

JULY 2019

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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141 ELM STREET

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AUGUST 2019

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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 June 11th, 12th, and 13th.

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 June 11th, 12th, and 13th, 2019.

3. GROUNDWATER MONITORING

3.1. 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

For this reporting period, the groundwater sampling was completed on July 30th, 2019.

3.2. 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 USEPA¹ 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.

Samples were collected for VOCs in two 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

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.

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.

3.3. 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

<i>MONITORING WELL ID</i>	<i>GROUND ELEVATION (FT.)</i>	<i>WATER LEVEL (FT.)</i>	<i>GROUNDWATER ELEVATION (FT.)</i>
BCP-MW-1	663.465	33.6	629.865
BCP-MW-3	663.465	32.8	630.665
BCP-MW-4	663.465	33.2	630.265
BCP-MW-5	663.465	32.2	631.265
BCP-MW-6	663.465	33.5	629.965
BCP-MW-7	663.465	30.5	632.965

Note: Ground elevations from Lidar Dataset.

Figure 3 presents groundwater elevation contours.

3.4. BTEX Monitoring

Table 3-2 attached to the end of this report presents detected VOC concentrations from December 2012 to July 2019. **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

Sample results indicate total reading of 2.1 ug/L for total VOCs and no reading of BTEX concentrations. BTEX concentration is down to non-detect for the last three sampling events dating back to the August 16th, 2018 sampling event.

BCP-MW-4

Initial analytical results from MW-4 had a BTEX concentration of 76.8 ug/L from September 20, 2013, and had initially increased and peaked at a BTEX concentration of 4,162 ug/L, after the sampling event that took place on August 3, 2015. Since the peak from the sampling event in August of 2015, injection treatments have been successful to decrease the concentrations.

In the latest sampling event that was carried out on July 30, 2019 the BTEX concentration was 8.7 ug/L. This indicates a 99.7% decrease of BTEX concentrations from the peak analytical of 4,162 ug/L from the August, 2015 sampling event.

The 8.7 ug/L BTEX concentration from the July 2019 sampling event is also down 97.1% from the previous sampling event that took place on November 29, 2019.

BCP-MW-5

The initial BTEX concentration of MW-5 was 17,670 ug/L in September of 2013. The analytical that was recorded after the most recent sampling event on July 30, 2019 was 2,440.30 ug/L. That indicates an 86.2% decrease in BTEX concentration since the initial sampling event that occurred in 2013.

BCP-MW-6

Total BTEX concentrations dropped to non-detect for the first time since sampling the wells in 2013. After analyzing the results of the July 2019 sampling event, BTEX concentrations were observed at 0 ug/L. That is a 100% decrease in BTEX concentrations from the previous sampling event that recorded a BTEX concentration of 4.52 ug/L in November of 2018.

BCP-MW-7

MW-7 slightly increased in BTEX concentration. The recorded BTEX concentration after the July 2019 sampling event was 0.77 ug/L. The sample concentration of .77 ug/L is a minimal increase from the previous sampling event in November of 2018, which had a concentration of total BTEX of 0.18 ug/L

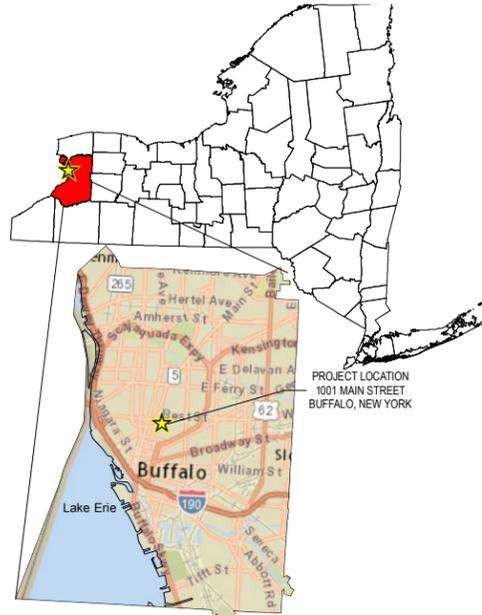
4. CONCLUSION AND RECOMMENDATIONS

The June 2019 injection event appeared to be successful in decreasing contaminant concentrations. After the chemical oxidant treatment, petroleum contamination still exists in the one monitoring well. C&S recommends the following:

- Perform another quarterly in-situ treatments within two groundwater monitoring wells (BCP-MW-5 and BCP-MW-6).
- Subsequent in-situ treatments should focus on reducing contaminant concentrations at BCP-MW-5.
- Bi-annual groundwater sampling on all monitoring wells located on the Conventus site.

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FIGURES



Legend

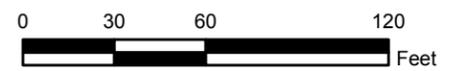
- Parcel Boundary
- Brownfield Cleanup Program Boundary

Property Note

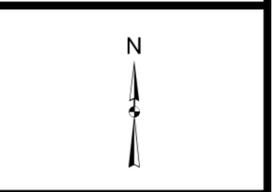
1) The BCP Project Area ("Site") includes the entire western parcel [1001 Main Street (formerly 979 Main Street)] and extends approximately 40 feet east onto the adjacent eastern parcel (818 Ellicott Street). Total acreage of the BCP Project Site is 1.72 acres.

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



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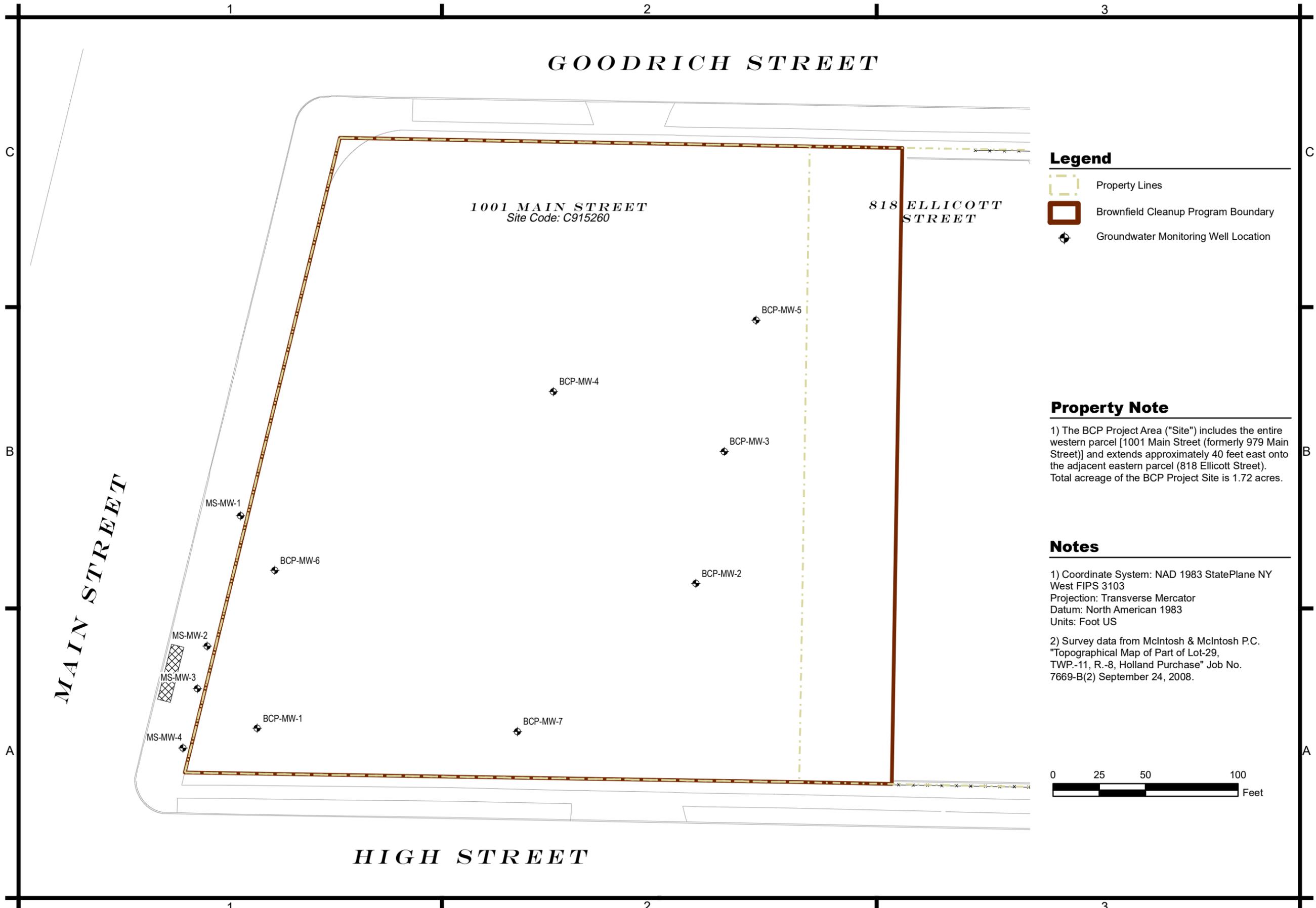
**FORMER MOBIL STATION 99-MST
 979 MAIN ST (1001 MAIN ST)
 BROWNFIELD CLEANUP PROGRAM**
 Site Code: C915260
BUFFALO, NEW YORK

MARK	DATE	DESCRIPTION
REVISIONS		
	PROJECT NO:	K11.002.001
	DATE:	May 4, 2016
	DRAWN BY:	C. MARTIN
	DESIGNED BY:	C. MARTIN
	CHECKED BY:	
NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW		

SITE
LOCATION

FIGURE 1

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

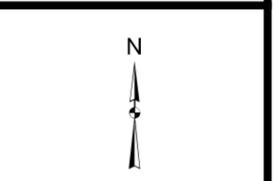
Notes

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.



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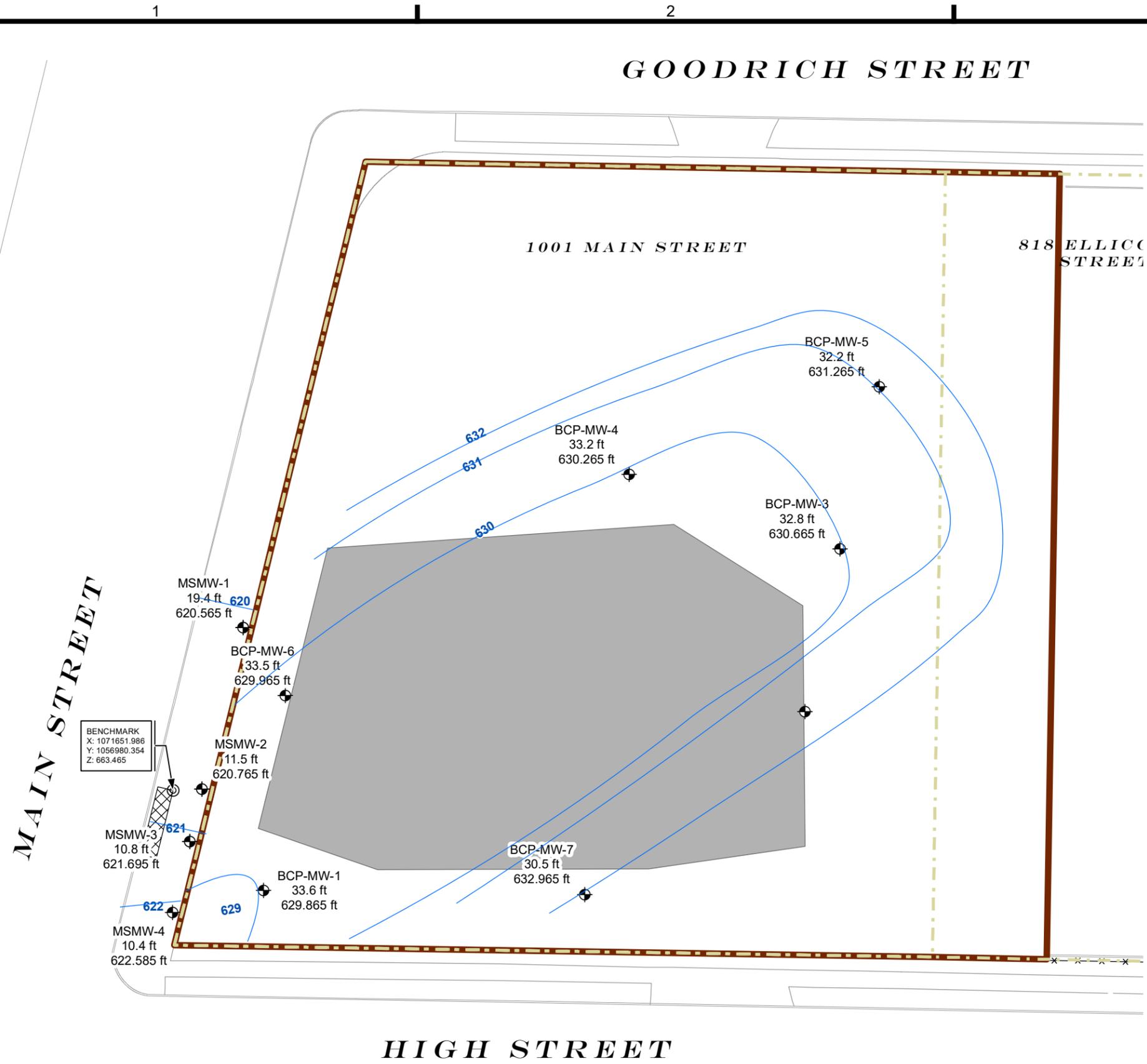
**FORMER MOBIL STATION 99-MST
 979 MAIN ST (1001 MAIN ST)
 BROWNFIELD CLEANUP PROGRAM
 BUFFALO, NEW YORK**

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		

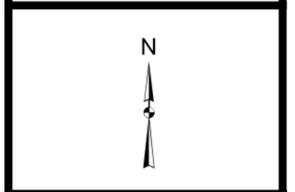
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**OFFSITE & ONSITE
 GROUNDWATER
 WELLS**

FIGURE 2



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**FORMER MOBIL STATION 99-MST
 979 MAIN ST (1001 MAIN ST)
 BROWNFIELD CLEANUP PROGRAM**

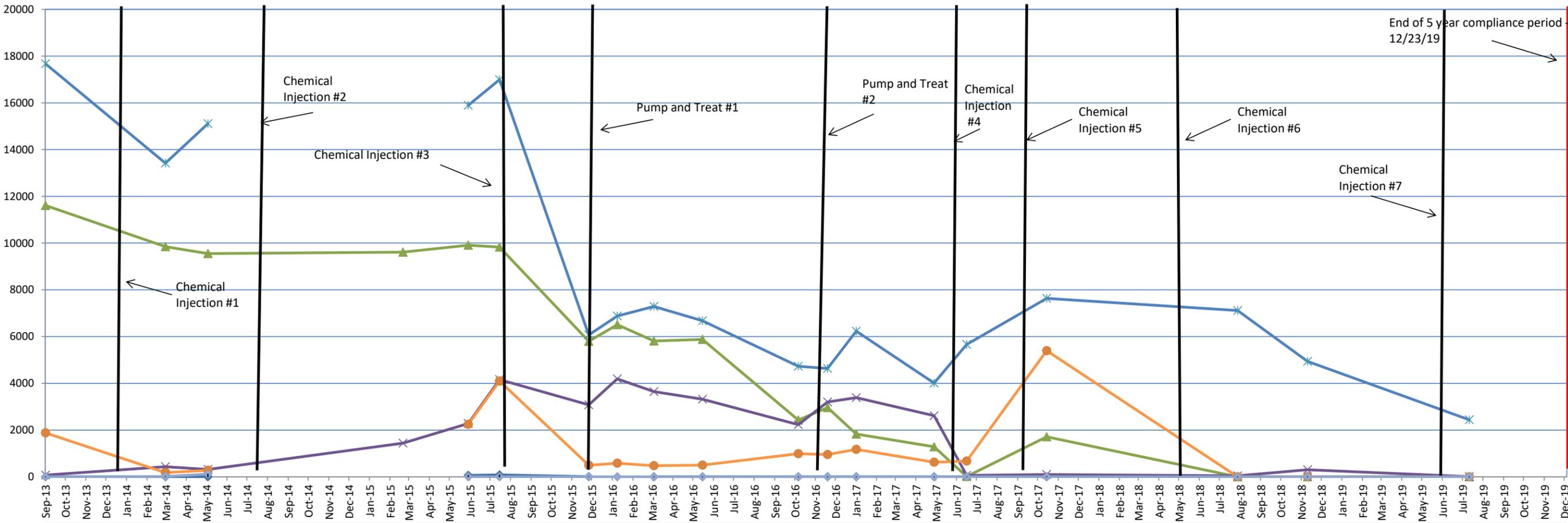
BUFFALO, NEW YORK

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: K11.002.001		
DATE: JULY 30, 2019		
DRAWN BY: R. BACKERT		
DESIGNED BY: C. MARTIN		
CHECKED BY: D. RIKER		
NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW		

GROUNDWATER CONTOUR

FIGURE 3

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	
BCP MW-1	0	0	0		62	83	6.25		1	1	-	-	-	-	-	-	-	-	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	
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	
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	
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	
BCP MW-7	1	14.16	115.7		0	0	0	-	-	-	-	-	-	-	2.3	3.9	1.8	0	0.77	

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
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	
Matrix	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	
NYSDEC Ambient Water Quality Standards & Guidance Values																			
Volatile Organic Compound	Surface Water	Groundwater																	
1,2-DICHLOROETHANE	3	3	ND	ND	ND				ND										ND
1,2-DICHLOROETHANE	0.6	0.6	ND	ND	ND				ND										.15 J
1,3-DICHLOROETHANE	3	3	ND	ND	ND				ND										ND
2-HEXANONE	50	50	ND	ND	ND				ND	ND	3.5	ND	ND	ND					ND
ACETONE	50	50	ND	ND	ND				ND	ND	ND	ND	ND	ND				5.1	2.4 J
BENZENE	1	1	ND	ND	ND				35	39	5.7	1.4	0.72	ND				0.33	ND
DIBROMOCHLOROMETHANE	50	50	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
ETHYLBENZENE	5	5	ND	ND	ND				2	1.5	ND	ND	ND	ND				ND	ND
ISOPROPYLBENZENE (CUMENE)	5	5	ND	ND	ND				1.3	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
METHYLENE CHLORIDE	5	5	ND	ND	ND				ND	ND	ND	ND	ND	ND				ND	ND
TOLUENE	5	5	ND	ND	ND				19	38	0.55	ND	ND	ND				1.1	ND
TRICHLOROETHYLENE (TCE)	5	5	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
XYLENES, TOTAL	5	5	ND	ND	ND				6.4	4.2	ND	ND	ND	ND				ND	ND
NAPHTHALENE	10	10	ND	ND	ND				ND	ND	ND	0.33 J	ND	ND				ND	4.3
No Standard																			
CARBON DISULFIDE			ND	ND	0.94				ND	ND	ND	ND	ND	ND				ND	ND
CYCLOHEXANE			ND	ND	ND				35	59	61	51	72	ND				ND	ND
METHYL ISOBUTYL KETONE			ND	ND	ND				ND	13	ND	ND	ND	ND				ND	ND
METHYLCYCLOHEXANE			ND	ND	0.47				3.2	17	15	11	ND	ND				1.5	.88J
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			
Total BTEX	0	0	0	-	62	83	6	1.4	0.7	0	0.0	0	0	0	0	0			
Non-Standard VOC List																			
1,3,5-TRIMETHYLBENZENE	5	5																ND	ND
1,2,4,5-TETRAMETHYLBENZENE	5	5																ND	ND
1,2,4-TRIMETHYLBENZENE	5	5																ND	ND
SEC-BUTYLBENZENE	5	5																ND	ND
N-PROPYLBENZENE	5	5																ND	ND
N-BUTYLBENZENE	5	5																ND	ND
P-ISOPROPYLTOLUENE																		ND	ND
1,4-DIETHYLBENZENE																		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
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	
Matrix	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	
NYSDEC Ambient Water Quality Standards & Guidance Values																				
Volatiles Organic Compound	Surface Water	Groundwater																		
1,2-DICHLOROBENZENE	3	3	ND	ND	ND															
1,2-DICHLOROETHANE	0.6	0.6	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	8	ND	ND	ND	ND
ACETONE	50	50	ND	98	ND	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	166	ND	2.3	24.0	2.1 J
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
DIBROMOCHLOROMETHANE	50	50	ND	ND	ND															
DICHLORODIFLUOROMETHANE	5	5	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
ISOPROPYLBENZENE (CUMENE)	5	5	ND	37	ND	32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.7	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
METHYLENE CHLORIDE	5	5	ND	ND	ND	ND	ND	ND	ND	ND	35	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
TRICHLOROETHYLENE (TCE)	5	5	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
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
NAPHTHALENE	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14	357	ND	ND
No Standard																				
CARBON DISULFIDE			ND	ND	ND	0.31	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
METHYL ISOBUTYL KETONE			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
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
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	-	-
Non-Standard VOC List																				
1,3,5-TRIMETHYLBENZENE	5	5														ND	133	133	ND	ND
1,2,4,5-TETRAMETHYLBENZENE	5	5														ND	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5	5														4.9	737	737	ND	ND
SEC-BUTYLBENZENE	5	5														ND	ND	ND	ND	ND
N-PROPYLBENZENE	5	5														ND	ND	ND	ND	ND
N-BUTYLBENZENE	5	5														ND	ND	ND	ND	ND
P-ISOPROPYLTOLUENE																ND	ND	ND	ND	ND
1,4-DIETHYLBENZENE																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
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	
Matrix	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
NYSDEC Ambient Water Quality Standards & Guidance Values																				
Volatile Organic Compound	Surface Water	Groundwater																		
1,2-DICHLOROETHANE	3	3	ND	ND	ND															
1,2-DICHLOROBENZENE	0.6	0.6	ND	ND	ND															
1,3-DICHLOROBENZENE	3	3	ND	ND	ND															
2-HEXANONE	50	50	ND	ND	ND	1.7	ND	ND	ND	ND	ND									
ACETONE	50	50	10	250	170	67	ND	210	ND	38.2	10	1.6	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
DIBROMOCHLOROMETHANE	50	50	ND	ND	ND															
DICHLORODIFLUOROMETHANE	5	5	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
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
METHYL ETHYL KETONE (2-BUTANONE)	50	50	ND	ND	ND	ND	8.50	ND	6.9	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
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
TRICHLOROETHYLENE (TCE)	5	5	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
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
NAPHTHALENE	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	ND	ND	36
No Standard																				
CARBON DISULFIDE			ND	ND	1.9 J	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
METHYL ISOBUTYL KETONE			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
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
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
Non-Standard VOC List																				
1,3,5-TRIMETHYLBENZENE	5	5															2	ND	ND	1.4 J
1,2,4,5-TETRAMETHYLBENZENE	5	5															1.1	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5	5															1.1	ND	ND	150
SEC-BUTYLBENZENE	5	5															ND	ND	ND	1.5 J
N-PROPYLBENZENE	5	5															2.3	ND	ND	37
N-BUTYLBENZENE	5	5															1.7	ND	ND	2.2 J
P-ISOPROPYLTOLUENE																	ND	ND	ND	ND
1,4-DIETHYLBENZENE																	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				
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					
Matrix	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					
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																			
1,3-DICHLOROBENZENE	3	3	ND	ND	ND																			
2-HEXANONE	50	50	11	ND	ND				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7 J				
ACETONE	50	50	ND	520	ND				ND	ND	ND	ND	ND	ND	ND	15.3	ND	41	69 J	44				
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	
DIBROMOCHLOROMETHANE	50	50	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	
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	
ISOPROPYLBENZENE (CUMENE)	5	5	28	29	ND				ND	ND	ND	ND	ND	ND	ND	ND	13.6	ND	20	16 J	23			
METHYL ETHYL KETONE (2-BUTANONE)	50	50	10	350	ND				ND	ND	ND	ND	ND	ND	ND	ND	5.1	ND	ND				ND	
METHYLENE CHLORIDE	5	5	ND	ND	ND				ND	ND	ND	ND	77	96	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	
TRICHLOROETHYLENE (TCE)	5	5	ND	ND	ND				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			22 J	
1,1,2-TRICHLOROETHANE	1	1	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	
NAPHTHALENE	10	10	ND	ND	ND				ND	ND	ND	ND	ND	ND	ND	ND	730	1,030	620	1,100				
No Standard																								
CARBON DISULFIDE			ND	ND	ND				ND	ND	ND	ND	ND	ND	ND	ND	2.1	ND	ND				1.2 J	
CYCLOHEXANE			230	340	240				430	260	230	250	280	430	198	148	257	ND	257	238	150	130 J	140	
METHYL ISOBUTYL KETONE			23	ND	ND				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			3.0 J	
METHYLCYCLOHEXANE			100	170	150				190	130	92	100	100	140	67.5	58.4	92.8	49	92.8	106	70	82 J	65	
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
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
Non-Standard VOC List																								
1,3,5-TRIMETHYLBENZENE	5	5															823	ND	ND	630	ND			
1,2,4,5-TETRAMETHYLBENZENE	5	5															135	ND	ND					
1,2,4-TRIMETHYLBENZENE	5	5															2,280	2,490	2,400	2,300	ND			
SEC-BUTYLBENZENE	5	5															3.2	ND	ND					
N-PROPYLBENZENE	5	5															34.8	ND	110	69	ND			
N-BUTYLBENZENE	5	5															43.3	ND	ND					
P-ISOPROPYLTOLUENE																	5.7	ND	ND					
1,4-DIETHYLBENZENE																	347	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
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	
Matrix	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
NYSDEC Ambient Water Quality Standards & Guidance Values																				
Volatile Organic Compound	Surface Water	Groundwater																		
1,2-DICHLOROBENZENE	3	3	ND	ND	ND															ND
1,2-DICHLOROETHANE	0.6	0.6	ND	ND	ND															ND
1,3-DICHLOROBENZENE	3	3	ND	ND	ND															ND
2-HEXANONE	50	50	ND	ND	ND			190	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	102	ND	17	4.5 J
BENZENE	1	1	190	33	16			470	890	250	230	200	120	302	168	200	113	131	774	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	130	20	31			36	210	22	44	67	50	163	169	173	175	85.5	154.0	3.3
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
METHYL ETHYL KETONE (2-BUTANONE)	50	50	ND	ND	ND			110	ND	ND	ND	ND	ND	ND	ND	ND	19.6	ND	ND	ND
METHYLENE CHLORIDE	5	5	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
TRICHLOROETHYLENE (TCE)	5	5	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
XYLENES, TOTAL	5	5	750	85	150			740	1,100	140	190	130	210	393	360	451	190.7	438	1,500	ND
NAPHTHALENE	10	10	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	ND	86.6	ND	1	8 J
No Standard																				
CARBON DISULFIDE			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	84	7.4	3.7 J
METHYL ISOBUTYL KETONE			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
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
Total BTEX			1,880	180	276	-		2,246	4,100	497	584	475	500	988	952	1,175	626	677	5,398	3
Non-Standard VOC List																				
1,3,5-TRIMETHYLBENZENE	5	5															74.3	ND	ND	5.1
1,2,4,5-TETRAMETHYLBENZENE	5	5															14.3	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5	5															134	ND	ND	ND
SEC-BUTYLBENZENE	5	5																		ND
N-PROPYLBENZENE	5	5															11.3	ND	4.7	1.7 J
N-BUTYLBENZENE	5	5															4.6	ND	0.72	ND
P-ISOPROPYLTOLUENE																	1.6	1.6	1.6	ND
1,4-DIETHYLBENZENE																	32.9	32.9	32.9	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
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	
Matrix	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
NYSDEC Ambient Water Quality Standards & Guidance Values																			
Volatile Organic Compound	Surface Water	Groundwater																	
1,2-DICHLOROBENZENE	3	3	ND	ND	ND														ND
1,2-DICHLOROETHANE	0.6	0.6	ND	ND	ND														ND
1,3-DICHLOROBENZENE	3	3	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
ACETONE	50	50	ND	3	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	ND	ND	4.2 J
BENZENE	1	1	0.51	8.8	14		ND	ND	ND	ND	ND	ND	ND	2.3	2.81	1.8	.18 J	.77	
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	ND	ND	3		ND	ND	ND	ND	ND	ND	ND	ND	0	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
METHYL ETHYL KETONE (2-BUTANONE)	50	50	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
TOLUENE	5	5	ND	0.56	4.7		ND	ND	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND	ND
TRICHLOROETHYLENE (TCE)	5	5	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	1	1																	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
NAPHTHALENE	10	10														1.50	.86 J		ND
No Standard																			
CARBON DISULFIDE			ND	ND	0.97		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
METHYL ISOBUTYL KETONE			ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHYLCYCLOHEXANE			ND	1.7	5.1		ND	ND	0.18	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
Total BTEX			0.51	14.16	115.7										2.3	3.9	1.8	0.18	0.77
Non-Standard VOC List																			
1,3,5-TRIMETHYLBENZENE	5	5													ND	ND	3.2		3.2
1,2,4,5-TETRAMETHYLBENZENE	5	5													ND	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	5	5													ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	5	5																	
N-PROPYLBENZENE	5	5																	
N-BUTYLBENZENE	5	5																	
P-ISOPROPYLTOLUENE																			
1,4-DIETHYLBENZENE																			

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

APPENDICES

APPENDIX A
LABORATORY ANALYTICAL RESULTS



ANALYTICAL REPORT

Lab Number:	L1933935
Client:	C&S Companies 141 Elm Street, Suite 100 Buffalo, NY 14203
ATTN:	Cody Martin
Phone:	(716) 847-1630
Project Name:	CONVENTUS
Project Number:	K11.002.001
Report Date:	08/12/19

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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: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1933935-01	MS-MW01072919	WATER	1001 MAIN ST.	07/29/19 10:30	07/31/19
L1933935-02	MS-MW02072919	WATER	1001 MAIN ST.	07/29/19 11:30	07/31/19
L1933935-03	MS-MW03072919	WATER	1001 MAIN ST.	07/29/19 12:30	07/31/19
L1933935-04	MS-MW04072919	WATER	1001 MAIN ST.	07/29/19 13:45	07/31/19
L1933935-05	BCP-MW01073019	WATER	1001 MAIN ST.	07/30/19 10:00	07/31/19
L1933935-06	BCP-MW07073019	WATER	1001 MAIN ST.	07/30/19 10:45	07/31/19
L1933935-07	BCP-MW04073019	WATER	1001 MAIN ST.	07/30/19 11:20	07/31/19
L1933935-08	BCP-MW03073019	WATER	1001 MAIN ST.	07/30/19 12:05	07/31/19
L1933935-09	BCP-MW06073019	WATER	1001 MAIN ST.	07/30/19 13:00	07/31/19
L1933935-10	BCP-MW05073019	WATER	1001 MAIN ST.	07/30/19 14:00	07/31/19
L1933935-11	TRIP BLANKS	WATER	1001 MAIN ST.	07/30/19 15:00	07/31/19

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

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
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

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

L1933935-04, -08, -09, and -10 were 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.

L1933935-10: Differences were noted between the results of the analyses which have been attributed to vial discrepancies. Further re-analysis could not be performed due to the existing vials being compromised.

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:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 08/12/19

ORGANICS

VOLATILES

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-01
 Client ID: MS-MW01072919
 Sample Location: 1001 MAIN ST.

Date Collected: 07/29/19 10:30
 Date Received: 07/31/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 08/09/19 17:30
 Analyst: PD

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	0.24	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: CONVENTUS

Lab Number: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-01
 Client ID: MS-MW01072919
 Sample Location: 1001 MAIN ST.

Date Collected: 07/29/19 10:30
 Date Received: 07/31/19
 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	3.6	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
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	130		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	107		70-130

Project Name: CONVENTUS**Lab Number:** L1933935**Project Number:** K11.002.001**Report Date:** 08/12/19**SAMPLE RESULTS**

Lab ID: L1933935-02 D

Date Collected: 07/29/19 11:30

Client ID: MS-MW02072919

Date Received: 07/31/19

Sample Location: 1001 MAIN ST.

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 08/09/19 18:14

Analyst: PD

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	230		ug/l	5.0	1.6	10
Toluene	550		ug/l	25	7.0	10
Ethylbenzene	94		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: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-02 D

Date Collected: 07/29/19 11:30

Client ID: MS-MW02072919

Date Received: 07/31/19

Sample Location: 1001 MAIN ST.

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	2000		ug/l	25	7.0	10
o-Xylene	2800		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	170		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	26	J	ug/l	50	10.	10
2-Hexanone	10	J	ug/l	50	10.	10
Bromochloromethane	ND		ug/l	25	7.0	10
1,2-Dibromoethane	ND		ug/l	20	6.5	10
1,2-Dibromo-3-chloropropane	ND		ug/l	25	7.0	10
Isopropylbenzene	ND		ug/l	25	7.0	10
1,2,3-Trichlorobenzene	ND		ug/l	25	7.0	10
1,2,4-Trichlorobenzene	ND		ug/l	25	7.0	10
Methyl Acetate	ND		ug/l	20	2.3	10
Cyclohexane	150		ug/l	100	2.7	10
1,4-Dioxane	ND		ug/l	2500	610	10
Freon-113	ND		ug/l	25	7.0	10
Methyl cyclohexane	ND		ug/l	100	4.0	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	104		70-130

Project Name: CONVENTUS**Lab Number:** L1933935**Project Number:** K11.002.001**Report Date:** 08/12/19**SAMPLE RESULTS**

Lab ID: L1933935-03
 Client ID: MS-MW03072919
 Sample Location: 1001 MAIN ST.

Date Collected: 07/29/19 12:30
 Date Received: 07/31/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 08/12/19 15:11
 Analyst: AD

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	2.1	J	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	0.76		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	1.1		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	0.18	J	ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	6.8		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	0.28	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-03
Client ID: MS-MW03072919
Sample Location: 1001 MAIN ST.

Date Collected: 07/29/19 12:30
Date Received: 07/31/19
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	0.73	J	ug/l	2.5	0.70	1
o-Xylene	6.3		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	120		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	3.6	J	ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	8.3	J	ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	1.3	J	ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	98		70-130

Project Name: CONVENTUS**Lab Number:** L1933935**Project Number:** K11.002.001**Report Date:** 08/12/19**SAMPLE RESULTS**

Lab ID: L1933935-04
 Client ID: MS-MW04072919
 Sample Location: 1001 MAIN ST.

Date Collected: 07/29/19 13:45
 Date Received: 07/31/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 08/09/19 22:33
 Analyst: PD

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	0.96	J	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	0.48	J	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	0.66		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	2.5		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	2.5		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	0.45	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-04
Client ID: MS-MW04072919
Sample Location: 1001 MAIN ST.

Date Collected: 07/29/19 13:45
Date Received: 07/31/19
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	1.1	J	ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	1.6	J	ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	103		70-130

Project Name: CONVENTUS

Lab Number: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-05
 Client ID: BCP-MW01073019
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 10:00
 Date Received: 07/31/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 08/09/19 22:55
 Analyst: PD

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	0.15	J	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
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-05
 Client ID: BCP-MW01073019
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 10:00
 Date Received: 07/31/19
 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	2.4	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
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	120		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	104		70-130

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-06
 Client ID: BCP-MW07073019
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 10:45
 Date Received: 07/31/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 08/09/19 23:17
 Analyst: PD

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	0.77		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: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-06
 Client ID: BCP-MW07073019
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 10:45
 Date Received: 07/31/19
 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	4.2	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
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	125		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	101		70-130

Project Name: CONVENTUS

Lab Number: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-07
 Client ID: BCP-MW04073019
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 11:20
 Date Received: 07/31/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 08/09/19 23:39
 Analyst: PD

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	6.7		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	2.0	J	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
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-07
 Client ID: BCP-MW04073019
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 11:20
 Date Received: 07/31/19
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	1.3	J	ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	0.41	J	ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	128		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	108		70-130

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-08
 Client ID: BCP-MW03073019
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 12:05
 Date Received: 07/31/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 08/10/19 00:01
 Analyst: PD

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: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-08
 Client ID: BCP-MW03073019
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 12:05
 Date Received: 07/31/19
 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	2.1	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
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	104		70-130

Project Name: CONVENTUS

Lab Number: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-09
 Client ID: BCP-MW06073019
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 13:00
 Date Received: 07/31/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 08/10/19 00:23
 Analyst: PD

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: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-09
 Client ID: BCP-MW06073019
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 13:00
 Date Received: 07/31/19
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	0.60	J	ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	127		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	105		70-130

Project Name: CONVENTUS**Lab Number:** L1933935**Project Number:** K11.002.001**Report Date:** 08/12/19**SAMPLE RESULTS**

Lab ID: L1933935-10
 Client ID: BCP-MW05073019
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 14:00
 Date Received: 07/31/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 08/10/19 00:45
 Analyst: PD

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	3.3		ug/l	0.50	0.16	1
Toluene	38		ug/l	2.5	0.70	1
Ethylbenzene	520	E	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	0.22	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-10
 Client ID: BCP-MW05073019
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 14:00
 Date Received: 07/31/19
 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	1800	E	ug/l	2.5	0.70	1
o-Xylene	79		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	44		ug/l	5.0	1.5	1
Carbon disulfide	1.2	J	ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	3.0	J	ug/l	5.0	1.0	1
2-Hexanone	2.7	J	ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	23		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	140		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	65		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	70		70-130

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-10 D2
 Client ID: BCP-MW05073019
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 14:00
 Date Received: 07/31/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 08/12/19 17:33
 Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS - Westborough Lab						
p/m-Xylene	4000		ug/l	100	28.	40

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	98		70-130

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-10 D
 Client ID: BCP-MW05073019
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 14:00
 Date Received: 07/31/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 08/12/19 15:39
 Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Ethylbenzene	1200		ug/l	25	7.0	10
p/m-Xylene	4500	E	ug/l	25	7.0	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	93		70-130

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-11
 Client ID: TRIP BLANKS
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 15:00
 Date Received: 07/31/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 08/12/19 14:43
 Analyst: AD

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
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

SAMPLE RESULTS

Lab ID: L1933935-11
 Client ID: TRIP BLANKS
 Sample Location: 1001 MAIN ST.

Date Collected: 07/30/19 15:00
 Date Received: 07/31/19
 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	4.1	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
Bromochloromethane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Cyclohexane	ND		ug/l	10	0.27	1
1,4-Dioxane	ND		ug/l	250	61.	1
Freon-113	ND		ug/l	2.5	0.70	1
Methyl cyclohexane	ND		ug/l	10	0.40	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	101		70-130

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 08/09/19 10:54
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1271358-5					
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: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 08/09/19 10:54
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1271358-5					
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Cyclohexane	ND		ug/l	10	0.27
1,4-Dioxane	ND		ug/l	250	61.
Freon-113	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.40

Project Name: CONVENTUS

Lab Number: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 08/09/19 10:54
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1271358-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	126		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	104		70-130

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 08/09/19 22:11
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04-10 Batch: WG1271370-5					
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: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 08/09/19 22:11
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04-10 Batch: WG1271370-5					
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Cyclohexane	ND		ug/l	10	0.27
1,4-Dioxane	ND		ug/l	250	61.
Freon-113	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.40

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 08/09/19 22:11
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04-10 Batch: WG1271370-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	103		70-130

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 08/12/19 10:27
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03,10-11 Batch: WG1271456-5					
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: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 08/12/19 10:27
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03,10-11 Batch: WG1271456-5					
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
Methyl Acetate	ND		ug/l	2.0	0.23
Cyclohexane	ND		ug/l	10	0.27
1,4-Dioxane	ND		ug/l	250	61.
Freon-113	ND		ug/l	2.5	0.70
Methyl cyclohexane	ND		ug/l	10	0.40

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 08/12/19 10:27
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 03,10-11 Batch: WG1271456-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONVENTUS

Lab Number: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1271358-3 WG1271358-4								
Methylene chloride	91		92		70-130	1		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	110		100		70-130	10		20
Carbon tetrachloride	120		110		63-132	9		20
1,2-Dichloropropane	93		92		70-130	1		20
Dibromochloromethane	100		110		63-130	10		20
1,1,2-Trichloroethane	93		97		70-130	4		20
Tetrachloroethene	90		95		70-130	5		20
Chlorobenzene	95		99		75-130	4		20
Trichlorofluoromethane	110		100		62-150	10		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	110		110		67-130	0		20
Bromodichloromethane	100		100		67-130	0		20
trans-1,3-Dichloropropene	98		100		70-130	2		20
cis-1,3-Dichloropropene	98		97		70-130	1		20
Bromoform	100		100		54-136	0		20
1,1,2,2-Tetrachloroethane	97		94		67-130	3		20
Benzene	96		97		70-130	1		20
Toluene	93		95		70-130	2		20
Ethylbenzene	99		100		70-130	1		20
Chloromethane	88		87		64-130	1		20
Bromomethane	87		83		39-139	5		20
Vinyl chloride	88		82		55-140	7		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONVENTUS

Lab Number: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1271358-3 WG1271358-4								
Chloroethane	100		100		55-138	0		20
1,1-Dichloroethene	88		90		61-145	2		20
trans-1,2-Dichloroethene	99		93		70-130	6		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	99		98		70-130	1		20
Methyl tert butyl ether	100		100		63-130	0		20
p/m-Xylene	100		100		70-130	0		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	99		94		70-130	5		20
Styrene	100		105		70-130	5		20
Dichlorodifluoromethane	88		87		36-147	1		20
Acetone	110		100		58-148	10		20
Carbon disulfide	91		84		51-130	8		20
2-Butanone	91		78		63-138	15		20
4-Methyl-2-pentanone	92		88		59-130	4		20
2-Hexanone	89		93		57-130	4		20
Bromochloromethane	100		99		70-130	1		20
1,2-Dibromoethane	98		100		70-130	2		20
1,2-Dibromo-3-chloropropane	85		96		41-144	12		20
Isopropylbenzene	99		100		70-130	1		20
1,2,3-Trichlorobenzene	98		100		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONVENTUS

Project Number: K11.002.001

Lab Number: L1933935

Report Date: 08/12/19

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 Batch: WG1271358-3 WG1271358-4								
1,2,4-Trichlorobenzene	98		100		70-130	2		20
Methyl Acetate	92		87		70-130	6		20
Cyclohexane	91		88		70-130	3		20
1,4-Dioxane	96		94		56-162	2		20
Freon-113	100		94		70-130	6		20
Methyl cyclohexane	88		86		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	112		113		70-130
Toluene-d8	98		100		70-130
4-Bromofluorobenzene	99		100		70-130
Dibromofluoromethane	102		104		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONVENTUS

Lab Number: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04-10 Batch: WG1271370-3 WG1271370-4								
Methylene chloride	95		89		70-130	7		20
1,1-Dichloroethane	92		86		70-130	7		20
Chloroform	100		99		70-130	1		20
Carbon tetrachloride	120		100		63-132	18		20
1,2-Dichloropropane	93		89		70-130	4		20
Dibromochloromethane	100		100		63-130	0		20
1,1,2-Trichloroethane	99		95		70-130	4		20
Tetrachloroethene	96		93		70-130	3		20
Chlorobenzene	100		98		75-130	2		20
Trichlorofluoromethane	100		94		62-150	6		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	110		100		67-130	10		20
Bromodichloromethane	110		100		67-130	10		20
trans-1,3-Dichloropropene	100		99		70-130	1		20
cis-1,3-Dichloropropene	100		98		70-130	2		20
Bromoform	110		100		54-136	10		20
1,1,2,2-Tetrachloroethane	98		93		67-130	5		20
Benzene	98		96		70-130	2		20
Toluene	98		92		70-130	6		20
Ethylbenzene	100		97		70-130	3		20
Chloromethane	91		84		64-130	8		20
Bromomethane	81		80		39-139	1		20
Vinyl chloride	83		83		55-140	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONVENTUS

Lab Number: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04-10 Batch: WG1271370-3 WG1271370-4								
Chloroethane	100		100		55-138	0		20
1,1-Dichloroethene	88		83		61-145	6		20
trans-1,2-Dichloroethene	92		85		70-130	8		20
Trichloroethene	96		88		70-130	9		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	99		100		70-130	1		20
1,4-Dichlorobenzene	100		97		70-130	3		20
Methyl tert butyl ether	97		94		63-130	3		20
p/m-Xylene	100		95		70-130	5		20
o-Xylene	100		100		70-130	0		20
cis-1,2-Dichloroethene	93		88		70-130	6		20
Styrene	105		100		70-130	5		20
Dichlorodifluoromethane	88		86		36-147	2		20
Acetone	89		87		58-148	2		20
Carbon disulfide	90		82		51-130	9		20
2-Butanone	100		100		63-138	0		20
4-Methyl-2-pentanone	94		94		59-130	0		20
2-Hexanone	90		88		57-130	2		20
Bromochloromethane	100		97		70-130	3		20
1,2-Dibromoethane	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	93		93		41-144	0		20
Isopropylbenzene	100		98		70-130	2		20
1,2,3-Trichlorobenzene	100		100		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONVENTUS

Project Number: K11.002.001

Lab Number: L1933935

Report Date: 08/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04-10 Batch: WG1271370-3 WG1271370-4								
1,2,4-Trichlorobenzene	100		100		70-130	0		20
Methyl Acetate	87		85		70-130	2		20
Cyclohexane	90		80		70-130	12		20
1,4-Dioxane	104		94		56-162	10		20
Freon-113	93		84		70-130	10		20
Methyl cyclohexane	88		87		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	114		109		70-130
Toluene-d8	99		99		70-130
4-Bromofluorobenzene	99		99		70-130
Dibromofluoromethane	102		104		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONVENTUS

Lab Number: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03,10-11 Batch: WG1271456-3 WG1271456-4								
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	110		110		63-132	0		20
1,2-Dichloropropane	100		100		70-130	0		20
Dibromochloromethane	100		100		63-130	0		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	110		110		62-150	0		20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	110		110		67-130	0		20
Bromodichloromethane	100		100		67-130	0		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
Bromoform	94		97		54-136	3		20
1,1,2,2-Tetrachloroethane	100		100		67-130	0		20
Benzene	100		100		70-130	0		20
Toluene	100		100		70-130	0		20
Ethylbenzene	100		100		70-130	0		20
Chloromethane	97		95		64-130	2		20
Bromomethane	92		84		39-139	9		20
Vinyl chloride	100		100		55-140	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: CONVENTUS

Lab Number: L1933935

Project Number: K11.002.001

Report Date: 08/12/19

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03,10-11 Batch: WG1271456-3 WG1271456-4								
Chloroethane	110		100		55-138	10		20
1,1-Dichloroethene	110		100		61-145	10		20
trans-1,2-Dichloroethene	100		100		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	100		100		70-130	0		20
Methyl tert butyl ether	110		110		63-130	0		20
p/m-Xylene	105		100		70-130	5		20
o-Xylene	105		105		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Styrene	105		105		70-130	0		20
Dichlorodifluoromethane	90		85		36-147	6		20
Acetone	110		110		58-148	0		20
Carbon disulfide	100		100		51-130	0		20
2-Butanone	110		110		63-138	0		20
4-Methyl-2-pentanone	96		100		59-130	4		20
2-Hexanone	100		110		57-130	10		20
Bromochloromethane	110		110		70-130	0		20
1,2-Dibromoethane	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	96		110		41-144	14		20
Isopropylbenzene	100		100		70-130	0		20
1,2,3-Trichlorobenzene	100		110		70-130	10		20

Lab Control Sample Analysis Batch Quality Control

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 03,10-11 Batch: WG1271456-3 WG1271456-4								
1,2,4-Trichlorobenzene	100		110		70-130	10		20
Methyl Acetate	110		120		70-130	9		20
Cyclohexane	100		100		70-130	0		20
1,4-Dioxane	174	Q	164	Q	56-162	6		20
Freon-113	110		100		70-130	10		20
Methyl cyclohexane	100		99		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		100		70-130
Toluene-d8	99		98		70-130
4-Bromofluorobenzene	97		99		70-130
Dibromofluoromethane	101		101		70-130

Project Name: CONVENTUS**Lab Number:** L1933935**Project Number:** K11.002.001**Report Date:** 08/12/19**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(*)
L1933935-01A	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-01B	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-01C	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-02A	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-02B	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-02C	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-03A	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-03B	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-03C	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-04A	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-04B	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-04C	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-05A	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-05B	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-05C	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-06A	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-06B	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-06C	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-07A	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-07B	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-07C	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-08A	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-08B	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)

Project Name: CONVENTUS
Project Number: K11.002.001

Serial_No:08121919:22
Lab Number: L1933935
Report Date: 08/12/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1933935-08C	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-09A	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-09B	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-09C	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-10A	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-10B	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-10C	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-11A	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)
L1933935-11B	Vial HCl preserved	A	NA		4.0	Y	Absent		NYTCL-8260-R2(14)

Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

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.
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.

Footnotes

Report Format: DU Report with 'J' Qualifiers



Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

- 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.

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. If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- 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.
- 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.
- 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.

Report Format: DU Report with 'J' Qualifiers



Project Name: CONVENTUS
Project Number: K11.002.001

Lab Number: L1933935
Report Date: 08/12/19

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

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

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; 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.

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.

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, 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	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	Date Rec'd in Lab	ALPHA Job #		
			1 of 2	8/01/19	L1933935		
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	Project Information Project Name: <u>CONVENTUS</u> Project Location: <u>1001 MAIN ST.</u> Project # <u>K11.002.001</u> (Use Project name as Project #) <input type="checkbox"/>		Deliverables <input type="checkbox"/> ASP-A <input checked="" type="checkbox"/> ASP-B <input checked="" type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other	Billing Information <input checked="" type="checkbox"/> Same as Client Info PO #		
Client Information Client: <u>CES Eng. MKRS</u> Address: <u>141 ELM ST. SUITE 100</u> <u>BUFFALO, NY 14203</u> Phone: <u>(716)-1847-1630</u> Fax: _____ Email: <u>Rbuckert@CSCOS.COM</u>		Project Manager: <u>CODY MARTIN</u> ALPHAQuote #: _____ Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: _____ Rush (only if pre approved) <input type="checkbox"/> # of Days: _____		Regulatory Requirement <input type="checkbox"/> NY TOGS <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge	Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input checked="" type="checkbox"/> NY <input type="checkbox"/> Other: _____		
These samples have been previously analyzed by Alpha <input type="checkbox"/> Other project specific requirements/comments: _____ Please specify Metals or TAL. _____		ANALYSIS TCC VOLs 87600			Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)		
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection	Sample Matrix	Sampler's Initials	TCC VOLs 87600	Sample Specific Comments	Total Bottles
		Date	Time				
<u>33935-01</u>	<u>MS-MW01072919</u>	<u>7/29/19</u>	<u>10:30</u>	<u>GW</u>	<u>RB</u>	<u>X</u>	
<u>-02</u>	<u>MS-MW02072919</u>	<u>7/29/19</u>	<u>11:30</u>	<u>GW</u>	<u>RB</u>	<u>X</u>	
<u>-03</u>	<u>MS-MW03072919</u>	<u>7/29/19</u>	<u>12:30</u>	<u>GW</u>	<u>RB</u>	<u>X</u>	
<u>-04</u>	<u>MS-MW04072919</u>	<u>7/29/19</u>	<u>1:45</u>	<u>GW</u>	<u>RB</u>	<u>X</u>	
<u>-05</u>	<u>BCP-MW01073019</u>	<u>7/30/19</u>	<u>10:00</u>	<u>GW</u>	<u>RB</u>	<u>X</u>	
<u>-06</u>	<u>BCP-MW07073019</u>	<u>7/30/19</u>	<u>10:45</u>	<u>GW</u>	<u>RB</u>	<u>X</u>	
<u>-07</u>	<u>BCP-MW04073019</u>	<u>7/30/19</u>	<u>11:20</u>	<u>GW</u>	<u>RB</u>	<u>X</u>	
<u>-08</u>	<u>BCP-MW03073019</u>	<u>7/30/19</u>	<u>12:05</u>	<u>GW</u>	<u>RB</u>	<u>X</u>	
<u>-09</u>	<u>BCP-MW06073019</u>	<u>7/30/19</u>	<u>1:00</u>	<u>GW</u>	<u>RB</u>	<u>X</u>	
<u>-10</u>	<u>BCP-MW05073019</u>	<u>7/30/19</u>	<u>2:00</u>	<u>GW</u>	<u>RB</u>	<u>X</u>	
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O 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 <u>V</u> Preservative <u>B</u>	Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)			
Relinquished By: <u>[Signature]</u>		Date/Time: <u>7/31/19 10:20</u>	Received By: <u>[Signature]</u>		Date/Time: <u>7/31/19 10:20</u>		
Relinquished By: <u>[Signature]</u>		Date/Time: <u>7/31/19 11:03</u>	Received By: <u>[Signature]</u>		Date/Time: <u>8/1/19 01:10</u>		

 NEW YORK CHAIN OF CUSTODY Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193	NEW YORK CHAIN OF CUSTODY 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 2 of 2	Date Rec'd in Lab 8/01/19	ALPHA Job # L1933935	
		Project Information Project Name: CONVENTUS Project Location: 1001 TAN ST. Project # K.H. 002.001 (Use Project name as Project #) <input type="checkbox"/>		Deliverables <input type="checkbox"/> ASP-A <input checked="" type="checkbox"/> ASP-B <input checked="" type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other		Billing Information <input checked="" type="checkbox"/> Same as Client Info PO #
Client Information Client: CES ENGINEERS Address: 141 ELA ST. SUITE 100 BUFFALO, NY 14203 Phone: (716) 8147-1430 Fax: Email: Rbuckner@cesos.com		Project Manager: CODY MARTIN ALPHAQuote #: Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		Regulatory Requirement <input type="checkbox"/> NY TOGS <input checked="" type="checkbox"/> NY Part 875 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input checked="" type="checkbox"/> NY <input type="checkbox"/> Other:
These samples have been previously analyzed by Alpha <input type="checkbox"/> Other project specific requirements/comments:			ANALYSIS			Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)
Please specify Metals or TAL.			TCU Vols 8700			Total Bottles
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date Time	Sample Matrix	Sampler's Initials	Sample Specific Comments	
33935-11	TRIP BLANKS	7/30/19 3:00	6W	RB		2
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O 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: [Signature] Date/Time: 7/31/19 1020		Received By: [Signature] Date/Time: 7/31/19 0120		Received By: [Signature] Date/Time: 8/1/19 0110		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

APPENDIX B
GROUNDWATER MONITORING CONSTRUCTION & SAMPLING LOGS



C&S Engineers, Inc.
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 Fax: 716-847-1454
 www.cscos.com

BORING LOG

Boring No. MW-01

Sheet 1 of: 1

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. Wohlabough

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 <small>c - coarse m - medium f - fine S - Sand, \$ - Silt, G - Gravel, C - Clay, cly - clayey</small>	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)
1			5			Start: 12:15 PM
			4	<u>Crushed Stone (dry)</u>		12" rec
2			9			0.2 ppm
			10			
3			6			
			6	<u>Crushed Stone (dry)</u>		15" rec
4			8	<u>Silt (red/brown - dry)</u>		0.2 ppm
			8			
5			11			
			12	<u>Silt (red/brown - moist)</u>		13" rec
6			15			2.5 ppm
			18			
7			16			
			22	<u>Silt (red/brown - saturated)</u>		24" rec
8			22	<u>Gravel (fine - medium grey - saturated)</u>		0 ppm
			24			
9			13			
			19	<u>Gravel (medium fine - medium grey - saturated)</u>		18" rec
10			19	<u>Silt (saturated)</u>		15.3 ppm
			22			
11			7			
			18	<u>Gravel (medium fine - medium grey - saturated)</u>		17" rec
12			18	<u>Silt (saturated)</u>		229 ppm
			28			
13			50/4	<u>Gravel (medium fine - medium grey - saturated)</u>		5" rec
						16.3 ppm
14			16			
			24	<u>Gravel (medium fine - medium grey - saturated)</u>		17" rec
15			14			14.0 ppm
			16			
16						
17						
18						
19						
20						
21						
22						
23						
24						



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BORING LOG

Boring No. MW-02

Sheet 1 of: 1

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: 8/16/13

Drilling Firm: SJB

Driller: Tony

Finish Date: 8/16/13

Groundwater

Depth

Date & Time

Drill Rig: CME 45C

Inspector: N. Wohlabough

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"	<small>c - coarse m - medium f - fine</small> MATERIAL DESCRIPTION <small>S - Sand, \$ - Silt, G - Gravel, C - Clay, cly - clayey</small>	<small>a - and - 35-50% s - some - 20-35% l - little - 10-20% t - trace - 0-10%</small>	COMMENTS (e.g., N-value, recovery, relative moisture, core run, RQD, % recovered)
1			7			Start: 9:20 AM
			7	<u>Crushed Stone (grey - dry)</u>		6" rec
2			15			0.2 ppm
			17			
3			10			
			10	<u>Flowable Fill (black - dry/damp)</u>		6" rec
4			23			0.2 ppm
			26			
5			3			
			3	<u>Flowable Fill (black - dry/damp)</u>		24" rec
6			12			3.1 ppm
			10			
7			13			
			15	<u>Flowable Fill (black - dry/damp)</u>		24" rec
8			22			5.6 ppm
			23			
9			4			
			4	<u>Flowable Fill (black - damp/moist)</u>		24" rec
10			5			4.3 ppm
			8			
11			5			
			9	<u>Flowable Fill (black - damp/moist)</u>		20" rec
12			14	<u>Medium Sand (Caorse - gray - moist)</u>		1.5 ppm
			48			
13			3-May	<u>2" of Slough</u>		N/A
14						N/A
15				<u>Bottom of @ 13'+3' = 16' bg</u>		
16						
17						
18						
19						
20						
21						
22						
23						
24						



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BORING LOG

Boring No. MW-03

Sheet 1 of: 1

Project No.: K11.002.001

Project Name: Main St ROW Investigation

Surface Elev.:

Location: MOB - Buffalo, NY

Datum: 26' - Surface

Client: Kaleida Health

Start Date: 9/12/13

Drilling Firm: SJB

Driller: Tony

Finish Date: 9/12/13

Groundwater

Depth

Date & Time

Drill Rig: CME 45C

Inspector: N. Wohlabough

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 <small>c - coarse m - medium f - fine S - Sand, \$ - Silt, G - Gravel, C - Clay, cly - clayey</small>	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)
1			4			Start: 8:30 AM
			7	<u>Sand (med brown - fine sand - moist)</u>		12" rec
			10	<u>some Silt</u>		0.2 ppm
2			12			
			17			
3			17	<u>Silt (med brown - wet to saturated)</u>		15" rec
			18	<u>some Fine Sand and Clay</u>		0.4 ppm
4			17			
			6			
5			8	<u>Sand (black - med grained - sheen - saturated)</u>		14" rec
			7			415 ppm
6			7			
			9			
7			10	<u>Sand (black - med grained - sheen - saturated)</u>		16"
			10			0 ppm
8			11			
			2			
9			4	<u>Sand (med grey - saturated)</u>		20" rec
			5	<u>4" of Clay at the bottom (red/brown)</u>		175 ppm
10			15			
			16			
11			35	<u>Sand (upper 10" - black - wet to moist)</u>		20" rec
			50/3	<u>Sand (lower 10" - coarse - with angular gravel - west to moist)</u>		305 ppm
12						
			27			
13			50/4	<u>Sand (med grey - coarse - with angular gravel - moist)</u>		8" rec
						19.4 ppm
14						
			13			
15			19	<u>Sand (med grey - coarse - with angular gravel - moist)</u>		15" rec
			37			12 ppm
16			30			
17						
18						
19						
20						
21						
22						
23						
24						



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BORING LOG

Boring No. MW-04

Sheet 1 of: 1

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. Wohlabough

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 <small>c - coarse m - medium f - fine S - Sand, \$ - Silt, G - Gravel, C - Clay, cly - clayey</small>	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)
1			9			Start: 7:20 AM
			12	<u>Crushed Stone (dry)</u>		12" rec
			13			0.2 ppm
2			10			
			15			
3			21	<u>Crushed Stone (dry)</u>		15" rec
			23			0.2 ppm
4			25			
			20			
5			19	<u>Crushed Stone (dry)</u>		16" rec
			19	<u>Bottom 2" Flowable Fill</u>		0.5 ppm
6			20			
			13			
7			16	<u>Flowable Fill (black - moist)</u>		24" rec
			19			0 ppm
8			40			
			12			
9			13	<u>Flowable Fill (black - moist)</u>		24" rec
			15			0 ppm
10			19			
			7			
11			8	<u>Flowable Fill (black - moist)</u>		24" rec
			9	<u>Sand (medium brown - saturated)</u>		517 ppm
12			9			
			5			
13			9	<u>Sand (medium brown - moist)</u>		16" rec
			6	<u>Clay (red/brown - moist)</u>		59 ppm
14			14			
			6			
15			4	<u>Clay (red/brown - moist)</u>		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

Project Name: Main St ROW Investigation

Surface Elev.:

Location: MOB - Buffalo, NY

Datum: 26' - Surface

Client: Kaleida Health

Start Date: 9/12/13

Drilling Firm: SJB

Driller:

Tony

Finish Date: 9/12/12

Groundwater

Depth

Date & Time

Drill Rig:

CME 45C

Inspector:

N. Wohlabough

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"	c - coarse m - medium f - fine S - Sand, \$ - Silt, G - Gravel, C - Clay, cly - clayey	MATERIAL DESCRIPTION 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)
			2			Start: 12:35 PM
1			3		<u>Sand (med - red/brown - fine - moist)</u>	19" rec
			5			0.6 ppm
2			11			
			12			
3			16		<u>Sand (med - red/brown - fine - moist)</u>	16" rec
			16		<u>some clay</u>	0.9 ppm
4			20			
			6			
5			8		<u>Sand (top 8" - med - brown - coarse - saturated)</u>	16" rec
			10		<u>Sand (bottom 8" - grey/black - coarse/gravelly - product sheet)</u>	382 ppm
6			9			
			6			
7			7		<u>Sand (med - black - product sheen - saturated)</u>	21" rec
			6			1628 ppm
8			8			
			5			
9			8		<u>Sand (upper 12" - grey/black - wet)</u>	20" rec
			12		<u>Sand (lower 8" - red/brown - clay - wet)</u>	17.2 ppm
10			50/4			
			10			
11			16		<u>Sand (grey - round and angular gravel - saturated)</u>	11" rec
			47			12 pmm
12			50/2			
13			50/3		<u>Sand (coarse - grey - angular gravel - saturated)</u>	3" rec
						4.2 ppm
14						
			15			
15			23		<u>Gravel (angular gravel - grey - moist to saturated)</u>	14" rec
			50/4		<u>some Sand</u>	10.5 ppm
16						
17						
18						
19						
20						
21						
22						
23						
24						



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BORING LOG

Boring No. MW-06

Sheet 1 of: 1

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: 8/14/13

Drilling Firm: SJB

Driller:

Tony

Finish Date: 8/14/13

Groundwater

Depth

Date & Time

Drill Rig:

CME 45C

Inspector:

N. Wohlabough

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 <small>c - coarse m - medium f - fine S - Sand, \$ - Silt, G - Gravel, C - Clay, cly - clayey</small>	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)
1			8			Start: 8:15 AM
			7	<u>Crushed Stone (dry)</u>		12" rec
2			6			0.6 ppm
			16			
3			9			
			10	<u>Crushed Stone (dry)</u>		15" rec
4			10			0.0 ppm
			17			
5			5			
			6	<u>Sand(medium/dark grey/brown - moist)</u>		10" rec
6			6			33.4
			8			
7			11			
			9	<u>Silty CLAY (red/brown - moist)</u>		18" rec
8			11	<u>Sand(brown - fine - moist)</u>		43.0 ppm
			14			
9			4			10" rec
			5	<u>Clayey SILT (red/brown - wet/saturated)</u>		53.0 ppm
10			13	<u>Sand(brown - fine - wet/saturated)</u>		
			38			
11			1			
			1	<u>Medium Sand (dark grey - saturated)</u>		11" rec
12			3	<u>Some Silt/Gravel (saturated)</u>		1.8 ppm
			7			
13			5			
			8	<u>Medium Sand (medium grey - saturated)</u>		24" rec
14			10	<u>Sand (lower 6" black- saturated)</u>		2.9 ppm
			11			
15			1			
			2	<u>Medium Sand (black - degraded oil smell - saturated)</u>		24" rec
16			4	<u>Clay (red/brown - rotten - saturated)</u>		
			5			
17						
18						
19						
20						
21						
22						
23						
24						



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BORING LOG

Boring No. MW-07

Sheet 1 of: 1

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: 8/16/13

Drilling Firm: SJB

Driller: Tony

Finish Date: 8/16/13

Groundwater

Depth

Date & Time

Drill Rig: CME 45C

Inspector: N. Wohlabough

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 <small>c - coarse m - medium f - fine S - Sand, \$ - Silt, G - Gravel, C - Clay, cly - clayey</small>	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)
1			3			Start: 2:45 PM
			5	<u>Crushed Stone (grey - dry)</u>		12" rec
2			5			0.4 ppm
			9			
3			19			
			16	<u>Sand (fine - red/brown - dry to moist)</u>		15" rec
4			18	<u>Silt (red/brown - dry to moist)</u>		1.0 ppm
			18			
5			12			
			17	<u>Sand (fine - red/brown - moist)</u>		16" rec
6			18	<u>Silt (red/brown - moist)</u>		0.2 ppm
			20			
7			24			
			24	<u>Sand (fine - red/brown - wet to saturated)</u>		23" rec
8			28	<u>Silt (red/brown - wet to saturated)</u>		0.5 ppm
			37			
9			14			
			16	<u>Sand (fine - red/brown - saturated)</u>		21" rec
10			22	<u>Silt (red/brown - saturated)</u>		0.8 ppm
			39			
11			16			
			28	<u>Silt (red/brown - wet)</u>		18" rec
12			32	<u>Clay (red/brown - wet)</u>		0.1 ppm
			31			
13			25			
			17	<u>Silt (red/brown - saturated)</u>		24" rec
14			26	<u>Clay (red/brown - saturated)</u>		0.0 ppm
			33			
15			20			
			19	<u>Silt (red/brown - moist to wet)</u>		19" rec
16			19	<u>Gravel (red/brown - moist to wet)</u>		0.0 ppm
			21			
17						
18						
19						
20						
21						
22						
23						
24						



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Well Sampling Field Data Sheet

Well Casing Unit Volume		
(gal/l.f.)		
1 1/4" = 0.08	2" = 0.17	3" = 0.38
4" = 0.66	6" = 1.5	8" = 2.6

Client Name: KACANDA HEALTH
 Site Name: W410 CONVERSION
 Project No.: W410
 Field Staff: RICH BARNETT

WELL DATA

Date		7/29/19	7/29/19	7/29/19	7/29/19	7/30/19	7/30/19	7/30/19	7/30/19
Well Number		MS-1W01	MS-1W02	MS-1W03	MS-1W04	3CP1W01	3CP1W02	3CP1W03	3CP1W04
Diameter (Inches)		2"	2"	2"	2"	2"	2"	2"	8"
Total Sounded Depth (feet)		36 FT.	36 FT.	40 FT.	40 FT.	15 FT.	15 FT.	15 FT.	15 FT.
Static Water Level (feet)		70.9 FT.	28.5 FT.	29.2 FT.	29.6 FT.	6.4 FT.	7.5 FT.	6.8 FT.	7.2 FT.
H ₂ O Column (feet)									
Pump Intake (feet)									
Well Volume (gallons)									
Amount to Evacuate (gallons)		2 gal	2 gal	1 gal	2 gal	2 gal	2 gal	2 gal	2 gal
Amount Evacuated (gallons)		2 gal	2 gal	1 gal	2 gal	2 gal	2 gal	2 gal	2 gal

FIELD READINGS

Date	Stabilization Criteria	7/29/19	7/29/19	7/29/19	7/29/19	7/30/19	7/30/19	7/30/19	7/30/19
Time		10:30	11:30	17:30	14:5	10:00	10:45	11:20	12:05
pH (Std. Units)	+/-0.1	7.17	10.50	11.50	10.80	8.09	7.62	7.63	8.63
Conductivity (mS/cm)	3%	5.63	17.05	30.3	14.8	8.02	4.30	7.02	10.9
Turbidity (NTU)	10%	-	-	-	-	-	-	-	-
D.O. (mg/L)	10%	9.10	27.52	20.61	50.00	1.85	2.23	2.14	8.35
Temperature (°C) (°F)	3%	14.07°C	14.49°C	20.71°C	15.82°C	12.80°C	13.83°C	14.29°C	14.01°C
ORP ³ (mV)	+/-10 mv	130	81	48	69	-106	96	-115	74
Appearance		CLEAR	ST	ST	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
Free Product (Yes/No)		YES	YES	YES	YES	YES	YES	YES	YES
Odor		NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Comments		* BATTERY WENT LOW SO TURBIDITY WAS NOT COLLECTED.							

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



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

Well Sampling Field Data Sheet

Well Casing Unit Volume (gal/l.f.)		
1 1/4" = 0.08	2" = 0.17	3" = 0.38
4" = 0.66	6" = 1.5	8" = 2.6

Client Name: KALIEDA HEALTH
 Site Name: CONVENTUS
 Project No.: N46
 Field Staff: RICH BACHERT

WELL DATA

Date			
Well Number		7/30/19	7/30/19
Diameter (inches)		300MM OLD	200MM
Total Sounded Depth (feet)		9'	2'
Static Water Level (feet)		15 FT.	15 FT.
H ₂ O Column (feet)		10.5 FT.	7.8 FT.
Pump Intake (feet)			
Well Volume (gallons)			
Amount to Evacuate (gallons)		2 gal	3 gal
Amount Evacuated (gallons)		2 gal	2 gal

FIELD READINGS

Date			
Time	Stabilization Criteria	7/30/19	7/30/19
pH (Std. Units)	+/-0.1	1:00	2:00
Conductivity (mS/cm)	3%	18.52	9.81
Turbidity (NTU)	10%	149	28.2
D.O. (mg/L)	10%	-	-
Temperature (°C) (°F)	3%	5.53	2.60
ORP ³ (mV)	+/-10 mv	14.00°C	15.58°C
Appearance		108	46
Free Product (Yes/No)		CLEAR	CLEAR
Odor		YES	NEW SOME PRODUCT.
Comments		NONE.	SOME ODOR PPT. ABOVE.
* HANIBU BATTERIES WERE LOW UNABLE TO COLLECT TURBIDITY.			

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

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).

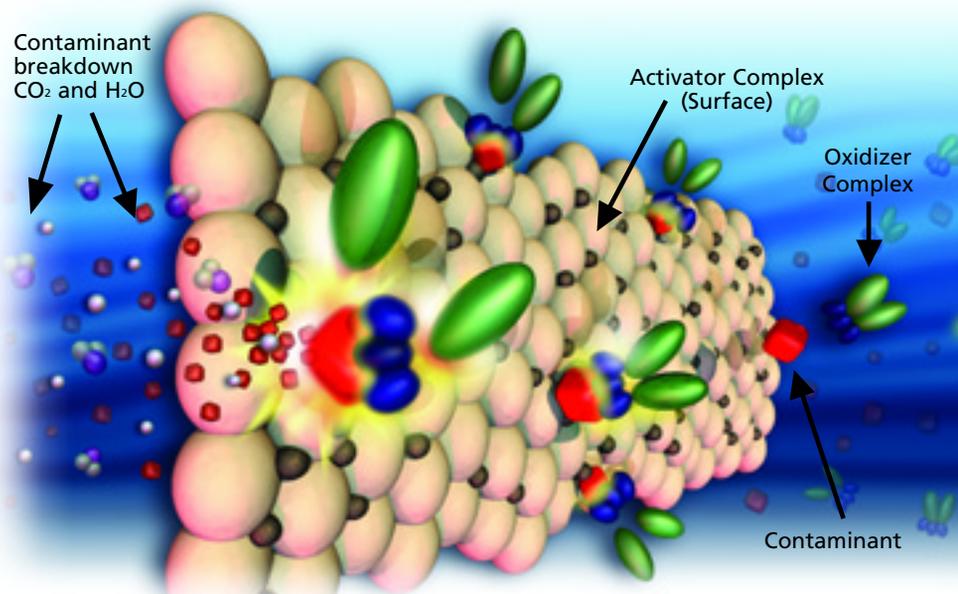
ACHIEVES RAPID OXIDATION VIA A NUMBER OF MECHANISMS

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:** $C_2Cl_4 + 2 Na_2CO_3 + 3 H_2O_2 + 2 H_2O \leftrightarrow 2CO_2 + 4 NaCl + 4 H_2O + 2 H_2CO_3$
- **Free Radical Oxidation:**
 - Peroxy Radical ($HO_2\bullet$)
 - Hydroxyl Radical ($OH\bullet$)
 - Superoxide Radical ($O_2\bullet$)

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.

Figure 1. RegenOx™ Surface-Mediated Oxidation



* Patent applied for



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



Advanced Technologies for Groundwater Resources

1011 Calle Sombra / San Clemente / California 92673-6244
Tel: 949/366-8000 / Fax: 949/366-8090 / www.regenesis.com

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 Regenesi's 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:



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 cost-effective 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 Regenesi 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.