	**17,380**	**6,392**	**7,230**	**7,745**	**7,343**	**4,994**	**4,843**	**6,583**	**4,062**	**6,780**	**9,009**	**8,014**	**6,338**	**2,718.72**	**6,160.9**	**8,170.80**	**7.272.4**	**2,864.00**
Total BTEX			**17,670**	**13,420**	**15,110**	-	**15,890**	**16,990**	**6,070**	**6,880**	**7,288**	**6,677**	**4,729**	**4,636**	**6,233**	**4,013**	**5,664**	**7,635**	**7,113**	**4,941**	**2,440.30**	**4,623.90**	**6,840.80**	**6,026.40**	**2,325.80**
Non-Standard VOC List																									
1,3,5-TRIMETHYLBENZENE	5	5															823	ND	ND	**630**	ND	**480**	**520**	**400**	**99**
1,2,4,5-TETRAMETHYLBENZENE	5	5															135	ND	ND		ND	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5	5															**2,280**	**2,490**	**2,400**	**2,300**	ND	**2200**	**2500**	**2500**	**1200**
SEC-BUTYLBENZENE	5	5															3.2	ND	ND		ND	ND	ND	ND	ND
N-PROPYLBENZENE	5	5															34.8	ND	110	**69**	ND	**110**	**140**	**150**	**64**
N-BUTYLBENZENE	5	5															43.3	ND	ND		ND	4.1 J	ND	ND	ND
P-ISOPROPYLTOLUENE																	5.7	ND	ND		ND	ND	ND	ND	ND
1,4-DIETHYLBENZENE																	347	ND	ND		ND	ND	ND	ND	ND

Notes:

Not Sampled

1) Blank space = analyte concentration not reported

2) BCP MW-2 was dry and not sampled

3) For the March 11, 2015 monitoring event well MW-1, MW-5, MW-6 and MW-7 were dry or not enough water was inside the well for a representative sample.

4) WG = groundwater

Table 1 - Groundwater Analytical Results
Summary of Detected Compounds
Former Mobil Station 99-MST 979 Main Street (1001 Main Street) Brownfield Cleanup

			Sample Name	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6
			Date Collected	9/20/2013	3/19/2014	5/22/2014	3/11/2015	6/17/2015	8/3/2015	12/14/2015	1/27/2016	3/22/2016	6/3/2016	10/25/2016	12/8/2016	1/20/2017	5/17/2017	7/5/2017	11/2/2017	8/16/2018	11/29/2018	7/30/2019	12/12/2019	3/31/2020	11/25/2020	5/14/2021
			Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG
			Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
NYSDEC Ambient Water Quality Standards & Guidance Values																									
Volatile Organic Compound	**Surface Water**	**Groundwater**																							
1,2-DICHLOROBENZENE	3	3		ND	ND	ND																ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	0.6	0.6		ND	ND	ND																ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	1	1		ND	ND	ND																ND	.20 J	ND	ND	ND
1,3-DICHLOROBENZENE	3	3		ND	ND	ND																ND	ND	ND	ND	ND
2-HEXANONE	50	50		ND	ND	ND		190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	50	50		ND	ND	ND		480	340	ND	ND	ND	ND	ND	ND	ND	ND	**102**	ND	17	4.5 J	ND	6.4	1.6J	ND	ND
BENZENE	1	1		**190**	**33**	**16**		**470**	**890**	**250**	**230**	**200**	**120**	**302**	**168**	**200**	**113**	**131**	**774**	ND	0.82	ND	**4**	ND	**7.5**	ND
DIBROMOCHLOROMETHANE	50	50		ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	5	5		ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	5	5		**130**	**20**	**31**		**36**	**210**	**22**	**44**	**67**	**50**	**163**	**169**	**173**	**175**	**85.5**	**154.0**	**3.3**	1.7 J	ND	2.4 J	ND	**2.7**	ND
ISOPROPYLBENZENE (CUMENE)	5	5		4.4	ND	1.9 J			ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5	ND	1.3	ND	ND	.90 J	ND	ND	ND
METHYL ETHYL KETONE (2-BUTANONE)	50	50		ND	ND	ND		110	ND	ND	ND	ND	ND	ND	ND	ND	ND	**19.6**	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	5	5		ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	5	5		**810**	**42**	**79**		**1,000**	**1,900**	**85**	**120**	**78**	**120**	**130**	**255**	**351**	**147**	**22.5**	**2,970.0**	ND	ND	ND	**6.7**	ND	**9**	ND
TRICHLOROETHYLENE (TCE)	5	5		ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	1	1		ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
XYLENES, TOTAL	5	5		**750**	**85**	**150**		**740**	**1,100**	**140**	**190**	**130**	**210**	**393**	**360**	**451**	**190.7**	**438**	**1,500**	ND	2 J	ND	**8**	ND	**10**	1.1 J
NAPHTHALENE	10	10		ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**86.6**	ND	1	.8 J	ND	4.8	ND	2.6	3.9
No Standard																										
CARBON DISULFIDE				ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE				68	ND	130		270	41	62	110	110	91	81.5	ND	ND	ND	ND	84	7.4	3.7 J	**.60 J**	6.6 J	ND	7.2 J	ND
METHYL ISOBUTYL KETONE				ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLCYCLOHEXANE				46	16	18		170	27	24	21	10	24	32.2	30.2	36.9	35.3	36.9	44	4.3	3.8 J	ND	4.5 J	ND	4.6 J	ND
Total VOCs				**1,998.4**	**196**	**424**	**-**	**3,466**	**4,508**	**583**	**715**	**595**	**615**	**1,101**	**983**	**1,212**	**661**	**925**	**5,526**	**35**	**17.32**	**0.6**	**44.5**	**1.6**	**43.6**	**5**
Total BTEX				**1,880**	**180**	**276**	**-**	**2,246**	**4,100**	**497**	**584**	**475**	**500**	**988**	**952**	**1,175**	**626**	**677**	**5,398**	**3**	**4.52**	**-**	**21.10**	**0**	**21.70**	**0**
Non-Standard VOC List																										
1,3,5-TRIMETHYLBENZENE	5	5																**74.3**	ND	ND	5.1	ND	1.4 J	ND	2.0 J	ND
1,2,4,5-TETRAMETHYLBENZENE	5	5																**14.3**	ND	ND	ND	ND	ND	ND	ND	2 J
1,2,4-TRIMETHYLBENZENE	5	5																**134**	ND	ND	ND	ND	2.2 J	ND	2.8	ND
SEC-BUTYLBENZENE	5	5																			ND	ND	0.88 J	ND	ND	ND
N-PROPYLBENZENE	5	5																**11.3**	ND	4.7	1.7 J	ND	1.3 J	ND	1.2 J	ND
N-BUTYLBENZENE	5	5																4.6	ND	0.72	ND	ND	4.1 J	ND	ND	ND
P-ISOPROPYLTOLUENE																		1.6	1.6	1.6	ND	ND	ND	ND	ND	ND
1,4-DIETHYLBENZENE																		32.9	32.9	32.9	ND	ND	ND	ND	ND	ND

Notes:

Not Sampled

1) Blank space = analyte concentration not reported

2) BCP MW-2 was dry and not sampled

3) For the March 11, 2015 monitoring event well MW-1, MW-5, MW-6 and MW-7 were dry or not enough water was inside the well for a representative sample.

4) WG = groundwater

Table 1 - Groundwater Analytical Results
Summary of Detected Compounds
Former Mobil Station 99-MST 979 Main Street (1001 Main Street) Brownfield Cleanup

			Sample Name	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7	MW-7
			Date Collected	9/20/2013	3/19/2014	5/22/2014	3/11/2015	6/17/2015	8/3/2015	12/15/2015	3/22/2016	6/3/2016	10/25/2016	12/8/2016	1/20/2017	5/17/2017	7/5/2017	11/2/2017	8/16/2018	11/29/2018	7/30/2019	12/12/2019	3/31/2020	11/25/2020	5/14/2021
			Matrix	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG	WG
			Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
NYSDEC Ambient Water Quality Standards & Guidance Values																								
Volatile Organic Compound	**Surface Water**	**Groundwater**																						
1,2-DICHLOROBENZENE	3	3		ND	ND	ND														ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	0.6	0.6		ND	ND	ND														ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	1	1		ND	ND	ND														ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	3	3		ND	ND	ND														ND	ND	ND	ND	ND
2-HEXANONE	50	50		ND	ND	4.8		ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
ACETONE	50	50		ND	3	ND		ND	ND	ND	ND	ND	ND			ND	ND	ND	1.5	ND	**4.2 J**	ND	ND	ND
BENZENE	1	1		0.51	**8.8**	**14**		ND	ND	ND	ND	ND	ND			ND	**2.3**	**2.81**	**1.8**	.18 J	**.77**	.17 J	ND	ND
DIBROMOCHLOROMETHANE	50	50		ND	ND	ND		ND		ND		ND				ND		ND			ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	5	5		ND	ND	ND		ND		ND		ND				ND		ND			ND	ND	ND	ND
ETHYLBENZENE	5	5		ND	ND	3		ND	ND	ND	ND	ND	ND			ND	ND	0	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE (CUMENE)	5	5		ND	ND	ND		ND	ND	ND	ND	ND	ND			ND	ND	0.45	ND	ND	ND	ND	ND	ND
METHYL ETHYL KETONE (2-BUTANONE)	50	50		ND	ND	ND		ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	5	5		ND	ND	ND		ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
TOLUENE	5	5		ND	0.56	4.7		ND	ND	ND	ND	ND	ND			ND	ND	1.1	ND	ND	ND	ND	ND	ND
TRICHLOROETHYLENE (TCE)	5	5		ND	ND	ND		ND		ND		ND				ND		ND			ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	1	1																			ND	ND	ND	ND
XYLENES, TOTAL	5	5		0.96	4.8	**94**		ND	ND	ND	0.99 J	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	10	10																	1.50	.86 J	ND	ND	ND	1 J
No Standard																								
CARBON DISULFIDE				ND	ND	0.97		ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE				ND	4.3	9.6		ND	ND	0.71	ND	ND	ND			ND	ND	0.99	0.66	ND	ND	ND	ND	ND
METHYL ISOBUTYL KETONE				ND	ND	ND		ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLCYCLOHEXANE				ND	1.7	5.1		0.18	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND
Total VOCs				**1.47**	**23.16**	**136.17**	**-**	**0.18**	**-**	**0.71**	**-**	**-**	**-**	**-**	**-**	**-**	**2.30**	**5.35**	**3.66**	**1.04**	**4.97**	**0.17**	**0**	**0**	**1**
Total BTEX				**0.51**	**14.16**	**115.7**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2.3**	**3.9**	**1.8**	**0.18**	**0.77**	**0.17**	**0**	**0**	**0**
Non-Standard VOC List																								
1,3,5-TRIMETHYLBENZENE	5	5															ND	ND	3.2		3.2	ND	ND	ND	ND
1,2,4,5-TETRAMETHYLBENZENE	5	5															ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5	5															ND	ND	ND	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	5	5															ND	ND	ND	ND	ND	ND	ND	ND	ND
N-PROPYLBENZENE	5	5															ND	ND	ND	ND	ND	ND	ND	ND	ND
N-BUTYLBENZENE	5	5															ND	ND	ND	ND	ND	ND	ND	ND	ND
P-ISOPROPYLTOLUENE																	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-DIETHYLBENZENE																	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Not Sampled

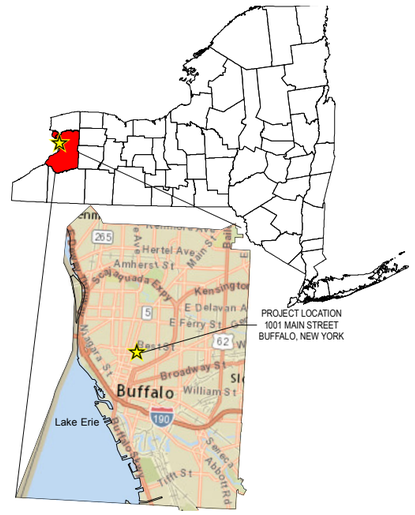
1) Blank space = analyte concentration not reported

2) BCP MW-2 was dry and not sampled

3) For the March 11, 2015 monitoring event well MW-1, MW-5, MW-6 and MW-7 were dry or not enough water was inside the well for a representative sample.

4) WG = groundwater

FIGURES



Legend

- Parcel Boundary
- Brownfield Cleanup Program Boundary

Property Note

1) The BCP Project Area ("Site") includes the entire western parcel [1001 Main Street (formerly 979 Main Street)] and extends approximately 40 feet east onto the adjacent eastern parcel (818 Ellicott Street). Total acreage of the BCP Project Site is 1.72 acres.

Notes

1) Groundwater elevation benchmark.

2) Coordinate System: NAD 1983 StatePlane NY West FIPS 3103
Projection: Transverse Mercator
Datum: North American 1983
Units: Foot US

0 30 60 120
Feet

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FORMER MOBIL STATION 99-MST
979 MAIN ST (1001 MAIN ST)
BROWNFIELD CLEANUP PROGRAM
BUFFALO, NEW YORK

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	K11.002.001
DATE:	May 4, 2016
DRAWN BY:	C. MARTIN
DESIGNED BY:	C. MARTIN
CHECKED BY:	

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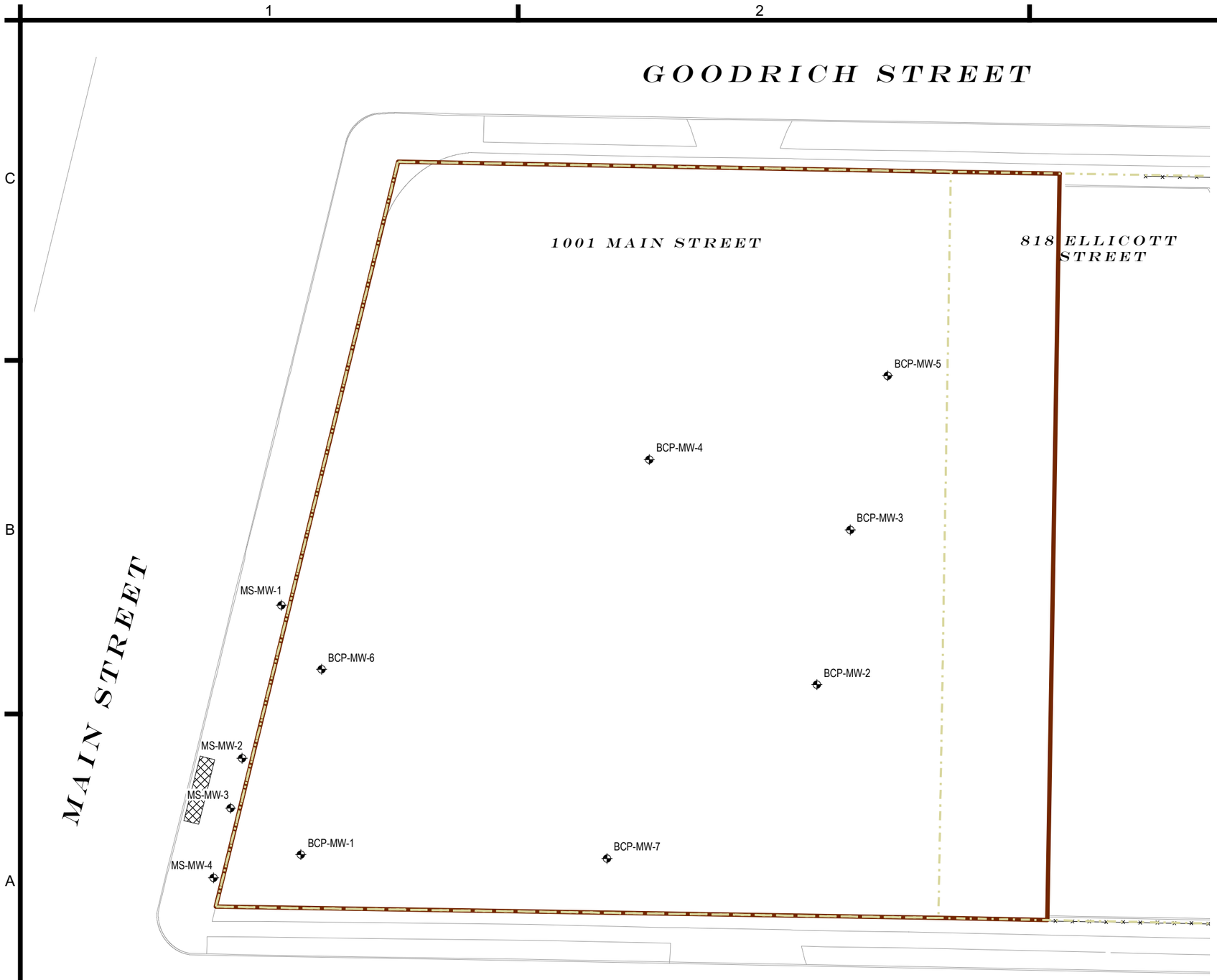
SITE LOCATION

FIGURE 1

Path: F:\Project\K11-Kaleida Health\K11.002.001 - MOB Brownfield Cleanup Program\Environmental-study\CADD-GIS\GIS\Projects\PRR\FIGURE_2_PROJECT_BOUNDARIES.mxd



Legend

- Property Lines
- Brownfield Cleanup Program Boundary
- Groundwater Monitoring Well Location

Property Note

1) The BCP Project Area ("Site") includes the entire western parcel [1001 Main Street (formerly 979 Main Street)] and extends approximately 40 feet east onto the adjacent eastern parcel (818 Ellicott Street). Total acreage of the BCP Project Site is 1.72 acres.

Notes

1) Coordinate System: NAD 1983 StatePlane NY West FIPS 3103
Projection: Transverse Mercator
Datum: North American 1983
Units: Foot US

2) Survey data from McIntosh & McIntosh P.C. "Topographical Map of Part of Lot-29, TWP.-11, R.-8, Holland Purchase" Job No. 7669-B(2) September 24, 2008.

0 25 50 100 Feet

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FORMER MOBIL STATION 99-MST
979 MAIN ST (1001 MAIN ST)
BROWNFIELD CLEANUP PROGRAM
BUFFALO, NEW YORK

MARK	DATE	DESCRIPTION
REVISIONS		

PROJECT NO:	K11.002.001
DATE:	JUNE 15, 2016
DRAWN BY:	C. MARTIN
DESIGNED BY:	C. MARTIN
CHECKED BY:	D. RIKER

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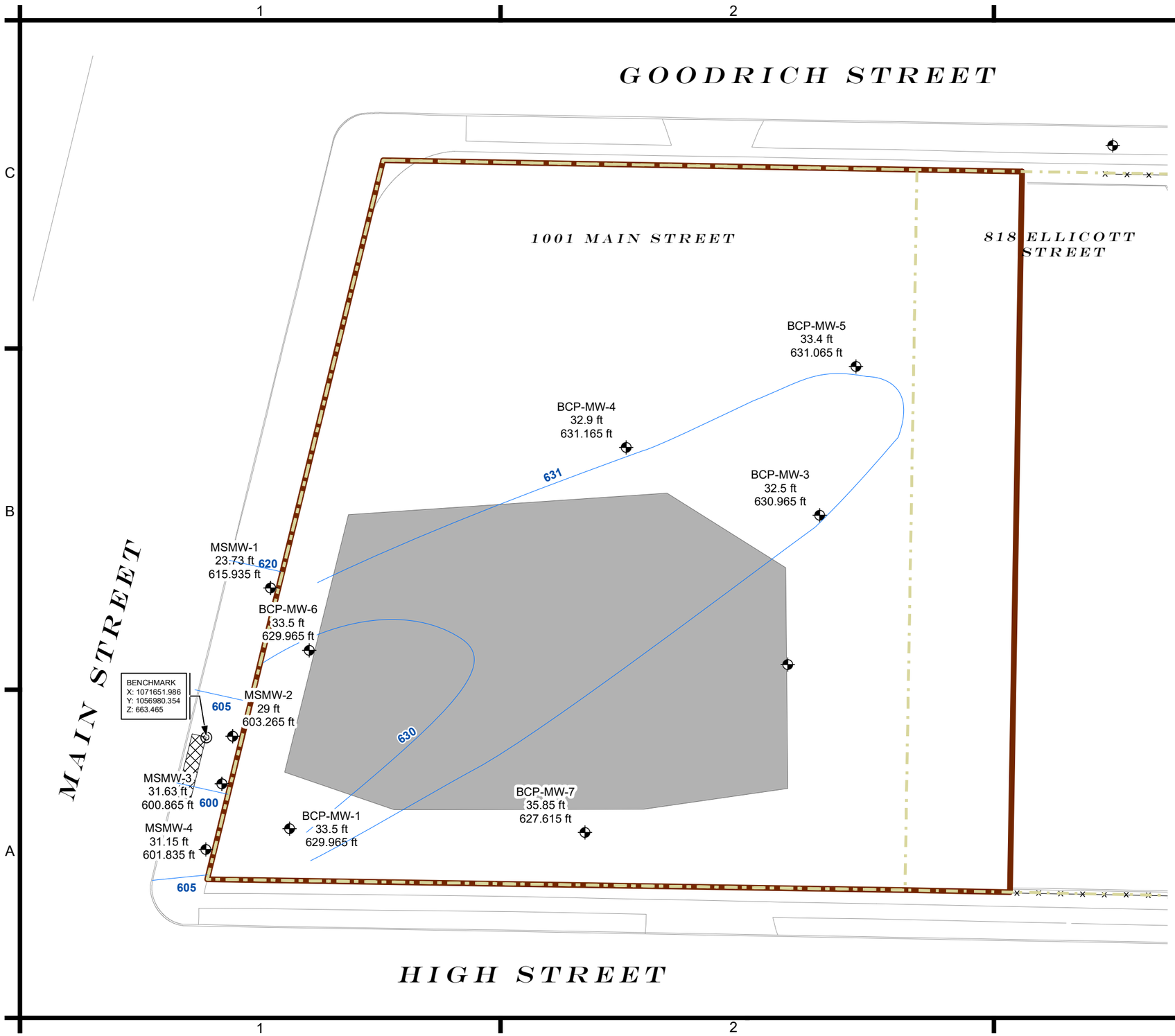
OFFSITE & ONSITE GROUNDWATER WELLS

FIGURE 2

Path: F:\Project\K11-Kaleida Health\K11.002.001 - MOB Brownfield Cleanup Program\Environmental-study\CADD-GIS\GIS\Projects\BCP_GW_WELL_LOCATIONS.mxd



Legend

- Property Lines
- Brownfield Cleanup Program Boundary
- Area of Deep Excavation / Flowable Fill Area
- Groundwater Monitoring Well Location

Label Note

32.2' — Depth to Water (ft) from ground surface
631.265' — Groundwater Elevation below Benchmark (feet)

Property Note

1) The BCP Project Area ("Site") includes the entire western parcel [1001 Main Street (formerly 979 Main Street)] and extends approximately 40 feet east onto the adjacent eastern parcel (818 Ellicott Street). Total acreage of the BCP Project Site is 1.72 acres.

Notes

1) Coordinate System: NAD 1983 StatePlane NY West FIPS 3103
Projection: Transverse Mercator
Datum: North American 1983
Units: Foot US

2) Survey data from McIntosh & McIntosh P.C. "Topographical Map of Part of Lot-29, TWP.-11, R.-8, Holland Purchase" Job No. 7669-B(2) September 24, 2008.

0 20 40 80 Feet

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FORMER MOBIL STATION 99-MST
979 MAIN ST (1001 MAIN ST)
BROWNFIELD CLEANUP PROGRAM
BUFFALO, NEW YORK

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	K11.002.001
DATE:	December 2020
DRAWN BY:	R. BACKERT
DESIGNED BY:	C. MARTIN
CHECKED BY:	D. RIKER

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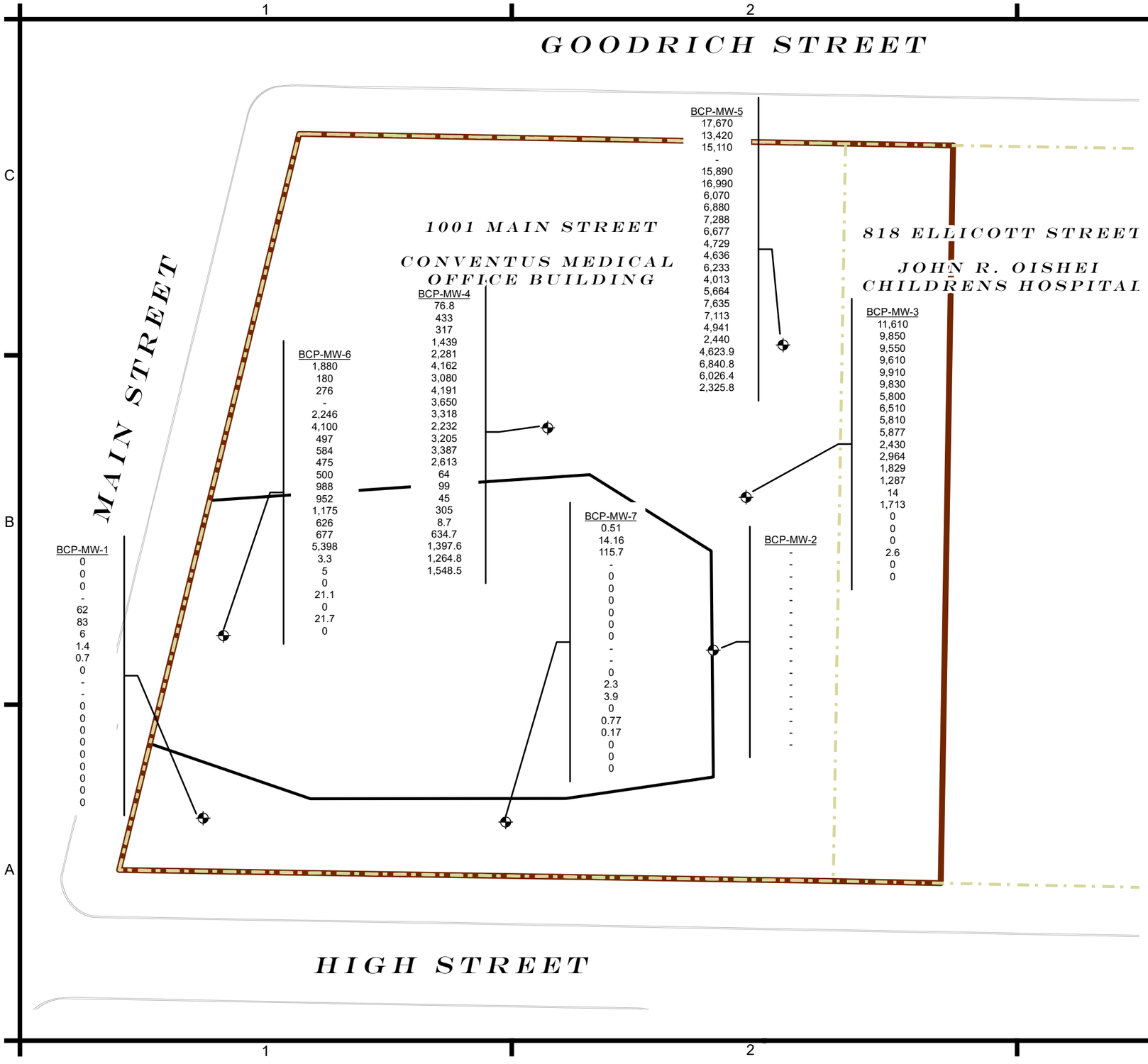
GROUNDWATER CONTOUR

FIGURE 3

Path: F:\Project\K11 - Kaleida Health\K11.005.004 - General Environmental Cleanup Services 2018-2021\Planning-Study\Reports\2021-Groundwater Monitoring Reports\May 2021\Figures\2021 ISCO_GW_CONTOURS.mxd



Legend

- Property Lines
- Brownfield Cleanup Program Boundary
- Area of Deep Excavation to -40 ft (below former ground surface)
- Groundwater Monitoring Well Location (Ground Floor of Underground Parking Garage)

Property Note

1) The BCP Project Area ("Site") includes the entire western parcel [1001 Main Street (formerly 979 Main Street)] and extends approximately 40 feet east onto the adjacent eastern parcel (818 Ellicott Street). Total acreage of the BCP Project Site is 1.72 acres.

Label Note

Total concentrations (ug/L) of benzene, toluene, ethlybenzene and xylenes ("BTEX") for each groundwater monitoring event.

BCP-MW-4	
76.8	September 2013
433	March 2014
317	May 2014
1,439	March 2015
2,281	June 2015
4,162	August 2015
3,080	December 2015
4,191	January 2016
3,650	March 2016
3,318	June 2016
2,232	October 2016
3,205	December 2016
3,387	January 2017
2,613	May 2017
64	July 2017
99	November 2017
45	August 2018
305	November 2018
8.7	July 2019
634.7	December 2019
1,390	March 2020
1,264.8	November 2020
1,548.5	May 2021

Notes

1) Elevations from New York State Erie County LiDAR Dataset, 2005, NAD 88.

2) Coordinate System: NAD 1983 StatePlane NY West FIPS 3103
Projection: Transverse Mercator
Datum: North American 1983
Units: Foot US

3) Survey data from McIntosh & McIntosh P.C. "Topographical Map of Part of Lot-29, TWP.-11, R.-8, Holland Purchase" Job No. 7669-B(2) September 24, 2008.

0 20 40 80 Feet

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FORMER MOBIL STATION 99-MST
979 MAIN ST (1001 MAIN ST)
BUFFALO, NEW YORK

MARK	DATE	DESCRIPTION
		REVISIONS

PROJECT NO: December 2020
DATE: R. BACKERT
DRAWN BY: C. MARTIN
DESIGNED BY: D. RIKER
CHECKED BY:

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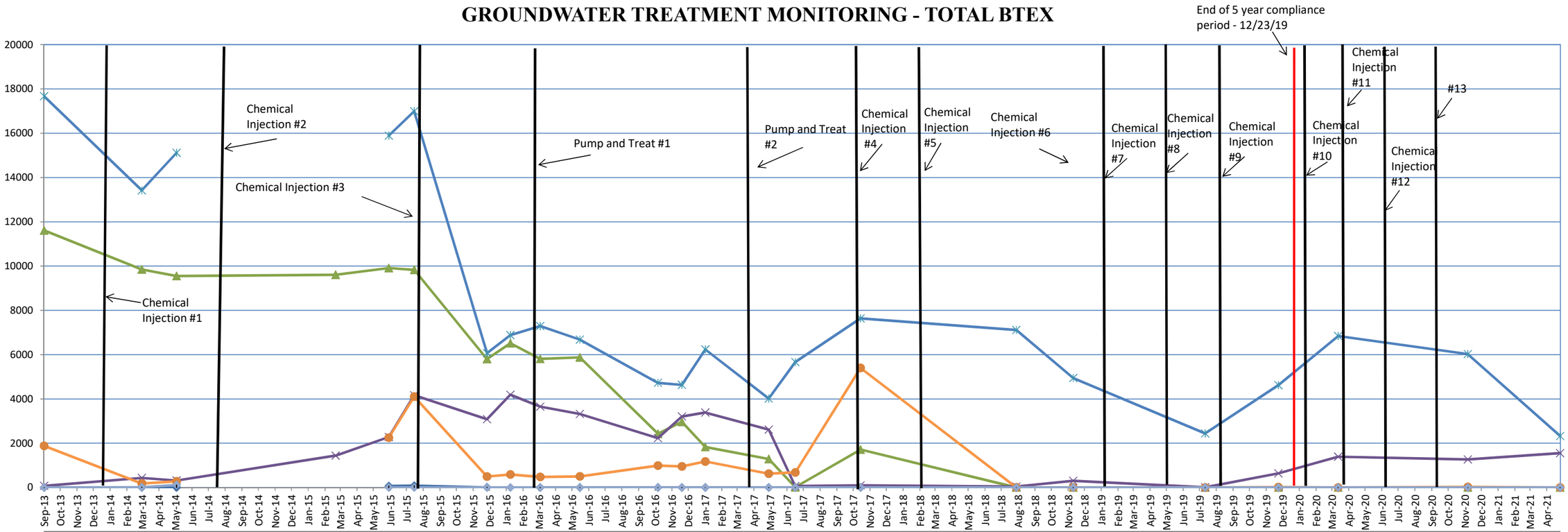
HISTORIC BTEX CONCENTRATIONS

FIGURE 4

Path: F:\Project\U86 - Seavest Core Buffalo Conventus, LLC\U86001004 - Conventus 2021 Groundwater remediation\Planning-Study\Reports\May 2021\Figures\2021 Historic_GW_Results Figure 4.mxd

GROUNDWATER TREATMENT MONITORING - TOTAL BTEX



	9/20/2013	3/19/2014	5/22/2014	3/11/2015	6/17/2015	8/3/2015	12/15/2015	1/27/2016	3/22/2016	6/3/2016	10/25/2016	12/8/2016	1/20/2017	5/17/2017	7/5/2017	11/2/2017	8/16/2018	11/29/2018	7/30/2019	12/12/2019	3/31/2020	11/25/2020	5/14/2021
BCP MW-1	0	0	0		62	83	6.25		1	1	-	-	-	-	-	-	-	-	0	0	0	0	0
BCP MW-2																							
BCP MW-3	11,610	9,850	9,550	9,610	9,910	9,830	5,800	6,510	5,810	5,877	2,430	2,964	1,829	1,287	14	1,713	-	0	0	2.6	0	0	0
BCP MW-4	76.8	433	317	1,439	2,281	4,162	3,080	4,191	3,650	3,318	2,232	3,205	3,387	2,613	64	99	45	305	8.7	634.7	1,390	1,264.80	1548.5
BCP MW-5	17,670	13,420	15,110		15,890	16,990	6,070	6,880	7,288	6,677	4,729	4,636	6,233	4,013	5,664	7,635	7,113	4,941	2,440	4,623.90	6,840.80	6,026.40	2,325.80
BCP MW-6	1,880	180	276		2,246	4,100	497	584	475	500	988	952	1,175	626	677	5,398	3	5	0	21.1	0	21.7	0
BCP MW-7	1	14.16	115.7		0	0	0	-	-	-	-	-	-	-	2.3	3.9	1.8	0	0.77	0.17	0	0	0

APPENDICES

APPENDIX A
LABORATORY ANALYTICAL RESULTS

ANALYTICAL REPORT

Lab Number:	L2125478
Client:	C&S Companies 141 Elm Street, Suite 100 Buffalo, NY 14203
ATTN:	Cody Martin
Phone:	(716) 847-1630
Project Name:	CONVENTUS
Project Number:	U86
Report Date:	06/01/21

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

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

Project Name: CONVENTUS
Project Number: U86

Lab Number: L2125478
Report Date: 06/01/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2125478-01	BCP-MW-1	WATER	CONVENTUS / MAIN ST. BUFFALO, NY	05/14/21 08:35	05/14/21
L2125478-02	BCP-MW-3	WATER	CONVENTUS / MAIN ST. BUFFALO, NY	05/14/21 12:05	05/14/21
L2125478-03	BCP-MW-4	WATER	CONVENTUS / MAIN ST. BUFFALO, NY	05/14/21 12:40	05/14/21
L2125478-04	BCP-MW-5	WATER	CONVENTUS / MAIN ST. BUFFALO, NY	05/14/21 11:25	05/14/21
L2125478-05	BCP-MW-6	WATER	CONVENTUS / MAIN ST. BUFFALO, NY	05/14/21 09:10	05/14/21
L2125478-06	BCP-MW-7	WATER	CONVENTUS / MAIN ST. BUFFALO, NY	05/14/21 10:00	05/14/21
L2125478-07	TRIP BLANK	WATER	CONVENTUS / MAIN ST. BUFFALO, NY	05/14/21 00:00	05/14/21

Project Name:	CONVENTUS	**Lab Number:**	L2125478
Project Number:	U86	**Report Date:**	06/01/21

Case Narrative

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

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

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

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

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

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

Project Name:	CONVENTUS	**Lab Number:**	L2125478
Project Number:	U86	**Report Date:**	06/01/21

Case Narrative (continued)

Report Submission

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

Volatile Organics

L2125478-04D was received in the proper acid-preserved containers; however, upon analysis, the pH was determined to be greater than 2, and thus the method required holding time was exceeded.

L2125478-05 was received in the proper acid-preserved containers; however, upon analysis, the pH was determined to be greater than 2, and thus the method required holding time was exceeded.

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: 06/01/21

ORGANICS

VOLATILES

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

SAMPLE RESULTS

Lab ID: L2125478-01
Client ID: BCP-MW-1
Sample Location: CONVENTUS / MAIN ST. BUFFALO, NY

Date Collected: 05/14/21 08:35
Date Received: 05/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/25/21 13:35
Analyst: LAC

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

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

SAMPLE RESULTS

Lab ID: L2125478-01 Date Collected: 05/14/21 08:35

Client ID: BCP-MW-1 Date Received: 05/14/21

Sample Location: CONVENTUS / MAIN ST. BUFFALO, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	1.8	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	1.4	J	ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	1.6	J	ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	108		70-130

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

SAMPLE RESULTS

Lab ID: L2125478-02
Client ID: BCP-MW-3
Sample Location: CONVENTUS / MAIN ST. BUFFALO, NY

Date Collected: 05/14/21 12:05
Date Received: 05/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/25/21 14:02
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	0.20	J	ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

SAMPLE RESULTS

Lab ID: L2125478-02 Date Collected: 05/14/21 12:05

Client ID: BCP-MW-3 Date Received: 05/14/21

Sample Location: CONVENTUS / MAIN ST. BUFFALO, NY Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	112		70-130

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

SAMPLE RESULTS

Lab ID: L2125478-03 D
Client ID: BCP-MW-4
Sample Location: CONVENTUS / MAIN ST. BUFFALO, NY

Date Collected: 05/14/21 12:40
Date Received: 05/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/26/21 12:39
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	25	7.0	10
1,1-Dichloroethane	ND		ug/l	25	7.0	10
Chloroform	ND		ug/l	25	7.0	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
1,2-Dichloropropane	ND		ug/l	10	1.4	10
Dibromochloromethane	ND		ug/l	5.0	1.5	10
1,1,2-Trichloroethane	ND		ug/l	15	5.0	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	25	7.0	10
Trichlorofluoromethane	ND		ug/l	25	7.0	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
1,1,1-Trichloroethane	ND		ug/l	25	7.0	10
Bromodichloromethane	ND		ug/l	5.0	1.9	10
trans-1,3-Dichloropropene	ND		ug/l	5.0	1.6	10
cis-1,3-Dichloropropene	ND		ug/l	5.0	1.4	10
Bromoform	ND		ug/l	20	6.5	10
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	1.7	10
Benzene	8.5		ug/l	5.0	1.6	10
Toluene	22	J	ug/l	25	7.0	10
Ethylbenzene	1100		ug/l	25	7.0	10
Chloromethane	ND		ug/l	25	7.0	10
Bromomethane	ND		ug/l	25	7.0	10
Vinyl chloride	ND		ug/l	10	0.71	10
Chloroethane	ND		ug/l	25	7.0	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
trans-1,2-Dichloroethene	ND		ug/l	25	7.0	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,2-Dichlorobenzene	ND		ug/l	25	7.0	10

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

SAMPLE RESULTS

Lab ID: L2125478-03 D Date Collected: 05/14/21 12:40

Client ID: BCP-MW-4 Date Received: 05/14/21

Sample Location: CONVENTUS / MAIN ST. BUFFALO, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	25	7.0	10
1,4-Dichlorobenzene	ND		ug/l	25	7.0	10
Methyl tert butyl ether	ND		ug/l	25	7.0	10
p/m-Xylene	400		ug/l	25	7.0	10
o-Xylene	18	J	ug/l	25	7.0	10
cis-1,2-Dichloroethene	ND		ug/l	25	7.0	10
Styrene	ND		ug/l	25	7.0	10
Dichlorodifluoromethane	ND		ug/l	50	10.	10
Acetone	ND		ug/l	50	15.	10
Carbon disulfide	ND		ug/l	50	10.	10
2-Butanone	ND		ug/l	50	19.	10
4-Methyl-2-pentanone	ND		ug/l	50	10.	10
2-Hexanone	ND		ug/l	50	10.	10
1,2-Dibromoethane	ND		ug/l	20	6.5	10
n-Butylbenzene	9.7	J	ug/l	25	7.0	10
sec-Butylbenzene	ND		ug/l	25	7.0	10
tert-Butylbenzene	ND		ug/l	25	7.0	10
1,2-Dibromo-3-chloropropane	ND		ug/l	25	7.0	10
Isopropylbenzene	27		ug/l	25	7.0	10
p-Isopropyltoluene	ND		ug/l	25	7.0	10
Naphthalene	320		ug/l	25	7.0	10
n-Propylbenzene	160		ug/l	25	7.0	10
1,2,4-Trichlorobenzene	ND		ug/l	25	7.0	10
1,3,5-Trimethylbenzene	8.4	J	ug/l	25	7.0	10
1,2,4-Trimethylbenzene	1500		ug/l	25	7.0	10
Methyl Acetate	ND		ug/l	20	2.3	10
Cyclohexane	160		ug/l	100	2.7	10
Freon-113	ND		ug/l	25	7.0	10
Methyl cyclohexane	44	J	ug/l	100	4.0	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	97		70-130

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

SAMPLE RESULTS

Lab ID: L2125478-04 D
Client ID: BCP-MW-5
Sample Location: CONVENTUS / MAIN ST. BUFFALO, NY

Date Collected: 05/14/21 11:25
Date Received: 05/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/25/21 14:57
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	25	7.0	10
1,1-Dichloroethane	ND		ug/l	25	7.0	10
Chloroform	ND		ug/l	25	7.0	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
1,2-Dichloropropane	ND		ug/l	10	1.4	10
Dibromochloromethane	ND		ug/l	5.0	1.5	10
1,1,2-Trichloroethane	ND		ug/l	15	5.0	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	25	7.0	10
Trichlorofluoromethane	ND		ug/l	25	7.0	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
1,1,1-Trichloroethane	ND		ug/l	25	7.0	10
Bromodichloromethane	ND		ug/l	5.0	1.9	10
trans-1,3-Dichloropropene	ND		ug/l	5.0	1.6	10
cis-1,3-Dichloropropene	ND		ug/l	5.0	1.4	10
Bromoform	ND		ug/l	20	6.5	10
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	1.7	10
Benzene	ND		ug/l	5.0	1.6	10
Toluene	16	J	ug/l	25	7.0	10
Ethylbenzene	770		ug/l	25	7.0	10
Chloromethane	ND		ug/l	25	7.0	10
Bromomethane	ND		ug/l	25	7.0	10
Vinyl chloride	ND		ug/l	10	0.71	10
Chloroethane	ND		ug/l	25	7.0	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
trans-1,2-Dichloroethene	ND		ug/l	25	7.0	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,2-Dichlorobenzene	ND		ug/l	25	7.0	10

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

SAMPLE RESULTS

Lab ID: L2125478-04 D Date Collected: 05/14/21 11:25

Client ID: BCP-MW-5 Date Received: 05/14/21

Sample Location: CONVENTUS / MAIN ST. BUFFALO, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	25	7.0	10
1,4-Dichlorobenzene	ND		ug/l	25	7.0	10
Methyl tert butyl ether	ND		ug/l	25	7.0	10
p/m-Xylene	1500		ug/l	25	7.0	10
o-Xylene	34		ug/l	25	7.0	10
cis-1,2-Dichloroethene	ND		ug/l	25	7.0	10
Styrene	ND		ug/l	25	7.0	10
Dichlorodifluoromethane	ND		ug/l	50	10.	10
Acetone	45	J	ug/l	50	15.	10
Carbon disulfide	ND		ug/l	50	10.	10
2-Butanone	ND		ug/l	50	19.	10
4-Methyl-2-pentanone	ND		ug/l	50	10.	10
2-Hexanone	ND		ug/l	50	10.	10
1,2-Dibromoethane	ND		ug/l	20	6.5	10
n-Butylbenzene	ND		ug/l	25	7.0	10
sec-Butylbenzene	ND		ug/l	25	7.0	10
tert-Butylbenzene	ND		ug/l	25	7.0	10
1,2-Dibromo-3-chloropropane	ND		ug/l	25	7.0	10
Isopropylbenzene	13	J	ug/l	25	7.0	10
p-Isopropyltoluene	ND		ug/l	25	7.0	10
Naphthalene	430		ug/l	25	7.0	10
n-Propylbenzene	64		ug/l	25	7.0	10
1,2,4-Trichlorobenzene	ND		ug/l	25	7.0	10
1,3,5-Trimethylbenzene	99		ug/l	25	7.0	10
1,2,4-Trimethylbenzene	1200		ug/l	25	7.0	10
Methyl Acetate	ND		ug/l	20	2.3	10
Cyclohexane	130		ug/l	100	2.7	10
Freon-113	ND		ug/l	25	7.0	10
Methyl cyclohexane	60	J	ug/l	100	4.0	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	100		70-130

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

SAMPLE RESULTS

Lab ID: L2125478-05
Client ID: BCP-MW-6
Sample Location: CONVENTUS / MAIN ST. BUFFALO, NY

Date Collected: 05/14/21 09:10
Date Received: 05/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/25/21 15:24
Analyst: NLK

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

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

SAMPLE RESULTS

Lab ID: L2125478-05 Date Collected: 05/14/21 09:10

Client ID: BCP-MW-6 Date Received: 05/14/21

Sample Location: CONVENTUS / MAIN ST. BUFFALO, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	1.1	J	ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	3.9		ug/l	2.5	0.70	1
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	2.0	J	ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	107		70-130

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

SAMPLE RESULTS

Lab ID: L2125478-06 Date Collected: 05/14/21 10:00

Client ID: BCP-MW-7 Date Received: 05/14/21

Sample Location: CONVENTUS / MAIN ST. BUFFALO, NY Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 05/25/21 15:52

Analyst: NLK

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

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

SAMPLE RESULTS

Lab ID: L2125478-06 Date Collected: 05/14/21 10:00

Client ID: BCP-MW-7 Date Received: 05/14/21

Sample Location: CONVENTUS / MAIN ST. BUFFALO, NY Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	105		70-130

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

SAMPLE RESULTS

Lab ID: L2125478-07
Client ID: TRIP BLANK
Sample Location: CONVENTUS / MAIN ST. BUFFALO, NY

Date Collected: 05/14/21 00:00
Date Received: 05/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/25/21 16:19
Analyst: NLK

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

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

SAMPLE RESULTS

Lab ID: L2125478-07 Date Collected: 05/14/21 00:00

Client ID: TRIP BLANK Date Received: 05/14/21

Sample Location: CONVENTUS / MAIN ST. BUFFALO, NY Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	111		70-130

Project Name: CONVENTUS
Project Number: U86

Lab Number: L2125478
Report Date: 06/01/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/25/21 09:29
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02,04-07 Batch: WG1503972-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: CONVENTUS
Project Number: U86

Lab Number: L2125478
Report Date: 06/01/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/25/21 09:29
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02,04-07 Batch: WG1503972-5					
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
1,2-Dibromoethane	ND		ug/l	2.0	0.65
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Cyclohexane	ND		ug/l	10	0.27
Freon-113	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.40

Project Name: CONVENTUS
Project Number: U86

Lab Number: L2125478
Report Date: 06/01/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/25/21 09:29
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02,04-07 Batch: WG1503972-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	114		70-130

Project Name: CONVENTUS
Project Number: U86

Lab Number: L2125478
Report Date: 06/01/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/26/21 09:56
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1504113-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70

Project Name: CONVENTUS
Project Number: U86

Lab Number: L2125478
Report Date: 06/01/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/26/21 09:56
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1504113-5					
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
1,2-Dibromoethane	ND		ug/l	2.0	0.65
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Cyclohexane	ND		ug/l	10	0.27
Freon-113	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.40

Project Name: CONVENTUS
Project Number: U86

Lab Number: L2125478
Report Date: 06/01/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/26/21 09:56
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1504113-5					

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

Lab Control Sample Analysis
Batch Quality Control

Project Name: CONVENTUS
Project Number: U86

Lab Number: L2125478
Report Date: 06/01/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02,04-07 Batch: WG1503972-3 WG1503972-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	120		120		70-130	0		20
Chloroform	110		120		70-130	9		20
Carbon tetrachloride	95		97		63-132	2		20
1,2-Dichloropropane	120		120		70-130	0		20
Dibromochloromethane	100		100		63-130	0		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	110		110		75-130	0		20
Trichlorofluoromethane	98		100		62-150	2		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	100		110		67-130	10		20
Bromodichloromethane	110		110		67-130	0		20
trans-1,3-Dichloropropene	98		96		70-130	2		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
Bromoform	93		95		54-136	2		20
1,1,2,2-Tetrachloroethane	110		120		67-130	9		20
Benzene	110		110		70-130	0		20
Toluene	110		110		70-130	0		20
Ethylbenzene	110		100		70-130	10		20
Chloromethane	110		110		64-130	0		20
Bromomethane	70		71		39-139	1		20
Vinyl chloride	100		100		55-140	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: CONVENTUS
Project Number: U86

Lab Number: L2125478
Report Date: 06/01/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02,04-07 Batch: WG1503972-3 WG1503972-4								
Chloroethane	95		90		55-138	5		20
1,1-Dichloroethene	110		110		61-145	0		20
trans-1,2-Dichloroethene	110		110		70-130	0		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	110		100		70-130	10		20
Methyl tert butyl ether	94		96		63-130	2		20
p/m-Xylene	105		105		70-130	0		20
o-Xylene	110		110		70-130	0		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Styrene	110		110		70-130	0		20
Dichlorodifluoromethane	75		74		36-147	1		20
Acetone	**160**	Q	**170**	Q	58-148	6		20
Carbon disulfide	110		110		51-130	0		20
2-Butanone	110		130		63-138	17		20
4-Methyl-2-pentanone	110		120		59-130	9		20
2-Hexanone	110		110		57-130	0		20
1,2-Dibromoethane	100		110		70-130	10		20
n-Butylbenzene	110		110		53-136	0		20
sec-Butylbenzene	100		100		70-130	0		20
tert-Butylbenzene	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	93		97		41-144	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: CONVENTUS
Project Number: U86

Lab Number: L2125478
Report Date: 06/01/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02,04-07 Batch: WG1503972-3 WG1503972-4								
Isopropylbenzene	99		98		70-130	1		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	84		87		70-130	4		20
n-Propylbenzene	100		100		69-130	0		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	100		100		64-130	0		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
Methyl Acetate	130		130		70-130	0		20
Cyclohexane	120		120		70-130	0		20
Freon-113	110		110		70-130	0		20
Methyl cyclohexane	100		100		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	110		113		70-130
Toluene-d8	103		104		70-130
4-Bromofluorobenzene	101		102		70-130
Dibromofluoromethane	106		108		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: CONVENTUS
Project Number: U86

Lab Number: L2125478
Report Date: 06/01/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1504113-3 WG1504113-4								
Methylene chloride	100		100		70-130	0		20
1,1-Dichloroethane	110		100		70-130	10		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	79		76		63-132	4		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	100		100		63-130	0		20
1,1,2-Trichloroethane	120		120		70-130	0		20
Tetrachloroethene	93		90		70-130	3		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	81		78		62-150	4		20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	91		88		67-130	3		20
Bromodichloromethane	100		100		67-130	0		20
trans-1,3-Dichloropropene	92		97		70-130	5		20
cis-1,3-Dichloropropene	94		96		70-130	2		20
Bromoform	95		100		54-136	5		20
1,1,2,2-Tetrachloroethane	120		120		67-130	0		20
Benzene	100		100		70-130	0		20
Toluene	100		98		70-130	2		20
Ethylbenzene	97		96		70-130	1		20
Chloromethane	97		90		64-130	7		20
Bromomethane	56		58		39-139	4		20
Vinyl chloride	84		81		55-140	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: CONVENTUS
Project Number: U86

Lab Number: L2125478
Report Date: 06/01/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1504113-3 WG1504113-4								
Chloroethane	78		71		55-138	9		20
1,1-Dichloroethene	90		86		61-145	5		20
trans-1,2-Dichloroethene	97		94		70-130	3		20
Trichloroethene	90		87		70-130	3		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	100		100		70-130	0		20
Methyl tert butyl ether	89		96		63-130	8		20
p/m-Xylene	100		100		70-130	0		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	100		95		70-130	5		20
Styrene	105		105		70-130	0		20
Dichlorodifluoromethane	57		56		36-147	2		20
Acetone	**160**	Q	140		58-148	13		20
Carbon disulfide	92		88		51-130	4		20
2-Butanone	120		120		63-138	0		20
4-Methyl-2-pentanone	120		130		59-130	8		20
2-Hexanone	120		130		57-130	8		20
1,2-Dibromoethane	110		110		70-130	0		20
n-Butylbenzene	98		98		53-136	0		20
sec-Butylbenzene	95		95		70-130	0		20
tert-Butylbenzene	94		92		70-130	2		20
1,2-Dibromo-3-chloropropane	100		100		41-144	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONVENTUS
Project Number: U86

Lab Number: L2125478
Report Date: 06/01/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1504113-3 WG1504113-4								
Isopropylbenzene	93		89		70-130	4		20
p-Isopropyltoluene	94		91		70-130	3		20
Naphthalene	91		98		70-130	7		20
n-Propylbenzene	97		94		69-130	3		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	97		96		64-130	1		20
1,2,4-Trimethylbenzene	100		98		70-130	2		20
Methyl Acetate	130		130		70-130	0		20
Cyclohexane	93		90		70-130	3		20
Freon-113	84		82		70-130	2		20
Methyl cyclohexane	81		78		70-130	4		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	107		105		70-130
Toluene-d8	103		104		70-130
4-Bromofluorobenzene	100		99		70-130
Dibromofluoromethane	102		98		70-130

Project Name: CONVENTUS
Project Number: U86

Lab Number: L2125478
Report Date: 06/01/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2125478-01A	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-01B	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-01C	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-02A	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-02B	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-02C	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-03A	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-03B	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-03C	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-04A	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-04B	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-04C	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-05A	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-05B	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-05C	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-06A	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-06B	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-06C	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-07A	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)
L2125478-07B	Vial HCl preserved	A	NA		2.7	Y	Absent		NYTCL-8260-R2(14)

*Values in parentheses indicate holding time in days

Project Name: CONVENTUS **Lab Number:** L2125478

Project Number: U86 **Report Date:** 06/01/21

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	CONVENTUS	**Lab Number:**	L2125478
Project Number:	U86	**Report Date:**	06/01/21

Footnotes

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

Terms

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

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

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

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

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

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

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). 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:	CONVENTUS	**Lab Number:**	L2125478
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Data Qualifiers

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Project Name:	CONVENTUS	**Lab Number:**	L2125478
Project Number:	U86	**Report Date:**	06/01/21

REFERENCES

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

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

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

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

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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

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

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

Page 1 of 1

Date Rec'd in Lab: 05/15/21

ALPHA Job #: L2125478

Client Information

Client: C&S Engineers, Inc.
Address: 141 Elm. St.
Buffalo, NY 14203
Phone: (716) 864-3752
Fax:
Email: cmartin@cscos.com

Project Information

Project Name: Conventus
Project Location: Conventus / Main St. Buffalo, NY
Project #
(Use Project name as Project #) ☐
Project Manager: Cody Martin
ALPHAQuote #:

Turn-Around Time

Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

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

Regulatory Requirement

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

Billing Information

☑ Same as Client Info
PO #

Disposal Site Information

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

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC TCL 8260	Sample Specific Comments	Total # Bottles
25478-01	BCP-MW-1	5/14/2021	0835	GW	ES/CB	X		3
	~~BCP-MW-2~~	~~5/14/2021~~		~~GW~~		~~X~~	Could Not open well	3
02	BCP-MW-3	5/14/2021	12:05	GW		X		3
03	BCP-MW-4	5/14/2021	12:40	GW		X		3
04	BCP-MW-5	5/14/2021	11:25	GW		X		3
05	BCP-MW-6	5/14/2021	0910	GW		X		3
06	BCP-MW-7	5/14/2021	10:00	GW		X		3
07	Trip Blank					X		2

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

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

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

Container Type: V
Preservative: B

Relinquished By:	Date/Time	Received By:	Date/Time
AHL	5/14/21 1310		5/15/21 00:50

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.

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

APPENDIX B

GROUNDWATER MONITORING CONSTRUCTION & SAMPLING LOGS

APPENDIX C

EXAMPLE (Minimum Requirements)

WELL PURGING-FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) Conventus
Well Number MW-1 Date 5/14/21
Field Personnel ES/CB
Sampling Organization Alpha
Identify MP

Depth to 8.50ft / 15.25f of screen (below MP) top bottom
Pump Intake at (ft. below MP)
Purging Device; (pump type) Geo Pump
Total Volume Purged ~1/2 gal

Clock Time 24 HR	Water Depth below MP ft	Pump Dial[1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp. "C	Spec. Cond.[2] µS/cm	pH	ORP[3] mv	DO mg/L	Tur-bidity NTU	Comments
0810	8.50	1/4	100mL		11.2	7.416	7.00	104.0	0.69	22.14	
0815	8.55				11.2	7.431	6.99	99.2	0.52	20.09	
0820	8.56				11.1	7.463	6.98	89.1	0.38	16.25	
0825	8.56				11.1	7.459	6.97	73.7	0.31	12.90	
0830	8.56				11.1	7.450	6.96	73.1	0.30	13.10	
0835	8.55				11.1	7.455	6.96	72.8	0.29	12.83	
Stabilization Criteria					3%	3%	±0.1	±10 mv	10%	10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. µSiemens per cm(same as µmhos/cm)at 25°C.
3. Oxidation reduction potential (ORP)

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APPENDIX C

EXAMPLE (Minimum Requirements)

WELL PURGING-FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) Conventus
Well Number MW-3 Date 5/14/21
Field Personnel ES / CB
Sampling Organization Alpha
Identify MP

Depth to 7.50 / 15.10 of screen (below MP) top bottom
Pump Intake at (ft. below MP)
Purging Device; (pump type) Geo Pump
Total Volume Purged ~1/2 gal

Clock Time 24 HR	Water Depth below MP ft	Pump Dial[1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp. °C	Spec. Cond.[2] µS/cm	pH	ORP[3] mv	DO mg/L	Tur-bidity NTU	Comments
11:35	7.50	1/4	100mL		13.2	8.568	9.49	116.7	3.67	276.39	6inch MW
11:40	7.50	"	"		13.1	8.541	9.49	125.6	3.66	88.21	
11:45	7.50	"	"		13.1	8.530	9.49	130.9	3.66	84.31	
11:50	"	"	"		13.1	8.516	9.50	139.9	3.65	60.49	
11:55	"	"	"		13.1	8.512	9.50	140.2	3.65	59.86	
12:00					13.1	8.509	9.51	140.8	3.65	59.12	
12:05					13.1	8.506	9.51	140.6	3.65	59.76	
Stabilization Criteria					3%	3%	±0.1	±10 mv	10%	10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. µSiemens per cm(same as µmhos/cm)at 25°C.
3. Oxidation reduction potential (ORP)

Scanned with CamScanner

APPENDIX C

EXAMPLE (Minimum Requirements)

WELL PURGING-FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) Convatus
Well Number MW-4 Date 5/14/21
Field Personnel ES/CB
Sampling Organization Alpha
Identify MP

Depth to 7.90 / 14.95 of screen
(below MP) top bottom
Pump Intake at (ft. below MP)
Purging Device; (pump type) Geo Pump
Total Volume Purged ~1/2 gal

Clock Time 24 HR	Water Depth below MP ft	Pump Dial[1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp. °C	Spec. Cond.[2] µS/cm	pH	ORP[3] mv	DO mg/L	Tur-bidity NTU	Comments
12:15	7.90	1/4	100mL		12.5	3.305	8.68	-171.9	0.42	1.24	
12:20	7.90				12.5	3.263	8.68	-210.8	0.35	3.05	
12:25	7.91				12.5	3.225	8.66	-251.7	0.26	3.40	
12:30	7.92				12.5	3.216	8.66	-252.9	0.25	1.57	
12:35	7.91				12.5	3.214	8.66	-251.2	0.26	1.29	
12:40	7.91				12.5	3.210	8.65	-250.7	0.25	2.20	
Stabilization Criteria					3%	3%	±0.1	±10 mv	10%	10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. µSiemens per cm(same as µmhos/cm)at 25°C.
3. Oxidation reduction potential (ORP)

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APPENDIX C

EXAMPLE (Minimum Requirements)

WELL PURGING-FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) Conventus
Well Number MW-5 Date 5/14/21
Field Personnel ES / CB
Sampling Organization Alpha
Identify MP

Depth to 8.40 / 15.15 of screen (below MP) top bottom
Pump Intake at (ft. below MP)
Purging Device; (pump type) Geo Pump
Total Volume Purged ~1/2 gal

Clock Time 24 HR	Water Depth below MP ft	Pump Dial[1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp. "C	Spec. Cond.[2] µS/cm	pH	ORP[3] mv	DO mg/L	Tur-bidity NTU	Comments
10:55	8.40	1/4	100mL		12.6	17.113	8.86	-121.3	0.35	17.38	
11:00	8.42	"	"		12.5	18.503	8.92	-134.5	0.31	18.92	
11:05	8.40	"	"		12.6	20.085	8.98	-149.6	0.27	19.84	
11:10	8.40	"	"		12.6	21.197	9.00	-169.8	0.23	17.83	
11:15	8.40	"	"		12.6	21.210	9.01	-170.2	0.23	17.61	
11:20	8.40	"	"		12.6	21.297	9.00	-170.9	0.22	17.85	
11:25	8.40				12.6	21.251	9.01	-169.7	0.22	17.26	
Stabilization Criteria					3%	3%	±0.1	±10 mv	10%	10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. µSiemens per cm(same as µmhos/cm)at 25°C.
3. Oxidation reduction potential (ORP)

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APPENDIX C

EXAMPLE (Minimum Requirements)

WELL PURGING-FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) Conventus
Well Number MW-6 Date 5/14/21
Field Personnel ES/CB
Sampling Organization Alpha
Identify MP

Depth to 8.50 / 13.80 of screen
(below MP) top bottom
Pump Intake at (ft. below MP)
Purging Device; (pump type) Geo Pump
Total Volume Purged ~ 1/4 gal

Clock Time 24 HR	Water Depth below MP ft	Pump Dial[1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp. °C	Spec. Cond.[2] µS/cm	pH	ORP[3] mv	DO mg/L	Tur-bidity NTU	Comments
0850	8.50	1/4	100mL		12.5	10.175	9.36	267.5	8.18	18.14	
0855	8.50				12.4	10.324	9.41	257.1	8.02	10.28	
0900	8.50				12.4	10.364	9.42	255.3	7.99	9.93	
0905	8.50				12.4	10.367	9.42	255.7	7.98	10.12	
0910	8.50				12.4	10.369	9.42	255.4	7.98	10.07	
Stabilization Criteria					3%	3%	±0.1	±10 mv	10%	10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. µSiemens per cm(same as µmhos/cm)at 25°C.
3. Oxidation reduction potential (ORP)

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APPENDIX C

EXAMPLE (Minimum Requirements)

WELL PURGING-FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) Conentus
Well Number MW-7 Date 5/14/21
Field Personnel ES/CB
Sampling Organization Alpha
Identify MP

Depth to 10.85 / 14.95 of screen (below MP) top bottom
Pump Intake at (ft. below MP)
Purging Device; (pump type) Geo Pump
Total Volume Purged ~1/2 gal

Clock Time 24 HR	Water Depth below MP ft	Pump Dial[1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp. "C	Spec. Cond.[2] µS/cm	pH	ORP[3] mv	DO mg/L	Tur-bidity NTU	Comments
0930	10.85	1/4	100mL		12.2	3.856	7.26	151.8	7.29	44.51	
0935	10.85				12.2	4.082	7.11	211.3	3.66	68.03	
0940	10.85				12.1	4.221	7.07	261.2	1.84	39.50	
0945	10.85				12.1	4.240	7.07	268.5	1.77	35.10	
0955	10.85				12.0	4.251	7.06	266.8	1.78	32.80	
1000	10.85				12.0	4.255	7.06	265.6	1.77	33.41	
Stabilization Criteria					3%	3%	±0.1	±10 mv	10%	10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. µSiemens per cm(same as µmhos/cm)at 25°C.
3. Oxidation reduction potential (ORP)

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C&S Engineers, Inc.
90 Broadway
Buffalo, New York 14203
Phone: 716-847-1630
Fax: 716-847-1454
www.cscos.com

BORING LOG

Boring No.	**MW-01**
Sheet 1 of:	1
Project No.:	K11.002.001
Surface Elev.:	
Datum:	6. Surface
Start Date:	8/15/13
Finish Date:	8/15/13
Inspector:	N. Wohlabaugh

Project Name:	Main St ROW Investigation							
Location:	MOB - Buffalo, NY							
Client:	Kaleida Health							
Drilling Firm:	SJB			**Driller:**	**Tony**			
Groundwater	**Depth**	**Date & Time**		**Drill Rig:**	CME 45C			
While Drilling:				**Casing:**		**Rock Core:**	**Undist:**	
Before Casing Removal:				**Sampler:**		**Other:**		
After Casing Removal:				**Hammer:**	Auto			

(N -- No. of blows to drive sampler 12" w/140 lb. hammer falling 30" ASTM D-1586, Standard Penetration Test)

Depth (ft)	Sample No.	Symbol	Blows on Sampler per 6"	MATERIAL DESCRIPTION (c - coarse, m - medium, f - fine; a - and - 35-50%, s - some - 20-35%, l - little - 10-20%, t - trace - 0-10%; S - Sand, $ - Silt, G - Gravel, C - Clay, cly - clayey)	COMMENTS (e.g., N-value, recovery, relative moisture, core run, RQD, % recovered)
			5		Start: 12:15 PM
1			4	***Crushed Stone (dry)***	12" rec
			9		0.2 ppm
2			10		
			6		
3			6	***Crushed Stone (dry)***	15" rec
			8	***Silt (red/brown - dry)***	0.2 ppm
4			8		
			11		
5			12	***Silt (red/brown - moist)***	13" rec
			15		2.5 ppm
6			18		
			16		
7			22	***Silt (red/brown - saturated)***	24" rec
			22	***Gravel (fine - medium grey - saturated)***	0 ppm
8			24		
			13		
9			19	***Gravel (medium fine - medium grey - saturated)***	18" rec
			19	***Silt (saturated)***	15.3 ppm
10			22		
			7		
11			18	***Gravel (medium fine - medium grey - saturated)***	17" rec
			18	***Silt (saturated)***	229 ppm
12			28		
13			50/4	***Gravel (medium fine - medium grey - saturated)***	5" rec
					16..3 ppm
14					
			16		
15			24	***Gravel (medium fine - medium grey - saturated)***	17" rec
			14		14..0 ppm
16			16		
17					
18					
19					
20					
21					
22					
23					
24					

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

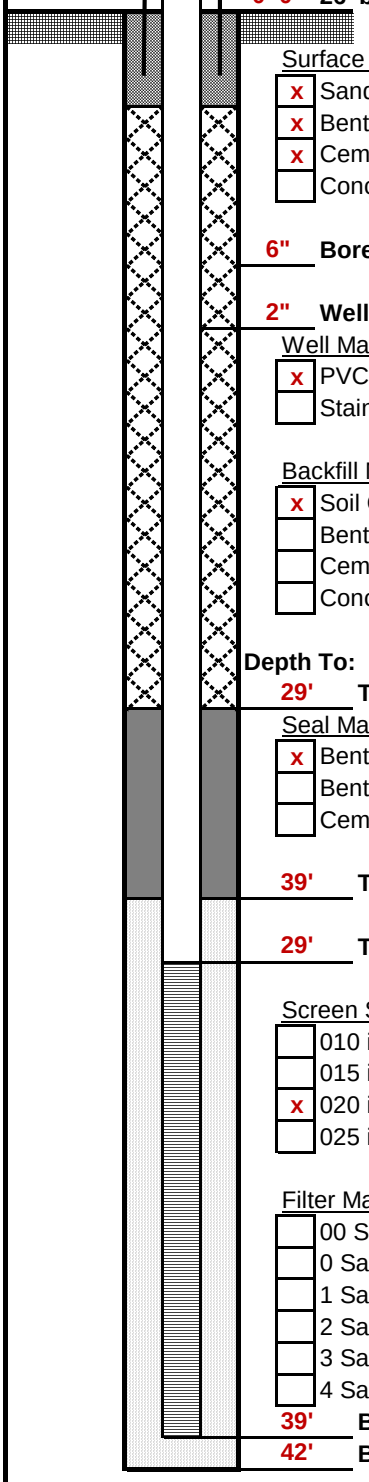
GROUNDWATER OBSERVATION WELL CONSTRUCTION LOG

Well No.	**MW-01**
Project No.:	K11.002.001
Surface Elev.:	
Datum:	26' bgs
Start Date:	8/15/13
Finish Date:	8/15/13
Inspector:	
Casing:	0

Project Name:	Main St ROW Investigation
Location:	MOB - Buffalo, NY
Client:	Kaleida Health
Drilling Firm:	SJB
Driller:	0
Drill Rig:	CME 45C

Notes: (provide description of observation well location, method of construction, development method and any other information)

The observation well was constructed in Bore Hole B-3 upon completing the soil boring to depth of 25 feet below ground surface (bgs). Hollow Stem Augers (HSA) were used as the casing and the well was constructed inside the augers. Filter pack material and seal material were poured separately down the inside of the augers while the augers were retracted. Measurements were taken to asure that neither the filter pack or seal materials were bridging between the well and HSA. The well was developed by pumping to remove fine materials.



2'-9" Top Protective Casing
2'-6" Top of Riser

0'-0" 26' bgs.

Surface Backfill Material
- [x] Sand
- [x] Bentonite Slurry
- [x] Cement/Bentonite Grout
- [ ] Concrete

6" Bore Hole Diameter

2" Well Diameter

Well Material
- [x] PVC
- [ ] Stainless Steel

Backfill Material
- [x] Soil Cuttings
- [ ] Bentonite Slurry
- [ ] Cement/Bentonite Grout
- [ ] Concrete

Depth To:

29' Top of Seal

Seal Material
- [x] Bentonite Chips/Pellets
- [ ] Bentonite Slurry
- [ ] Cement/Bentonite Grout

39' Top of Filter Pack

29' Top of Screen

Screen Slot Size
- [ ] 010 in
- [ ] 015 in
- [x] 020 in
- [ ] 025 in

Filter Material
- [ ] 00 Sand Pack
- [ ] 0 Sand Pack
- [ ] 1 Sand Pack
- [ ] 2 Sand Pack
- [ ] 3 Sand Pack
- [ ] 4 Sand Pack

39' Bottom of Screen

42' Bottom of Bore Hole

Groundwater Measurement Data

Date	Time	Depth to Water	Water Elevation	Tide Status

C&S Engineers, Inc.
90 Broadway
Buffalo, New York 14203
Phone: 716-847-1630
Fax: 716-847-1454
www.cscos.com

BORING LOG

Boring No.	**MW-02**
Sheet 1 of:	1
Project No.:	K11.002.001
Surface Elev.:	
Datum:	6. Surface
Start Date:	8/16/13
Finish Date:	8/16/13
Inspector:	N. Wohlabaugh

Project Name:	Main St ROW Investigation							
Location:	MOB - Buffalo, NY							
Client:	Kaleida Health							
Drilling Firm:	SJB			**Driller:**	**Tony**			
Groundwater	**Depth**	**Date & Time**		**Drill Rig:**	CME 45C			
While Drilling:				**Casing:**		**Rock Core:**		**Undist:**
Before Casing Removal:				**Sampler:**		**Other:**		
After Casing Removal:				**Hammer:**	Auto			

(N -- No. of blows to drive sampler 12" w/140 lb. hammer falling 30" ASTM D-1586, Standard Penetration Test)

c - coarse
m - medium
f - fine

a - and - 35-50%
s - some - 20-35%
l - little - 10-20%
t - trace - 0-10%

S - Sand, $ - Silt, G - Gravel, C - Clay, cly - clayey

Depth (ft)	Sample No.	Symbol	Blows on Sampler per 6"	MATERIAL DESCRIPTION	COMMENTS (e.g., N-value, recovery, relative moisture, core run, RQD, % recovered)
			7		Start: 9:20 AM
1			7	***Crushed Stone (grey - dry)***	6" rec
			15		0.2 ppm
2			17		
			10		
3			10	***Flowable Fill (black - dry/damp)***	6" rec
			23		0.2 ppm
4			26		
			3		
5			3	***Flowable Fill (black - dry/damp)***	24" rec
			12		3.1 ppm
6			10		
			13		
7			15	***Flowable Fill (black - dry/damp)***	24" rec
			22		5.6 ppm
8			23		
			4		
9			4	***Flowable Fill (black - damp/moist)***	24" rec
			5		4.3 ppm
10			8		
			5		
11			9	***Flowable Fill (black - damp/moist)***	20" rec
			14	***Medium Sand (Caorse - gray - moist)***	1.5 ppm
12			48		
13			3-May	***2" of Slough***	N/A
					N/A
14					
15				***Bottom of @ 13'+3' = 16' bg***	
16					
17					
18					
19					
20					
21					
22					
23					
24					

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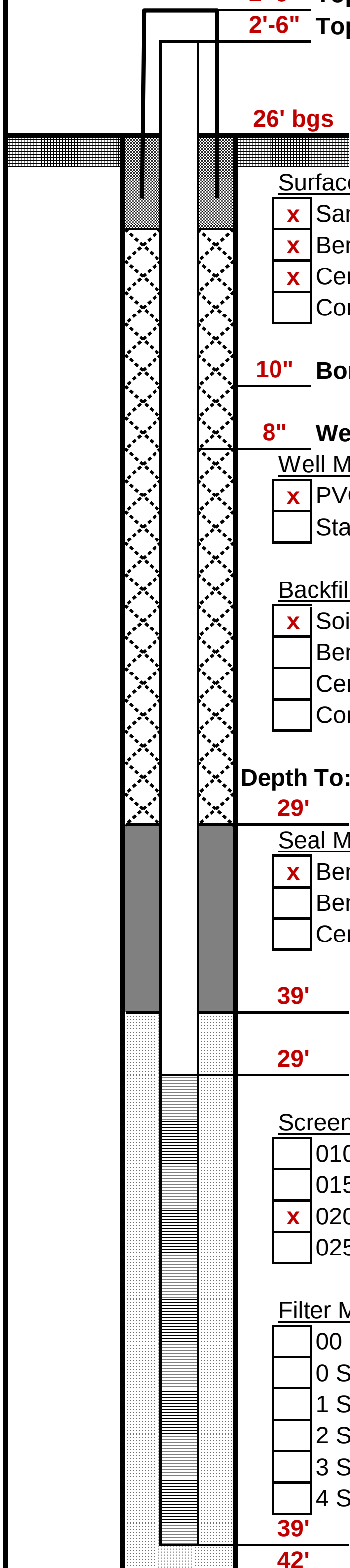
GROUNDWATER OBSERVATION WELL CONSTRUCTION LOG

Project Name:	Main St ROW Investigation	***Well No.***	**MW-02**
Location:	MOB - Buffalo, NY	***Project No.:***	K11.002.001
Client:	Kaleida Health	***Surface Elev.:***	
Drilling Firm:	SJB	***Datum:***	26' bgs
Driller:	0	***Start Date:***	8/16/13
Drill Rig:	CME 45C	***Finish Date:***	8/16/13
		Inspector:	
		Casing:	0

Notes: (provide description of observation well location, method of construction, development method and any other information)

The observation well was constructed in Bore Hole B-3 upon completing the soil boring to depth of 25 feet below ground surface (bgs). Hollow Stem Augers (HSA) were used as the casing and the well was constructed inside the augers. Filter pack material and seal material were poured separately down the inside of the augers while the augers were retracted. Measurements were taken to asure that neither the filter pack or seal materials were bridging between the well and HSA. The well was developed by pumping to remove fine materials.



2'-9" **Top Protective Casing**

2'-6" **Top of Riser**

26' bgs

Surface Backfill Material
- [x] Sand
- [x] Bentonite Slurry
- [x] Cement/Bentonite Grout
- [ ] Concrete

10" **Bore Hole Diameter**

8" **Well Diameter**

Well Material
- [x] PVC
- [ ] Stainless Steel

Backfill Material
- [x] Soil Cuttings
- [ ] Bentonite Slurry
- [ ] Cement/Bentonite Grout
- [ ] Concrete

Depth To:

29' **Top of Seal**

Seal Material
- [x] Bentonite Chips/Pellets
- [ ] Bentonite Slurry
- [ ] Cement/Bentonite Grout

39' **Top of Filter Pack**

29' **Top of Screen**

Screen Slot Size
- [ ] 010 in
- [ ] 015 in
- [x] 020 in
- [ ] 025 in

Filter Material
- [ ] 00 Sand Pack
- [ ] 0 Sand Pack
- [ ] 1 Sand Pack
- [ ] 2 Sand Pack
- [ ] 3 Sand Pack
- [ ] 4 Sand Pack

39' **Bottom of Screen**

42' **Bottom of Bore Hole**

Groundwater Measurement Data

Date	Time	Depth to Water	Water Elevation	Tide Status

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BORING LOG

Boring No.	**MW-03**
Sheet 1 of:	1
Project No.:	K11.002.001
Surface Elev.:	
Datum:	26' - Surface
Start Date:	9/12/13
Finish Date:	9/12/13
Inspector:	N. Wohlabaugh

Project Name:	Main St ROW Investigation							
Location:	MOB - Buffalo, NY							
Client:	Kaleida Health							
Drilling Firm:	SJB			**Driller:**	**Tony**			
Groundwater	**Depth**	**Date & Time**		**Drill Rig:**	CME 45C			
While Drilling:				**Casing:**		**Rock Core:**	**Undist:**	
Before Casing Removal:				**Sampler:**		**Other:**		
After Casing Removal:				**Hammer:**	Auto			

(N -- No. of blows to drive sampler 12" w/140 lb. hammer falling 30" ASTM D-1586, Standard Penetration Test)

c - coarse
m - medium
f - fine

a - and - 35-50%
s - some - 20-35%
l - little - 10-20%
t - trace - 0-10%

S - Sand, $ - Silt, G - Gravel, C - Clay, cly - clayey

Depth (ft)	Sample No.	Symbol	Blows on Sampler per 6"	MATERIAL DESCRIPTION	COMMENTS (e.g., N-value, recovery, relative moisture, core run, RQD, % recovered)
			4		Start: 8:30 AM
1			7	***Sand (med brown - fine sand - moist)***	12" rec
			10	***some Silt***	0.2 ppm
2			12		
			17		
3			17	***Silt (med brown - wet to saturated)***	15" rec
			18	***some Fine Sand and Clay***	0.4 ppm
4			17		
			6		
5			8	***Sand (black - med grained - sheen - saturated)***	14" rec
			7		415 ppm
6			7		
			9		
7			10	***Sand (black - med grained - sheen - saturated)***	16"
			10		0 ppm
8			11		
			2		
9			4	***Sand (med grey - saturated)***	20" rec
			5	***4" of Clay at the bottom (red/brown)***	175 ppm
10			15		
			16		
11			35	***Sand (upper 10" - black - wet to moist)***	20" rec
			50/3	***Sand (lower 10" - coarse - with agular gravel - west to moist)***	305 ppm
12					
			27		
13			50/4	***Sand (med grey - coarse - with angular gravel - moist)***	8" rec
					19.4 ppm
14					
			13		
15			19	***Sand (med grey - coarse - with angular gravel - moist)***	15" rec
			37		12 ppm
16			30		
17					
18					
19					
20					
21					
22					
23					
24					

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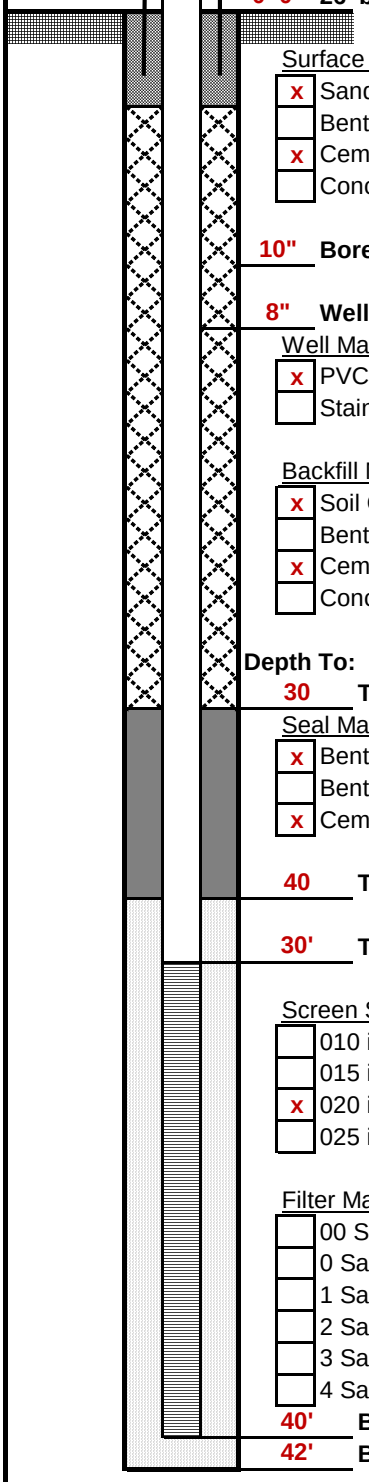
GROUNDWATER OBSERVATION WELL CONSTRUCTION LOG

Well No.	**MW-03**
Project No.:	K11.002.001
Surface Elev.:	
Datum:	26' bgs
Start Date:	9/12/13
Finish Date:	9/12/13
Inspector:	
Casing:	0

Project Name:	Main St ROW Investigation
Location:	MOB - Buffalo, NY
Client:	Kaleida Health
Drilling Firm:	SJB
Driller:	0
Drill Rig:	CME 45C

Notes: (provide description of observation well location, method of construction, development method and any other information)

The observation well was constructed in Bore Hole B-3 upon completing the soil boring to depth of 25 feet below ground surface (bgs). Hollow Stem Augers (HSA) were used as the casing and the well was constructed inside the augers. Filter pack material and seal material were poured separately down the inside of the augers while the augers were retracted. Measurements were taken to asure that neither the filter pack or seal materials were bridging between the well and HSA. The well was developed by pumping to remove fine materials.



2'-9" Top Protective Casing
2'-6" Top of Riser
0'-0" 26' bgs.

Surface Backfill Material
- [x] Sand
- [ ] Bentonite Slurry
- [x] Cement/Bentonite Grout
- [ ] Concrete

10" Bore Hole Diameter

8" Well Diameter

Well Material
- [x] PVC
- [ ] Stainless Steel

Backfill Material
- [x] Soil Cuttings
- [ ] Bentonite Slurry
- [x] Cement/Bentonite Grout
- [ ] Concrete

Depth To:
30 Top of Seal

Seal Material
- [x] Bentonite Chips/Pellets
- [ ] Bentonite Slurry
- [x] Cement/Bentonite Grout

40 Top of Filter Pack

30' Top of Screen

Screen Slot Size
- [ ] 010 in
- [ ] 015 in
- [x] 020 in
- [ ] 025 in

Filter Material
- [ ] 00 Sand Pack
- [ ] 0 Sand Pack
- [ ] 1 Sand Pack
- [ ] 2 Sand Pack
- [ ] 3 Sand Pack
- [ ] 4 Sand Pack

40' Bottom of Screen
42' Bottom of Bore Hole

Groundwater Measurement Data

Date	Time	Depth to Water	Water Elevation	Tide Status

C&S Engineers, Inc.	BORING LOG	Boring No.	MW-04
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		Project No.:	K11.002.001

Project Name:	Main St ROW Investigation					**Surface Elev.:**	
Location:	MOB - Buffalo, NY					**Datum:**	6. Surface
Client:	Kaleida Health					**Start Date:**	8/15/13
Drilling Firm:	SJB		**Driller:**	**Tony**		**Finish Date:**	8/15/13
Groundwater	**Depth**	**Date & Time**	**Drill Rig:**	CME 45C		**Inspector:**	N. Wohlabaugh
While Drilling:			**Casing:**		**Rock Core:**	**Undist:**	
Before Casing Removal:			**Sampler:**		**Other:**		
After Casing Removal:			**Hammer:**	Auto			

(N -- No. of blows to drive sampler 12" w/140 lb. hammer falling 30" ASTM D-1586, Standard Penetration Test)

Depth (ft)	Sample No.	Symbol	Blows on Sampler per 6"	MATERIAL DESCRIPTION c - coarse, m - medium, f - fine S - Sand, $ - Silt, G - Gravel, C - Clay, cly - clayey a - and - 35-50%, s - some - 20-35%, l - little - 10-20%, t - trace - 0-10%	COMMENTS (e.g., N-value, recovery, relative moisture, core run, RQD, % recovered)
			9		Start: 7:20 AM
1			12	***Crushed Stone (dry)***	12" rec
			13		0.2 ppm
2			10		
			15		
3			21	***Crushed Stone (dry)***	15" rec
			23		0.2 ppm
4			25		
			20		
5			19	***Crushed Stone (dry)***	16" rec
			19	***Bottom 2" Flowable Fill***	0.5 ppm
6			20		
			13		
7			16	***Flowable Fill (black - moist)***	24" rec
			19		0 ppm
8			40		
			12		
9			13	***Flowable Fill (black - moist)***	24" rec
			15		0 ppm
10			19		
			7		
11			8	***Flowable Fill (black - moist)***	24" rec
			9	***Sand (medium brown - saturated)***	517 ppm
12			9		
			5		
13			9	***Sand (medium brown - moist)***	16" rec
			6	***Clay (red/brown - moist)***	59 ppm
14			14		
			6		
15			4	***Clay (red/brown - moist)***	23" rec
			7		1.2 ppm
16			15		
17					
18					
19					
20					
21					
22					
23					
24					

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BORING LOG

Boring No.	**MW-05**
Sheet 1 of:	1
Project No.:	K11.002.001
Surface Elev.:	
Datum:	26' - Surface
Start Date:	9/12/13
Finish Date:	9/12/12
Inspector:	N. Wohlabaugh

Project Name:	Main St ROW Investigation							
Location:	MOB - Buffalo, NY							
Client:	Kaleida Health							
Drilling Firm:	SJB			**Driller:**	**Tony**			
Groundwater	**Depth**	**Date & Time**		**Drill Rig:**	CME 45C			
While Drilling:				**Casing:**		**Rock Core:**	**Undist:**	
Before Casing Removal:				**Sampler:**		**Other:**		
After Casing Removal:				**Hammer:**	Auto			

(N -- No. of blows to drive sampler 12" w/140 lb. hammer falling 30" ASTM D-1586, Standard Penetration Test)

Depth (ft)	Sample No.	Symbol	Blows on Sampler per 6"	MATERIAL DESCRIPTION (c - coarse, m - medium, f - fine; a - and - 35-50%, s - some - 20-35%, l - little - 10-20%, t - trace - 0-10%; S - Sand, $ - Silt, G - Gravel, C - Clay, cly - clayey)	COMMENTS (e.g., N-value, recovery, relative moisture, core run, RQD, % recovered)
			2		Start: 12:35 PM
1			3	***Sand (med - red/brown - fine - moist)***	19" rec
			5		0.6 ppm
2			11		
			12		
3			16	***Sand (med - red/brown - fine - moist)***	16" rec
			16	***some clay***	0.9 ppm
4			20		
			6		
5			8	***Sand (top 8" - med - brown - coarse - saturated)***	16" rec
			10	***Sand (bottom 8" - grey/black - coarse/gravely - product sheet)***	382 ppm
6			9		
			6		
7			7	***Sand (med - black - product sheen - saturated)***	21" rec
			6		1628 ppm
8			8		
			5		
9			8	***Sand (upper 12" - grey/black - wet)***	20" rec
			12	***Sand (lower 8" - red/brown - clay - wet)***	17.2 ppm
10			50/4		
			10		
11			16	***Sand (grey - round and angular gravel - saturated)***	11" rec
			47		12 pmm
12			50/2		
13			50/3	***Sand (coarse - grey - angular gravel - saturated)***	3" rec
					4.2 ppm
14					
			15		
15			23	***Gravel (angular gravel - grey - moist to saturated)***	14" rec
			50/4	***some Sand***	10.5 ppm
16					
17					
18					
19					
20					
21					
22					
23					
24					

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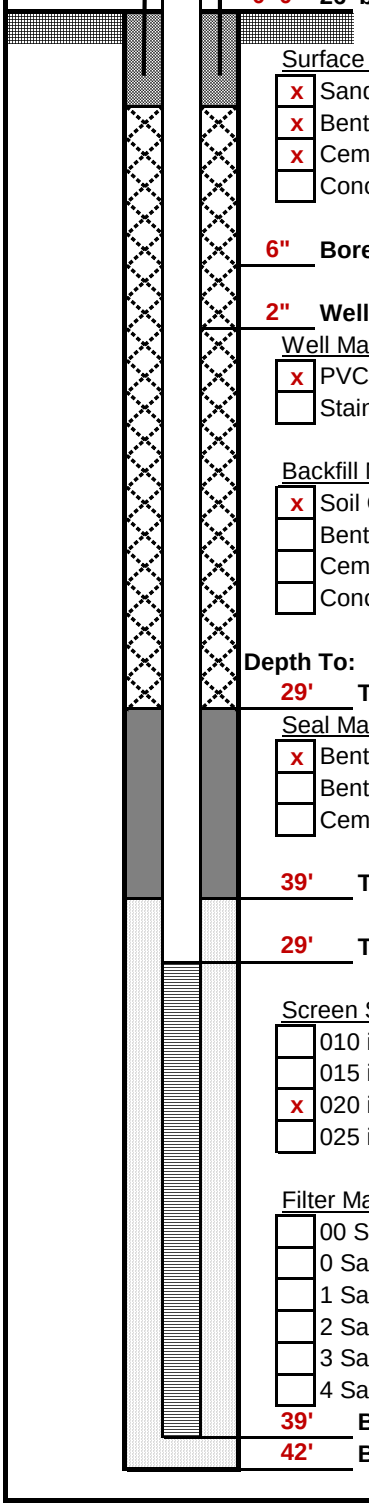
GROUNDWATER OBSERVATION WELL CONSTRUCTION LOG

Well No.	**MW-04**
Project No.:	K11.002.001
Surface Elev.:	
Datum:	26' bgs
Start Date:	8/15/13
Finish Date:	8/15/13
Inspector:	
Casing:	0

Project Name:	Main St ROW Investigation
Location:	MOB - Buffalo, NY
Client:	Kaleida Health
Drilling Firm:	SJB
Driller:	0
Drill Rig:	CME 45C

Notes: (provide description of observation well location, method of construction, development method and any other information)

The observation well was constructed in Bore Hole B-3 upon completing the soil boring to depth of 25 feet below ground surface (bgs). Hollow Stem Augers (HSA) were used as the casing and the well was constructed inside the augers. Filter pack material and seal material were poured separately down the inside of the augers while the augers were retracted. Measurements were taken to asure that neither the filter pack or seal materials were bridging between the well and HSA. The well was developed by pumping to remove fine materials.



2'-9" Top Protective Casing
2'-6" Top of Riser

0'-0" 26' bgs.

Surface Backfill Material
- [x] Sand
- [x] Bentonite Slurry
- [x] Cement/Bentonite Grout
- [ ] Concrete

6" Bore Hole Diameter

2" Well Diameter

Well Material
- [x] PVC
- [ ] Stainless Steel

Backfill Material
- [x] Soil Cuttings
- [ ] Bentonite Slurry
- [ ] Cement/Bentonite Grout
- [ ] Concrete

Depth To:

29' Top of Seal

Seal Material
- [x] Bentonite Chips/Pellets
- [ ] Bentonite Slurry
- [ ] Cement/Bentonite Grout

39' Top of Filter Pack

29' Top of Screen

Screen Slot Size
- [ ] 010 in
- [ ] 015 in
- [x] 020 in
- [ ] 025 in

Filter Material
- [ ] 00 Sand Pack
- [ ] 0 Sand Pack
- [ ] 1 Sand Pack
- [ ] 2 Sand Pack
- [ ] 3 Sand Pack
- [ ] 4 Sand Pack

39' Bottom of Screen

42' Bottom of Bore Hole

Groundwater Measurement Data

Date	Time	Depth to Water	Water Elevation	Tide Status

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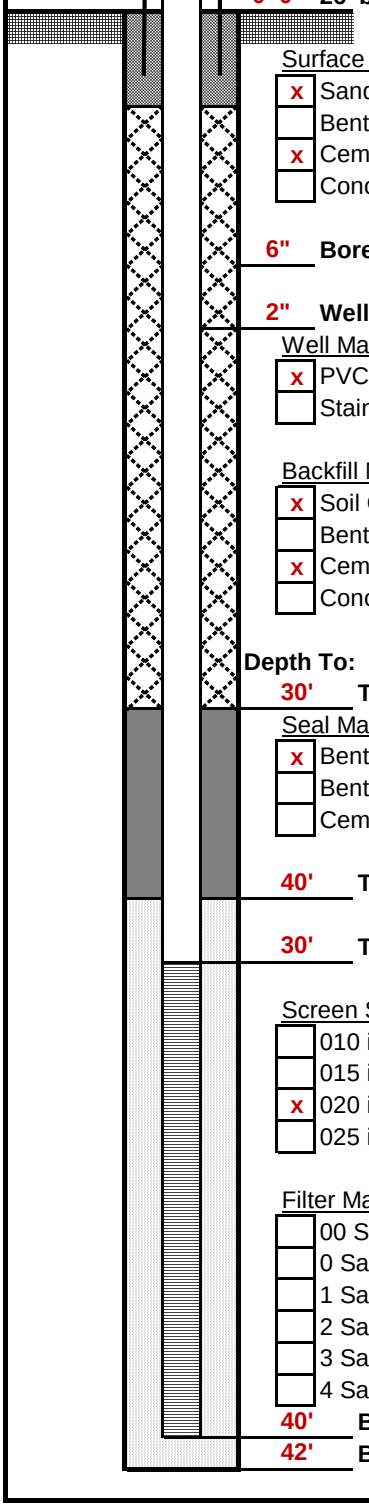
GROUNDWATER OBSERVATION WELL CONSTRUCTION LOG

Well No.	**MW-05**
Project No.:	K11.002.001
Surface Elev.:	
Datum:	26' bgs
Start Date:	9/12/13
Finish Date:	9/12/13
Inspector:	
Casing:	0

Project Name:	Main St ROW Investigation
Location:	MOB - Buffalo, NY
Client:	Kaleida Health
Drilling Firm:	SJB
Driller:	0
Drill Rig:	CME 45C

Notes: (provide description of observation well location, method of construction, development method and any other information)

The observation well was constructed in Bore Hole B-3 upon completing the soil boring to depth of 25 feet below ground surface (bgs). Hollow Stem Augers (HSA) were used as the casing and the well was constructed inside the augers. Filter pack material and seal material were poured separately down the inside of the augers while the augers were retracted. Measurements were taken to asure that neither the filter pack or seal materials were bridging between the well and HSA. The well was developed by pumping to remove fine materials.



2'-9" Top Protective Casing
2'-6" Top of Riser
0'-0" 26' bgs.

Surface Backfill Material
- [x] Sand
- [ ] Bentonite Slurry
- [x] Cement/Bentonite Grout
- [ ] Concrete

6" Bore Hole Diameter

2" Well Diameter

Well Material
- [x] PVC
- [ ] Stainless Steel

Backfill Material
- [x] Soil Cuttings
- [ ] Bentonite Slurry
- [x] Cement/Bentonite Grout
- [ ] Concrete

Depth To:
30' Top of Seal

Seal Material
- [x] Bentonite Chips/Pellets
- [ ] Bentonite Slurry
- [ ] Cement/Bentonite Grout

40' Top of Filter Pack

30' Top of Screen

Screen Slot Size
- [ ] 010 in
- [ ] 015 in
- [x] 020 in
- [ ] 025 in

Filter Material
- [ ] 00 Sand Pack
- [ ] 0 Sand Pack
- [ ] 1 Sand Pack
- [ ] 2 Sand Pack
- [ ] 3 Sand Pack
- [ ] 4 Sand Pack

40' Bottom of Screen
42' Bottom of Bore Hole

Groundwater Measurement Data

Date	Time	Depth to Water	Water Elevation	Tide Status

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BORING LOG

Boring No.	**MW-06**
Sheet 1 of:	1
Project No.:	K11.002.001
Surface Elev.:	
Datum:	6. Surface
Start Date:	8/14/13
Finish Date:	8/14/13
Inspector:	N. Wohlabaugh

Project Name:	Main St ROW Investigation							
Location:	MOB - Buffalo, NY							
Client:	Kaleida Health							
Drilling Firm:	SJB			**Driller:**	**Tony**			
Groundwater	**Depth**	**Date & Time**		**Drill Rig:**	CME 45C			
While Drilling:				**Casing:**		**Rock Core:**	**Undist:**	
Before Casing Removal:				**Sampler:**		**Other:**		
After Casing Removal:				**Hammer:**	Auto			

(N -- No. of blows to drive sampler 12" w/140 lb. hammer falling 30" ASTM D-1586, Standard Penetration Test)

c - coarse
m - medium
f - fine

a - and - 35-50%
s - some - 20-35%
l - little - 10-20%
t - trace - 0-10%

S - Sand, $ - Silt, G - Gravel, C - Clay, cly - clayey

Depth (ft)	Sample No.	Symbol	Blows on Sampler per 6"	MATERIAL DESCRIPTION	COMMENTS (e.g., N-value, recovery, relative moisture, core run, RQD, % recovered)
			8		Start: 8:15 AM
1			7	***Crushed Stone (dry)***	12" rec
			6		0.6 ppm
2			16		
			9		
3			10	***Crushed Stone (dry)***	15" rec
			10		0.0 ppm
4			17		
			5		
5			6	***Sand(medium/dark grey/brown - moist)***	10" rec
			6		33.4
6			8		
			11		
7			9	***Silty CLAY (red/brown - moist)***	18" rec
			11	***Sand(brown - fine - moist)***	43.0 ppm
8			14		
			4		10" rec
9			5	***Clayey SILT (red/brown - wet/saturated)***	53.0 ppm
			13	***Sand(brown - fine - wet/saturated)***	
10			38		
			1		
11			1	***Medium Sand (dark grey - saturated)***	11" rec
			3	***Some Silt/Gravel (saturated)***	1.8 ppm
12			7		
			5		
13			8	***Medium Sand (medium grey - saturated)***	24" rec
			10	***Sand (lower 6" black- saturated)***	2.9 ppm
14			11		
			1		
15			2	***Medium Sand (black - degraded oil smell - saturated)***	24" rec
			4	***Clay (red/brown - rotten - saturated)***	
16			5		
17					
18					
19					
20					
21					
22					
23					
24					

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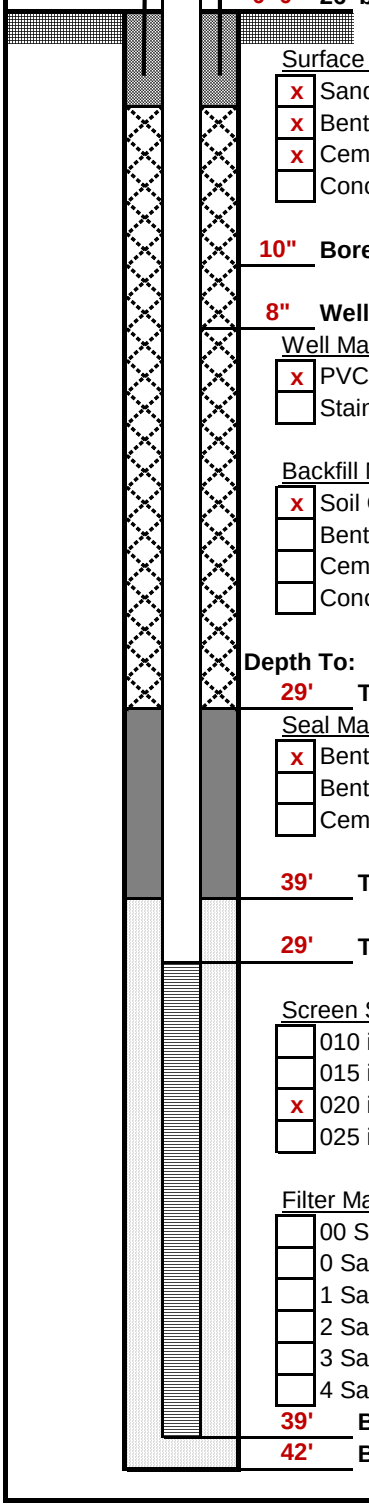
GROUNDWATER OBSERVATION WELL CONSTRUCTION LOG

Well No.	**MW-06**
Project No.:	K11.002.001
Surface Elev.:	
Datum:	26' bgs
Start Date:	8/14/13
Finish Date:	8/14/13
Inspector:	

Project Name:	Main St ROW Investigation		
Location:	MOB - Buffalo, NY		
Client:	Kaleida Health		
Drilling Firm:	SJB	**Driller:**	0
		Drill Rig:	CME 45C
		Casing:	0

Notes: (provide description of observation well location, method of construction, development method and any other information)

The observation well was constructed in Bore Hole B-3 upon completing the soil boring to depth of 25 feet below ground surface (bgs). Hollow Stem Augers (HSA) were used as the casing and the well was constructed inside the augers. Filter pack material and seal material were poured separately down the inside of the augers while the augers were retracted. Measurements were taken to asure that neither the filter pack or seal materials were bridging between the well and HSA. The well was developed by pumping to remove fine materials.



2'-9" Top Protective Casing
2'-6" Top of Riser
0'-0" 26' bgs.

Surface Backfill Material
- [x] Sand
- [x] Bentonite Slurry
- [x] Cement/Bentonite Grout
- [ ] Concrete

10" Bore Hole Diameter

8" Well Diameter

Well Material
- [x] PVC
- [ ] Stainless Steel

Backfill Material
- [x] Soil Cuttings
- [ ] Bentonite Slurry
- [ ] Cement/Bentonite Grout
- [ ] Concrete

Depth To:
29' Top of Seal

Seal Material
- [x] Bentonite Chips/Pellets
- [ ] Bentonite Slurry
- [ ] Cement/Bentonite Grout

39' Top of Filter Pack

29' Top of Screen

Screen Slot Size
- [ ] 010 in
- [ ] 015 in
- [x] 020 in
- [ ] 025 in

Filter Material
- [ ] 00 Sand Pack
- [ ] 0 Sand Pack
- [ ] 1 Sand Pack
- [ ] 2 Sand Pack
- [ ] 3 Sand Pack
- [ ] 4 Sand Pack

39' Bottom of Screen
42' Bottom of Bore Hole

Groundwater Measurement Data

Date	Time	Depth to Water	Water Elevation	Tide Status

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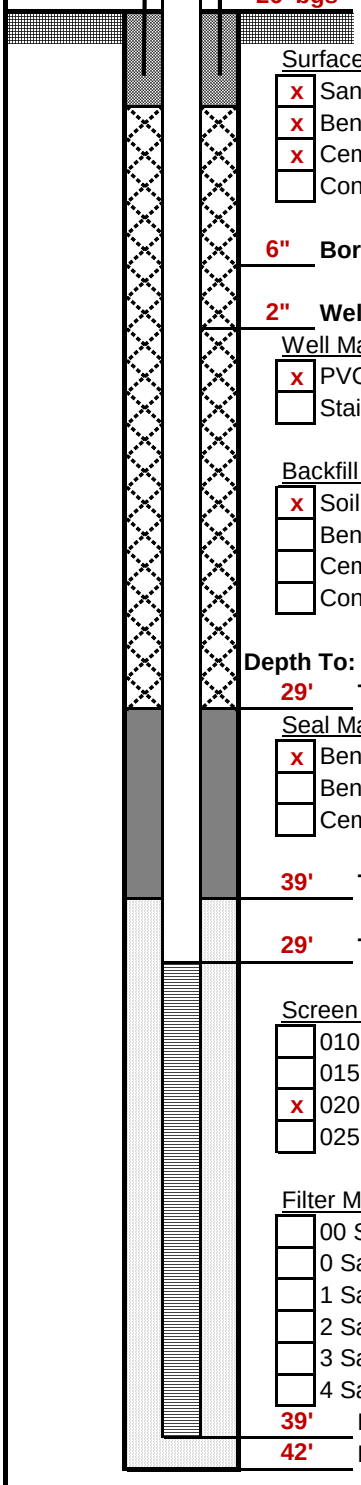
GROUNDWATER OBSERVATION WELL CONSTRUCTION LOG

Well No.	**MW-07**
Project No.:	K11.002.001
Surface Elev.:	
Datum:	26' bgs
Start Date:	8/16/13
Finish Date:	8/16/13
Inspector:	
Casing:	0

Project Name:	Main St ROW Investigation
Location:	MOB - Buffalo, NY
Client:	Kaleida Health
Drilling Firm:	SJB
Driller:	0
Drill Rig:	CME 45C

Notes: (provide description of observation well location, method of construction, development method and any other information)

The observation well was constructed in Bore Hole B-3 upon completing the soil boring to depth of 25 feet below ground surface (bgs). Hollow Stem Augers (HSA) were used as the casing and the well was constructed inside the augers. Filter pack material and seal material were poured separately down the inside of the augers while the augers were retracted. Measurements were taken to asure that neither the filter pack or seal materials were bridging between the well and HSA. The well was developed by pumping to remove fine materials.



2'-9" Top Protective Casing
2'-6" Top of Riser

26' bgs

Surface Backfill Material
- [x] Sand
- [x] Bentonite Slurry
- [x] Cement/Bentonite Grout
- [ ] Concrete

6" Bore Hole Diameter

2" Well Diameter

Well Material
- [x] PVC
- [ ] Stainless Steel

Backfill Material
- [x] Soil Cuttings
- [ ] Bentonite Slurry
- [ ] Cement/Bentonite Grout
- [ ] Concrete

Depth To:

29' Top of Seal

Seal Material
- [x] Bentonite Chips/Pellets
- [ ] Bentonite Slurry
- [ ] Cement/Bentonite Grout

39' Top of Filter Pack

29' Top of Screen

Screen Slot Size
- [ ] 010 in
- [ ] 015 in
- [x] 020 in
- [ ] 025 in

Filter Material
- [ ] 00 Sand Pack
- [ ] 0 Sand Pack
- [ ] 1 Sand Pack
- [ ] 2 Sand Pack
- [ ] 3 Sand Pack
- [ ] 4 Sand Pack

39' Bottom of Screen

42' Bottom of Bore Hole

Groundwater Measurement Data

Date	Time	Depth to Water	Water Elevation	Tide Status

C&S Engineers, Inc.
90 Broadway
Buffalo, New York 14203
Phone: 716-847-1630
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www.cscos.com

BORING LOG

Boring No.	**MW-07**
Sheet 1 of:	1
Project No.:	K11.002.001
Surface Elev.:	
Datum:	6. Surface
Start Date:	8/16/13
Finish Date:	8/16/13
Inspector:	N. Wohlabaugh

Project Name:	Main St ROW Investigation							
Location:	MOB - Buffalo, NY							
Client:	Kaleida Health							
Drilling Firm:	SJB			**Driller:**	**Tony**			
Groundwater	**Depth**	**Date & Time**		**Drill Rig:**	CME 45C			
While Drilling:				**Casing:**		**Rock Core:**	**Undist:**	
Before Casing Removal:				**Sampler:**		**Other:**		
After Casing Removal:				**Hammer:**	Auto			

(N -- No. of blows to drive sampler 12" w/140 lb. hammer falling 30" ASTM D-1586, Standard Penetration Test)

c - coarse
m - medium
f - fine

a - and - 35-50%
s - some - 20-35%
l - little - 10-20%
t - trace - 0-10%

S - Sand, $ - Silt, G - Gravel, C - Clay, cly - clayey

Depth (ft)	Sample No.	Symbol	Blows on Sampler per 6"	MATERIAL DESCRIPTION	COMMENTS (e.g., N-value, recovery, relative moisture, core run, RQD, % recovered)
			3		Start: 2:45 PM
1			5	***Crushed Stone (grey - dry)***	12" rec
			5		0.4 ppm
2			9		
			19		
3			16	***Sand (fine - red/brown - dry to moist)***	15" rec
			18	***Silt (red/brown - dry to moist)***	1.0 ppm
4			18		
			12		
5			17	***Sand (fine - red/brown - moist)***	16" rec
			18	***Silt (red/brown - moist)***	0.2 ppm
6			20		
			24		
7			24	***Sand (fine - red/brown - wet to saturated)***	23" rec
			28	***Silt (red/brown - wet to saturated)***	0.5 ppm
8			37		
			14		
9			16	***Sand (fine - red/brown - saturated)***	21" rec
			22	***Silt (red/brown - saturated)***	0.8 ppm
10			39		
			16		
11			28	***Silt (red/brown - wet)***	18" rec
			32	***Clay (red/brown - wet)***	0.1 ppm
12			31		
			25		
13			17	***Silt (red/brown - saturated)***	24" rec
			26	***Clay (red/brown - saturated)***	0.0 ppm
14			33		
			20		
15			19	***Silt (red/brown - moist to wet)***	19" rec
			19	***Gravel (red/brown - moist to wet)***	0.0 ppm
16			21		
17					
18					
19					
20					
21					
22					
23					
24					

APPENDIX C

IN SITU PRODUCT INFORMATION

RegenOx™

CHEMICAL OXIDATION REDEFINED...

RegenOx™ is an advanced in situ chemical oxidation technology designed to treat organic contaminants including high concentration source areas in the saturated and vadose zones*

PRODUCT FEATURES:

- Rapid and sustained oxidation of target compounds
- Easily applied with readily available equipment
- Destroys a broad range of contaminants
- More efficient than other solid oxidants
- Enhances subsequent bioremediation
- Avoids detrimental impacts to groundwater aquifers

RegenOx product application

HOW IT WORKS:

RegenOx maximizes in situ performance using a solid alkaline oxidant that employs a sodium percarbonate complex with a multi-part catalytic formula. The product is delivered as two parts that are combined and injected into the subsurface using common drilling or direct-push equipment. Once in the subsurface, the combined product produces an effective oxidation reaction comparable to that of Fenton's Reagent without a violent exothermic reaction. RegenOx safely, effectively and rapidly destroys a wide range of contaminants in both soil and groundwater (Table 1).

ACHIEVES RAPID OXIDATION VIA A NUMBER OF MECHANISMS

RegenOx directly oxidizes contaminants while its unique catalytic complex generates a suite of highly charged, oxidative free radicals that are responsible for the rapid destruction of contaminants. The mechanisms by which RegenOx operates are:

- **Surface- Mediated Oxidation: (see Figure 1 and description below)**
- **Direct Oxidation:** $C_2Cl_4 + 2\ Na_2CO_3 \bullet 3\ H_2O_2 + 2\ H_2O \longleftrightarrow 2CO_2 + 4\ NaCl + 4\ H_2O + 2\ H_2CO_3$
- **Free Radical Oxidation:**
  - Perhydroxyl Radical ($HO_2\bullet$)
  - Hydroxyl Radical ($OH\bullet$)
  - Superoxide Radical ($O_2\bullet$)

Figure 1. RegenOx™ Surface-Mediated Oxidation

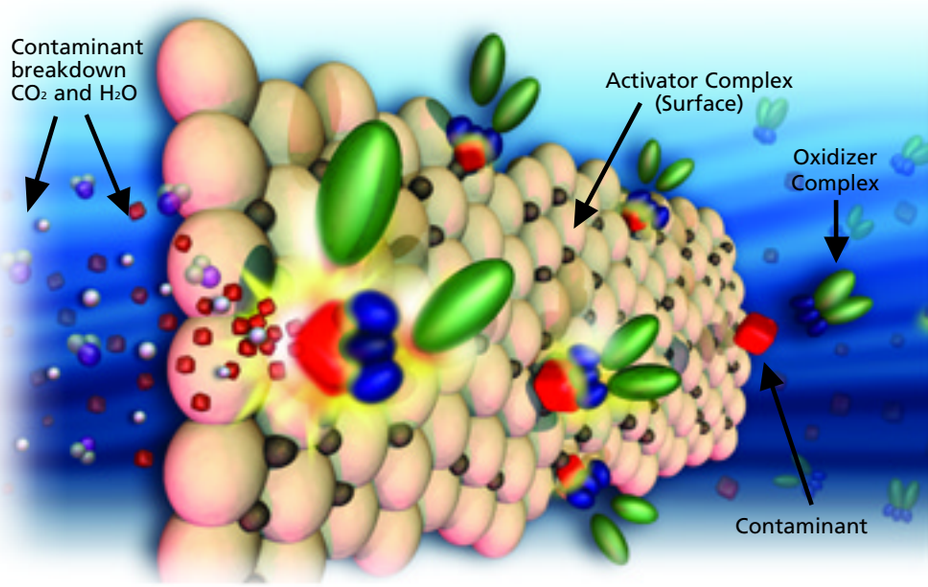

Figure 1. Surface-Mediated Oxidation is responsible for the majority of RegenOx contaminant destruction. This process takes place in two stages. First, the RegenOx activator complex coats the subsurface. Second, the oxidizer complex and contaminant react with the activator complex surface destroying the contaminant.

* Patent applied for

RegenOx™

From Mass Reduction to Bioremediation:

RegenOx™ is an effective and rapid contaminant mass reduction technology. A single injection will remove significant amounts of target contaminants from the subsurface. Strategies employing multiple Regenox injections coupled with follow-on accelerated bioremediation can be used to treat highly contaminated sites to regulatory closure. In fact, RegenOx was designed specifically to allow for a seamless transition to low-cost accelerated bioremediation using any of Regenesis controlled release compounds.

Significant Longevity:

RegenOx has been shown to destroy contaminants for periods of up to one month.

Product Application Made Safe and Easy:

RegenOx produces minimal heat and as with all oxidants proper health and safety procedures must be followed. The necessary safety guidance accompanies all shipments of RegenOx and additional resources are available on request. Through the use of readily available, highly mobile, direct-push equipment and an array of pumps, RegenOx has been designed to be as easy to install as other Regenesis products like ORC® and HRC®.

Effective on a Wide Range of Contaminants:

RegenOx has been rigorously tested in both the laboratory and the field on petroleum hydrocarbons (aliphatics and aromatics), gasoline oxygenates (e.g., MTBE and TAME), polyaromatic hydrocarbons (e.g., naphthalene and phenanthrene) and chlorinated hydrocarbons (e.g., PCE, TCE, TCA).

Oxidant Effectiveness vs. Contaminant Type:

Table 1

Contaminant	RegenOx™	Fenton's Reagent	Permanganate	Persulfate	Activated Persulfate	Ozone
Petroleum Hydrocarbons	**A**	**A**	B	B	B	**A**
Benzene	**A**	**A**	D	B	B	**A**
MTBE	**A**	B	B	C	B	B
Phenols	**A**	**A**	B	C	B	**A**
Chlorinated Ethenes (PCE, TCE, DCE, VC)	**A**	**A**	**A**	B	**A**	**A**
Chlorinated Ethanes (TCA, DCA)	**A**	B	C	D	C	B
Polycyclic Aromatic Hydrocarbons (PAHs)	**A**	**A**	B	B	**A**	**A**
Polychlorinated Biphenyls (PCBs)	B	C	D	D	D	B
Explosives (RDX, HMX)	**A**	**A**	**A**	**A**	**A**	**A**

Based on laboratory kinetic data, thermodynamic calculations, and literature reports.

Oxidant Effectiveness Key:

A = Short half life, low free energy (most energetically favored), most complete
B = Intermediate half life, low free energy, intermediate degree of completion
C = Intermediate half life, intermediate free energy, low degree of completion
D = Long half life, high free energy (least favored), very low degree of completion

REGENESIS
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OXYGEN RELEASE COMPOUND

Controlled-Release Oxygen for Enhanced Aerobic Biodegradation

The original Oxygen Release Compound (ORC®) is a fine, powdery material comprised of a patented formulation of phosphate-intercalated magnesium peroxide. The intercalation or embedding of phosphates within the magnesium peroxide is Regenesis' patented, controlled-release mechanism. Upon hydration, ORC is designed to produce a controlled-release of oxygen (10% by weight) into the subsurface in accordance with the following reaction:

$$MgO_2 + H_2O \rightarrow 1/2\ O_2 + Mg(OH)_2$$

This process can proceed for periods of up to one year depending on site conditions. In the presence of this long-lasting oxygen source, aerobic microbes flourish - accelerating the naturally slow rates of aerobic biodegradation.

Product Benefits

By enhancing bioremediation using ORC, in-situ treatment of contaminants can result in an efficient, simple and costeffective alternative to traditional technologies. With low capital costs, no operations and maintenance, minimal site disturbance and proven effectiveness, ORC can restore water quality and property values at a reasonable cost.

Subsurface Emplacement

- Direct – Push Injection
- Hollow Stem Augers
- Replaceable Filter Socks (existing wells)
- Excavations
- Trenches
- *Ex Situ* biophiles

Treatable Contaminants

ORC can treat a wide range of contaminants and most any aerobically degradable compound including: gasoline and fuel additives (BTEX and MTBE), diesel, kerosene, jet fuel, gas condensates, fuel oils, lubricants, bunker oil, PAHs, certain pesticides/herbicides and certain industrial solvents (alcohols and ketones).

Material Application

Most contaminated sites are treated using ORC slurry which is a prescribed and easily injectable water and ORC mixture (Figure 2). The direct-push injection of ORC slurry maximizes ORC and oxygen distribution in the subsurface increasing the range of enhanced biodegradation. ORC is dosed in pounds per vertical foot of material treated. The amount of ORC recommended depends greatly on various factors such as contaminant concentrations, oxygen sinks, groundwater flow rates and subsurface geology. It is recommended that a Regenesis Technical Services Representative be contacted for detailed design information. ORC treatment approaches or designs may consist of one, or combinations of the following: Source Area Grids, Plume Area Grids or Barriers, Excavations and Biopiles.