

# **GROUNDWATER SAMPLING REPORT**

**“CENTRAL BOULEVARD ELEMENTARY  
SCHOOL”**

**60 CENTRAL BOULEVARD  
BETHPAGE, NEW YORK 11714**

**PREPARED FOR:  
BETHPAGE UNION FREE SCHOOL DISTRICT  
10 CHERRY AVENUE  
BETHPAGE, NEW YORK 11714**

**JCB PROJECT #: 19-44415  
NOVEMBER 2019**

**J.C. BRODERICK & ASSOCIATES, INC.  
Environmental Consulting & Testing**

**1775 Expressway Drive North  
Hauppauge, New York 11788  
631-584-5492 Fax: 631-584-3395**



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### **Section No. 1.0: Introduction**

J.C. Broderick and Associates, Inc. (JCB) was retained by the Bethpage Union Free School District to perform annual groundwater sampling and analysis from three (3) existing groundwater monitoring wells located at the Central Boulevard Campus.

### **Section No. 2.0: Site Description and Location**

The subject site is located at 60 Central Boulevard, Bethpage, New York 11714. The subject site is located on the west side of Central Boulevard, between Brenner Avenue to the North and Jean Avenue to the south. According to the United States Geological Survey (USGS) *Amityville, New York 1994 7.5 Minute Series* Topographical Map, the subject site is situated at an approximate elevation of 100 feet above mean sea level. The location of the subject site is shown on the Site Location Map Appendix-A Figure-1.

### **Section No. 3.0: Subsurface Investigation Procedures**

The following sections summarizes the subsurface investigation performed. Please refer to the attachments of this document for additional details.

#### **Section No. 3.1: Monitoring Well Gauging**

On October 1, 2019, JCB checked the monitoring wells for the presence of light non-aqueous phase liquid (LNAPL) utilizing a Solinst® Model 122 Product/Water Interface Meter and depth to the groundwater table was recorded to the nearest 0.01 ft.

The following table summarizes the groundwater data:

<b>Table No. 1: Depth to Groundwater Gauged with Interface Meter</b>		
<b>Well Number</b>	<b>Depth to Product (ft)</b>	<b>Depth to Groundwater (ft)</b>
MW-1	No Product	37.02
MW-2	No Product	36.80
MW-3	No Product	36.93

#### **Section No. 3.2: Groundwater Sampling**

On October 1, 2019, JCB collected three (3) groundwater samples from the existing groundwater monitoring wells (MW-1, MW-2, and MW-3). Prior to sampling, the casing volume of each monitoring well was calculated and a minimum of three (3) casing volumes of water were purged utilizing a check valve with mechanical assistance. During the purging process, specific groundwater parameters were monitored by a YSI Multi-meter.

The following table summarizes the purged water testing.

Table No. 2: Groundwater Monitoring During Sample Collection					
<b>MW-1</b>	<b>DTW (ft)</b>	<b>TD (ft)</b>	<b>Water Column (ft)</b>		
	37.02	49.12	12.10		
<b>Time</b>	<b>Temp (°C)</b>	<b>TDS (g/l)</b>	<b>DO (%)</b>	<b>pH</b>	<b>ORP (mV)</b>
9:48	15.87	0.249	3.86	7.31	273.1
9:55	16.04	0.252	3.74	7.27	273.3
9:59	16.30	0.260	3.64	7.09	275.9
10:00	Samples Collected				
<b>MW-2</b>	<b>DTW (ft)</b>	<b>TD (ft)</b>	<b>Water Column (ft)</b>		
	36.80	49.11	12.31		
<b>Time</b>	<b>Temp (°C)</b>	<b>TDS (g/l)</b>	<b>DO (%)</b>	<b>pH</b>	<b>ORP (mV)</b>
10:18	16.20	0.248	3.60	6.60	283.0
10:25	15.82	0.247	3.62	6.56	283.3
10:30	15.67	0.247	3.65	6.54	285.7
10:35	Samples Collected				
<b>MW-3</b>	<b>DTW (ft)</b>	<b>TD (ft)</b>	<b>Water Column (ft)</b>		
	36.93	49.15	12.22		
<b>Time</b>	<b>Temp (°C)</b>	<b>TDS (g/l)</b>	<b>DO (%)</b>	<b>pH</b>	<b>ORP (mV)</b>
10:42	16.48	0.300	4.30	6.91	270.4
10:49	15.77	0.310	4.16	6.87	280.7
10:54	15.62	0.308	4.11	6.78	280.5
10:55	Samples Collected				
<b>Notes:</b> DTW = Depth to Groundwater Table TD = Total Depth of Well Temp = Temperature in degrees Celsius TDS = Total Dissolved Solids on grams per liter DO = Dissolved Oxygen in percent pH = Potential of Hydrogen, unitless ORP = Oxygen-Reduction Potential in millivolts					

The following table summarizes the groundwater samples submitted for laboratory analysis:

Table No. 3: Summary of Groundwater Samples Submitted for Laboratory Analysis			
Sample ID#	Date Sampled	Description of Sample	Analysis Method
MW-1	10-1-19	Monitoring Well No. 1	EPA 8260 + Freon EPA 903.0 EPA 904.0
MW-2	10-1-19	Monitoring Well No. 2	EPA 8260 + Freon EPA 903.0 EPA 904.0
MW-3	10-1-19	Monitoring Well No. 3	EPA 8260 + Freon EPA 903.0 EPA 904.0
<b>Notes:</b> EPA = Environmental Protection Agency			

**Section No. 4.0: Groundwater Laboratory Analytical Summary**

Groundwater samples selected for laboratory analysis were placed into laboratory supplied containers, assigned individual identification numbers and then placed into an appropriately conditioned cooler. Chain of Custody documents were prepared, and the samples were then delivered to an independent New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory for analysis.

Groundwater samples submitted for laboratory analysis were analyzed for volatile organic compounds (VOCs) plus Freon utilizing Environmental Protection Agency (EPA) Method 8260. York Analytical Laboratories, Inc. (York) provided laboratory analytical services. Copies of York’s NYSDOH certifications are available upon request

Groundwater samples submitted for laboratory analysis were analyzed for Radium 226 utilizing EPA Method 903.0, and for Radium 228 utilizing EPA Method 904. EMSL Analytical, Inc. (EMSL) provided laboratory analytical services. Copies of EMSL’s NYSDOH certifications are available upon request

The laboratory analytical results for the groundwater samples were reviewed and compared to Table No. 1 of the *Ambient Water Quality Standards and Guidance Values of the New York State Department of Environmental Conservation, Division of Water, Technical and Operational Guidance Series (TOGS) (1.1.1)*.

The following table summarizes the detected VOC analytical results in groundwater:

Table No. 4: Summary of Groundwater Samples Submitted for VOC Analysis								
Sample ID York ID Sampling Date Client Matrix		NYSDEC TOGS Standards and Guidance Values - GA	MW-1 19J0188-01 10/1/2019 Water		MW-2 19J0188-02 10/1/2019 Water		MW-3 19J0188-03 10/1/2019 Water	
Compound	CAS Number		Result	Q	Result	Q	Result	Q
<b>Volatile Organics, 8260 List - Low Level</b>		ug/L	ug/L		ug/L		ug/L	
<b>Dilution Factor</b>			1		1		1	
Chloroform	67-66-3	7	0.200	U	0.200	U	0.320	J
Toluene	108-88-3	5	0.560		0.200	U	0.210	J
Trichloroethylene	79-01-6	5	0.310	J	0.200	U	0.200	U
<b>NOTES:</b>								
Any Regulatory Exceedences are color coded by Regulation								
<b>Q is the Qualifier Column with definitions as follows:</b>								
J=analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated								
U=analyte not detected at or above the level indicated								

The review of the laboratory VOC analysis revealed the following significant findings:

The laboratory analysis results from the groundwater samples submitted from MW-1, MW-2, and MW-3 did indicate detectable concentrations of chloroform, toluene, and trichloroethylene; however, the levels reported were below the above referenced guidance values for groundwater.

The following table summarizes the Radium analytical results in groundwater:

Table No. 5: Summary of Groundwater Samples Submitted for Radon Analysis				
Client Sample ID	Allowable Standards	MW-1	MW-2	MW-3
EPA 903.0 & EPA 904	pCi/L	10/1/2019	10/1/2019	10/1/2019
Radium 226 (pCi/g)	3.0	6.01	0.83	1.42
Radium 228 (pCi/g)	5.0	5.18	1.24	2.42
<b>Notes:</b> pCi/L = picocuries per liter				

The review of the laboratory Radon analysis revealed the following significant findings:

The laboratory analysis results from the groundwater samples submitted from MW-2, and MW-3 did indicate detectable concentrations of Radium 226 and Radium 228; however, the levels reported were below the above referenced guidance values for groundwater. The laboratory analysis results from the groundwater samples submitted from MW-1 did indicate elevated concentrations of Radium 226 and Radium 228 exceeding the above referenced guidance values for groundwater.

#### **Section No. 5.0: Quality Assurance and Quality Control (QA/QC) Procedures**

In order to prevent cross-contamination between sampling locations, all re-usable sampling equipment which came into contact with sample materials was decontaminated prior to each use. Equipment used for sample collection was wiped clean, washed in a solution of Alconox and thoroughly rinsed with potable water. New and dedicated polyethylene tubing was used for collection of each groundwater sample. All sampling personnel wore disposable latex, nylon, or nitrile gloves during sampling events. At a minimum, gloves were changed between before each laboratory sample was collected. All collected samples were placed into an appropriately conditioned cooler for storage and were transported to the laboratory. Samples were maintained between 0°C and 8°C.

#### **Section No. 6.0: Conclusions and Recommendations**

Based on the findings of the current data collected during the subsurface investigation performed and reported to JCB, the following observations are made:

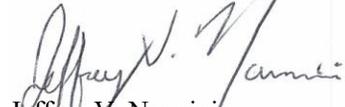
The laboratory analysis results from the groundwater samples submitted did not indicate elevated concentrations of any VOCs above the NYSDEC TOGS 1.1.1 guidance values for groundwater.

The laboratory analysis results from the groundwater samples submitted did not indicate detectable concentrations of Radium 226 and Radium 228 above the NYSDEC TOGS 1.1.1 guidance values for groundwater.

Based upon the detected concentrations of VOCs and Radium in the collected groundwater samples it is recommended that periodic groundwater and volatile vapor intrusion (VVI) sampling be continued to monitor site conditions. Radon sampling within the school building is currently scheduled for during the March 2020 break.

Sincerely,

**J.C. Broderick & Associates, Inc.**



Jeffrey V. Nannini  
Environmental Scientist



Steven Muller, P.G.  
Director – Subsurface Division

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# **Appendix A**

## **Figures**



**J.C. BRODERICK**  
 & Associates  
 Environmental Consulting and  
 Testing  
 1775 Express Drive North  
 Hauppauge, NY 11788  
 Phone: (631).584.5492  
 Fax: (631).584.3395

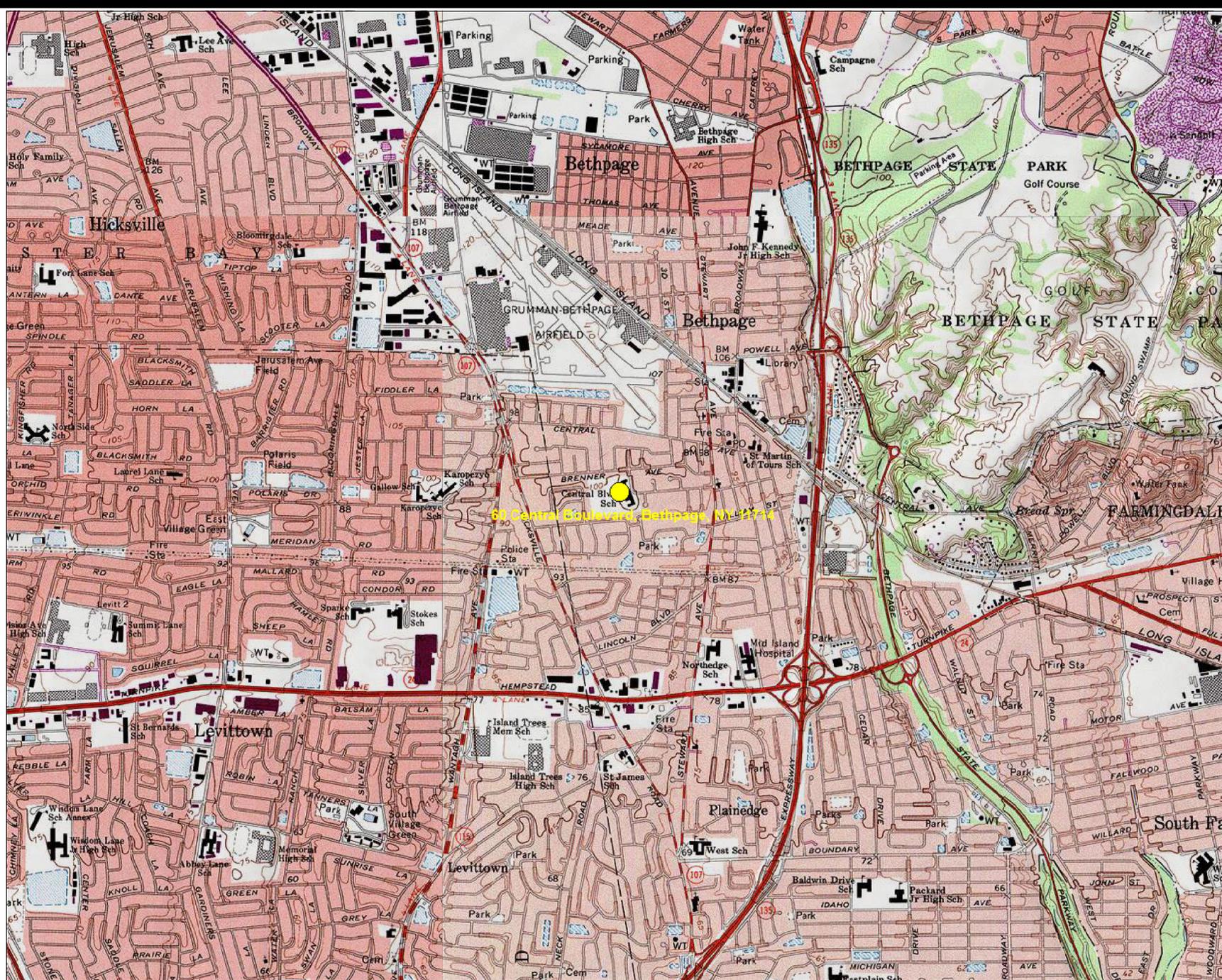
Notes:  
  
 Central Boulevard  
 Elementary School  
 60 Central Boulevard  
 Bethpage, NY 11714

Drawing Title  
  
 Figure No. 1  
 Site Location Map

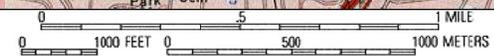
Scale As Noted    Project No. 19-44415    Date 10-10-19

Drawn By J.V.N.    Checked By S.W.M.    Page No. 1 of 3

Drawing No.  
  
 1



**JCB LEGEND**  
 ● SUBJECT SITE



Map created with TOPO!® ©2002 National Geographic (www.nationalgeographic.com/topo)



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Notes:

Central Boulevard  
Elementary School  
60 Central Boulevard,  
Bethpage, NY 11714

Drawing Title

Figure No. 2

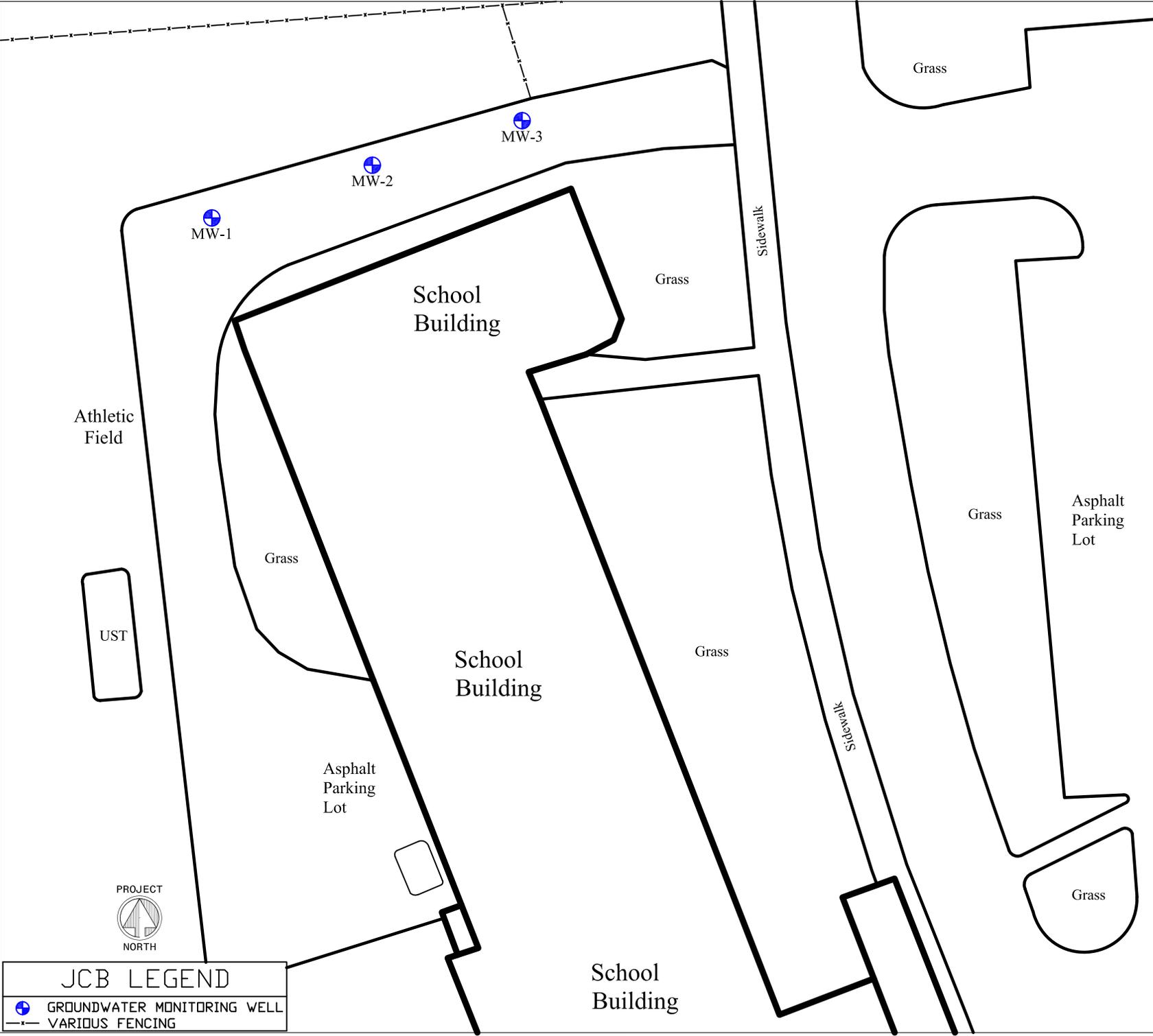
Monitoring Well  
Locations  
Map

Scale As Noted    Project No. 19-44415    Date 10-10-19

Drawn By J.V.N.    Checked By S.W.M.    Page No. 2 of 3

Drawing No.

2



**JCB LEGEND**

GROUNDWATER MONITORING WELL

VARIOUS FENCING





J.C. BRODERICK

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Notes:

Central Boulevard  
Elementary School  
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Drawing Title

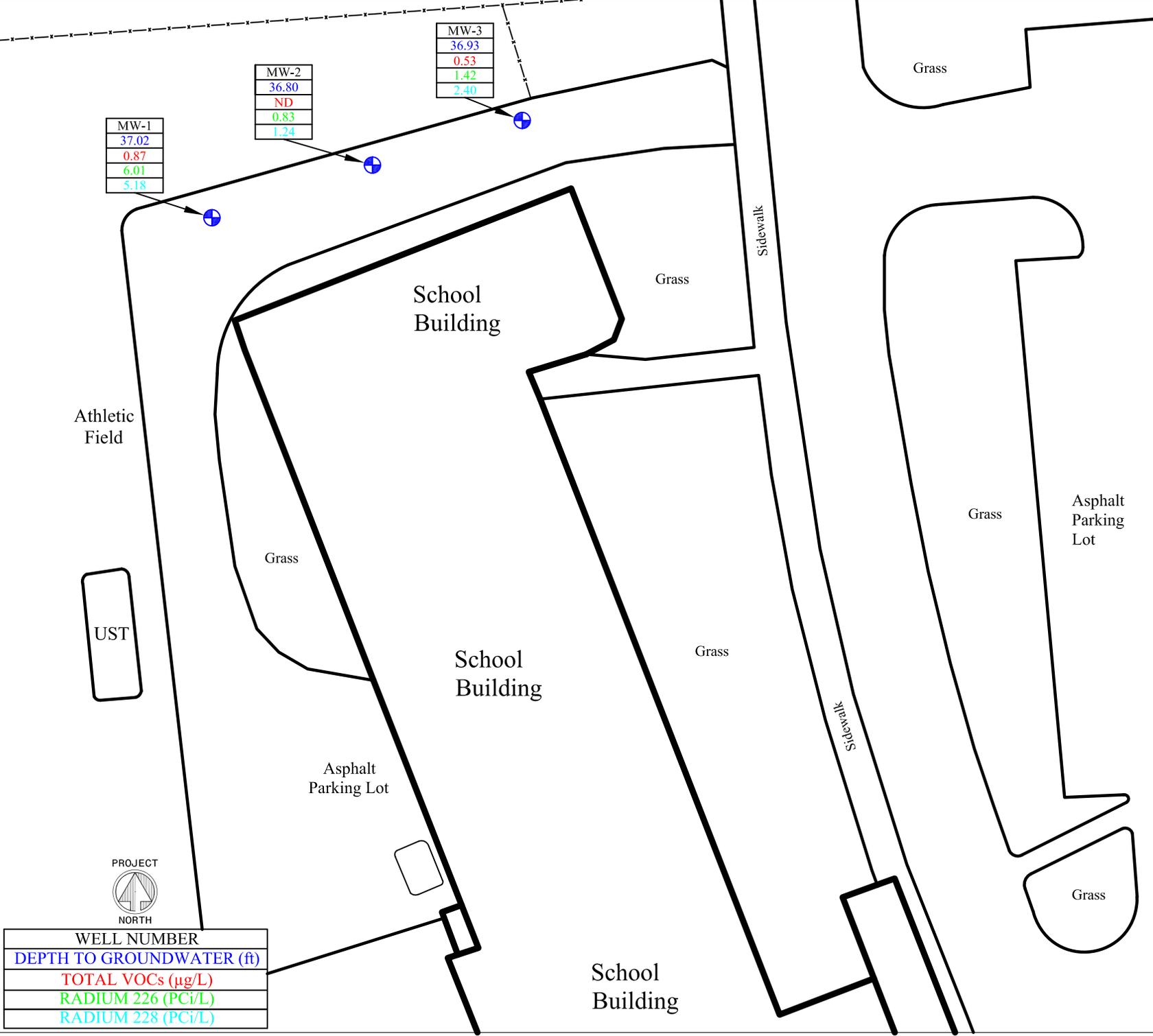
Figure No. 3  
Analytical Results  
Map

Scale As Noted Project No. 19-44415 Date 10-10-19

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Drawing No.

3



MW-3
36.93
0.53
1.42
2.40

MW-2
36.80
ND
0.83
1.24

MW-1
37.02
0.87
6.01
5.18

WELL NUMBER
DEPTH TO GROUNDWATER (ft)
TOTAL VOCs (µg/L)
RADIUM 226 (PCi/L)
RADIUM 228 (PCi/L)



PROJECT

Athletic Field

UST

School Building

School Building

School Building

Asphalt Parking Lot

Asphalt Parking Lot

Sidewalk

Sidewalk

Grass

Grass

Grass

Grass

Grass

Grass

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# **Appendix B**

## **Photo Log**

**Groundwater Monitoring Well Location  
MW-1**



**Field Photograph Log**

**Groundwater Sampling Report**

**Central Boulevard Elementary School  
60 Central Boulevard  
Bethpage, New York 11714**

**Photo No. 01**

**JCB#: 19-44415**

**Groundwater Monitoring Well Location  
MW-2**



**Field Photograph Log**

**Groundwater Sampling Report**

**Central Boulevard Elementary School  
60 Central Boulevard  
Bethpage, New York 11714**

**Photo No. 02**

**JCB#: 19-44415**

**Groundwater Monitoring Well Location  
MW-3**



**Field Photograph Log**

**Groundwater Sampling Report**

**Central Boulevard Elementary School  
60 Central Boulevard  
Bethpage, New York 11714**

**Photo No. 03**

**JCB#: 19-44415**

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# **Appendix C**

## **Laboratory Analysis Report**



# Technical Report

prepared for:

**J.C. Broderick**  
1775 North Express Drive  
Hauppauge NY, 11788  
**Attention: Steven Muller**

Report Date: 10/11/2019  
**Client Project ID: 19-44415**  
York Project (SDG) No.: 19J0188

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

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RICHMOND HILL, NY 11418  
ClientServices@yorklab.com

Report Date: 10/11/2019  
Client Project ID: 19-44415  
York Project (SDG) No.: 19J0188

**J.C. Broderick**  
1775 North Express Drive  
Hauppauge NY, 11788  
Attention: Steven Muller

---

## Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on October 03, 2019 with a temperature of 2.4 C. The project was identified as your project: **19-44415**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
19J0188-01	MW-1	Water	10/01/2019	10/03/2019
19J0188-02	MW-2	Water	10/01/2019	10/03/2019
19J0188-03	MW-3	Water	10/01/2019	10/03/2019

## **General Notes for York Project (SDG) No.: 19J0188**

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

**Approved By:**



**Benjamin Gulizia**  
Laboratory Director

**Date:** 10/11/2019





### Sample Information

<b>Client Sample ID:</b> MW-1			<b>York Sample ID:</b> 19J0188-01	
<u>York Project (SDG) No.</u> 19J0188	<u>Client Project ID</u> 19-44415	<u>Matrix</u> Water	<u>Collection Date/Time</u> October 1, 2019 12:00 am	<u>Date Received</u> 10/03/2019

### Volatile Organics, 8260 List - Low Level

### Log-in Notes:

### Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
71-55-6	1,1,1-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
79-00-5	1,1,2-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
563-58-6	1,1-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP	10/10/2019 06:32	10/11/2019 03:46	LLJ
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 03:46	LLJ
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 03:46	LLJ
95-93-2	* 1,2,4,5-Tetramethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	10/10/2019 06:32	10/11/2019 03:46	LLJ
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 03:46	LLJ
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ



### Sample Information

<b>Client Sample ID:</b> MW-1			<b>York Sample ID:</b> 19J0188-01
<b>York Project (SDG) No.</b> 19J0188	<b>Client Project ID</b> 19-44415	<b>Matrix</b> Water	<b>Collection Date/Time</b> October 1, 2019 12:00 am
			<b>Date Received</b> 10/03/2019

**Volatile Organics, 8260 List - Low Level**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
142-28-9	1,3-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 03:46	LLJ
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
594-20-7	2,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 03:46	LLJ
78-93-3	2-Butanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
95-49-8	2-Chlorotoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
106-43-4	4-Chlorotoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
108-10-1	4-Methyl-2-pentanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
67-64-1	Acetone	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
108-86-1	Bromobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 03:46	LLJ
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 03:46	LLJ
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
75-15-0	Carbon disulfide	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ



### Sample Information

**Client Sample ID:** MW-1

**York Sample ID:** 19J0188-01

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19J0188

19-44415

Water

October 1, 2019 12:00 am

10/03/2019

**Volatile Organics, 8260 List - Low Level**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 03:46	LLJ
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 03:46	LLJ
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 03:46	LLJ
98-82-8	Isopropylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 03:46	LLJ
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	10/10/2019 06:32	10/11/2019 03:46	LLJ
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	10/10/2019 06:32	10/11/2019 03:46	LLJ
105-05-5	* p-Diethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	10/10/2019 06:32	10/11/2019 03:46	LLJ
622-96-8	* p-Ethyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	10/10/2019 06:32	10/11/2019 03:46	LLJ
99-87-6	p-Isopropyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 03:46	LLJ



Sample Information

Client Sample ID: MW-1 York Sample ID: 19J0188-01
York Project (SDG) No. 19J0188 Client Project ID 19-44415 Matrix Water Collection Date/Time October 1, 2019 12:00 am Date Received 10/03/2019

Volatile Organics, 8260 List - Low Level

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Includes rows for Tetrachloroethylene, Toluene, trans-1,2-Dichloroethylene, trans-1,3-Dichloropropylene, Trichloroethylene, Trichlorofluoromethane, Vinyl Chloride, Xylenes, Total, and Surrogate Recoveries.

Sample Information

Client Sample ID: MW-2 York Sample ID: 19J0188-02
York Project (SDG) No. 19J0188 Client Project ID 19-44415 Matrix Water Collection Date/Time October 1, 2019 12:00 am Date Received 10/03/2019

Volatile Organics, 8260 List - Low Level

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

Table with 12 columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst. Includes rows for 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, and 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113).



### Sample Information

**Client Sample ID:** MW-2

**York Sample ID:** 19J0188-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19J0188

19-44415

Water

October 1, 2019 12:00 am

10/03/2019

**Volatile Organics, 8260 List - Low Level**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
79-00-5	1,1,2-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
75-34-3	1,1-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
75-35-4	1,1-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
563-58-6	1,1-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP	10/10/2019 06:32	10/11/2019 04:12	LLJ
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:12	LLJ
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:12	LLJ
95-93-2	* 1,2,4,5-Tetramethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	10/10/2019 06:32	10/11/2019 04:12	LLJ
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:12	LLJ
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
142-28-9	1,3-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:12	LLJ
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
594-20-7	2,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:12	LLJ
78-93-3	2-Butanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
95-49-8	2-Chlorotoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ



### Sample Information

**Client Sample ID:** MW-2

**York Sample ID:** 19J0188-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19J0188

19-44415

Water

October 1, 2019 12:00 am

10/03/2019

**Volatile Organics, 8260 List - Low Level**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
106-43-4	4-Chlorotoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
108-10-1	4-Methyl-2-pentanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
67-64-1	Acetone	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
108-86-1	Bromobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:12	LLJ
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:12	LLJ
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
75-15-0	Carbon disulfide	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:12	LLJ
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:12	LLJ



### Sample Information

**Client Sample ID:** MW-2

**York Sample ID:** 19J0188-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19J0188

19-44415

Water

October 1, 2019 12:00 am

10/03/2019

**Volatile Organics, 8260 List - Low Level**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:12	LLJ
98-82-8	Isopropylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:12	LLJ
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	10/10/2019 06:32	10/11/2019 04:12	LLJ
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	10/10/2019 06:32	10/11/2019 04:12	LLJ
105-05-5	* p-Diethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	10/10/2019 06:32	10/11/2019 04:12	LLJ
622-96-8	* p-Ethyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	10/10/2019 06:32	10/11/2019 04:12	LLJ
99-87-6	p-Isopropyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
108-88-3	Toluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:12	LLJ



Sample Information

Client Sample ID: MW-2

York Sample ID: 19J0188-02

Table with 5 columns: York Project (SDG) No., Client Project ID, Matrix, Collection Date/Time, Date Received

Volatile Organics, 8260 List - Low Level

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

Main data table for MW-2 with columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst

Sample Information

Client Sample ID: MW-3

York Sample ID: 19J0188-03

Table with 5 columns: York Project (SDG) No., Client Project ID, Matrix, Collection Date/Time, Date Received

Volatile Organics, 8260 List - Low Level

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

Main data table for MW-3 with columns: CAS No., Parameter, Result, Flag, Units, Reported to LOD/MDL, LOQ, Dilution, Reference Method, Date/Time Prepared, Date/Time Analyzed, Analyst



### Sample Information

**Client Sample ID:** MW-3

**York Sample ID:** 19J0188-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19J0188

19-44415

Water

October 1, 2019 12:00 am

10/03/2019

**Volatile Organics, 8260 List - Low Level**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:39	LLJ
95-93-2	* 1,2,4,5-Tetramethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	10/10/2019 06:32	10/11/2019 04:39	LLJ
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:39	LLJ
95-63-6	1,2,4-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
107-06-2	1,2-Dichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
108-67-8	1,3,5-Trimethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
142-28-9	1,3-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:39	LLJ
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
594-20-7	2,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:39	LLJ
78-93-3	2-Butanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
95-49-8	2-Chlorotoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
106-43-4	4-Chlorotoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
108-10-1	4-Methyl-2-pentanone	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
67-64-1	Acetone	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
71-43-2	Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ



### Sample Information

**Client Sample ID:** MW-3

**York Sample ID:** 19J0188-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19J0188

19-44415

Water

October 1, 2019 12:00 am

10/03/2019

**Volatile Organics, 8260 List - Low Level**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
108-86-1	Bromobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:39	LLJ
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:39	LLJ
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
75-15-0	Carbon disulfide	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
108-90-7	Chlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
67-66-3	<b>Chloroform</b>	<b>0.32</b>	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
156-59-2	cis-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:39	LLJ
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:39	LLJ
100-41-4	Ethyl Benzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:39	LLJ
98-82-8	Isopropylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ



### Sample Information

**Client Sample ID:** MW-3

**York Sample ID:** 19J0188-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19J0188

19-44415

Water

October 1, 2019 12:00 am

10/03/2019

**Volatile Organics, 8260 List - Low Level**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-20-3	Naphthalene	ND		ug/L	1.0	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NELAC-NY12058,NJDEP,PAI	10/10/2019 06:32	10/11/2019 04:39	LLJ
104-51-8	n-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
103-65-1	n-Propylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
95-47-6	o-Xylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	10/10/2019 06:32	10/11/2019 04:39	LLJ
179601-23-1	p- & m- Xylenes	ND		ug/L	0.50	1.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PA	10/10/2019 06:32	10/11/2019 04:39	LLJ
105-05-5	* p-Diethylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	10/10/2019 06:32	10/11/2019 04:39	LLJ
622-96-8	* p-Ethyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications:	10/10/2019 06:32	10/11/2019 04:39	LLJ
99-87-6	p-Isopropyltoluene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
135-98-8	sec-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
98-06-6	tert-Butylbenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
127-18-4	Tetrachloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
108-88-3	<b>Toluene</b>	<b>0.21</b>	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
156-60-5	trans-1,2-Dichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
79-01-6	Trichloroethylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
75-69-4	Trichlorofluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
75-01-4	Vinyl Chloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
1330-20-7	Xylenes, Total	ND		ug/L	0.60	1.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,NJ	10/10/2019 06:32	10/11/2019 04:39	LLJ
<b>Surrogate Recoveries</b>		<b>Result</b>	<b>Acceptance Range</b>								
17060-07-0	Surrogate: SURR: 1,2-Dichloroethane-d4	106 %	69-130								
2037-26-5	Surrogate: SURR: Toluene-d8	97.8 %	81-117								



### Sample Information

**Client Sample ID:** MW-3

**York Sample ID:** 19J0188-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

19J0188

19-44415

Water

October 1, 2019 12:00 am

10/03/2019

**Volatile Organics, 8260 List - Low Level**

**Log-in Notes:**

**Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
460-00-4	Surrogate: SURRE: p-Bromofluorobenzene	101 %			79-122						



### Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
19J0188-01	MW-1	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
19J0188-02	MW-2	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
19J0188-03	MW-3	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C



## Sample and Data Qualifiers Relating to This Work Order

- QL-02 This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
- J Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
- CCV-E The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).
- B Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

### Definitions and Other Explanations

- \* Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
- ND NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
- RL REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
- LOQ LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
- LOD LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
- MDL METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
- Reported to This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
- NR Not reported
- RPD Relative Percent Difference
- Wet The data has been reported on an as-received (wet weight) basis
- Low Bias Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
- High Bias High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
- Non-Dir. Non-dir. flag (Non-Directional Bias ) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.



Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

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York Analytical Laboratories, Inc.

120 Research Drive 132-02 89th Ave  
Stratford, CT 06615 Queens, NY 11418

clientservices@yorklab.com

www.yorklab.com

**YORK**  
ANALYTICAL LABORATORIES INC

# Field Chain-of-Custody Record

YORK Project No.

19JD188

**NOTE:** YORK's Standard Terms & Conditions are listed on the back side of this document.  
This document serves as your written authorization for YORK to proceed with the analyses requested below.  
Your signature binds you to YORK's Standard Terms & Conditions.

Page \_\_\_ of \_\_\_

<b>YOUR Information</b>		<b>Report To:</b>		<b>Invoice To:</b>		<b>YOUR Project Number</b>		<b>Turn-Around Time</b>	
Company: JCBroadrick & Assoc		Company: JCB		Company: JCB		19-44415		RUSH - Next Day	
Address: 1775 EXPRESSWAY DR - W HAMPDEN, NY 11768		Address:		Address:		YOUR Project Name		RUSH - Two Day	
Phone: 631-589 5492		Phone:.		Phone:.		CENTRAL BLVD ES		RUSH - Three Day	
Contact: SMULLER		Contact:		Contact:		YOUR PO#:		RUSH - Four Day	
E-mail: Smuller@JCBroadrick.com		E-mail:		E-mail:				Standard (5-7 Day) <input checked="" type="checkbox"/>	

Please print clearly and legibly. All information must be complete. Samples will not be logged in and the turn-around-time clock will not begin until any questions by YORK are resolved.

STEVEN MULLER

Samples Collected by: (print your name above and sign below)

Matrix Codes	Samples From	Report / EDD Type (circle selections)			YORK Reg. Comp.
S - soil / solid	New York	<input checked="" type="checkbox"/> Summary Report	CT RCP	Standard Excel EDD	Compared to the following Regulation(s): (please fill in)
GW - groundwater	New Jersey	<input type="checkbox"/> QA Report	CT RCP DQA/DUE	EQuIS (Standard)	
DW - drinking water	Connecticut	<input type="checkbox"/> NY ASP A Package	NJDEP Reduced Deliverables	NYSDEC EQuIS	
WW - wastewater	Pennsylvania	<input type="checkbox"/> NY ASP B Package	NJDEP SRP HazSite		
O - Oil ; Other	Other	<input type="checkbox"/>	NJDKQP	Other:	

Sample Identification	Sample Matrix	Date/Time Sampled	Analysis Requested	Container Description
MW-1	GW	10/1/19	EPA 8260 + FREON	3-40 ml
MW-2	GW	10/1/19	EPA 8260 + FREON	3-40 ml
MW-3	GW	10/1/19	EPA 8260 + FREON	3-40 ml

<b>Comments:</b>	<b>Preservation:</b> (check all that apply)	<b>Special Instruction</b>
	HCl <input checked="" type="checkbox"/> MeOH ___ HNO <sub>3</sub> ___ H <sub>2</sub> SO <sub>4</sub> ___ NaOH ___ ZnAc ___ Ascorbic Acid ___ Other: _____	Field Filtered ___ Lab to Filter ___

Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time
	10/2/19	R. Bahr York	10/3/19 12:00 PM	R. Bahr York	10/3/19 1830
Samples Received by / Company	Date/Time	Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time
Samples Relinquished by / Company	Date/Time	Samples Received by / Company	Date/Time	Samples Received in LAB by	Temp. Received at Lab
				TC Miller 10/3/19 1830	2.4 Degrees C

Page 19 of 19

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Phone/Fax: (800)220-3675 / (856)786-0327

<http://www.emsl.com> [cinnaminsonradonlab@emsl.com](mailto:cinnaminsonradonlab@emsl.com)EMSL Order #: **781908038**Customer ID: **JCBR50**Customer PO: **19-44415**

Attn: **Steven Muller**  
**J.C. Broderick & Associates**  
**1775 Expressway Drive North, Suite 1**  
**Hauppauge, NY 11788**

Phone: **631-584-5492**Fax: **Not Available**Project: **Central Boulevard ES / 60 Central Boulevard, Bethpage, NY 11714**Date Collected: **10/1/2019**Date Received: **10/4/2019**NELAC Certification #: **03036**

## Analytical Report

**Sample Identification: MW-1****Lab Sample #: 781908038-0001****Date/Time Collected: 10/1/2019 10:00 AM**

<u>Test Parameter</u>	<u>Units</u>	<u>Result</u>	<u>Uncertainty</u>	<u>SDWA DL</u>	<u>Start Count</u> <u>Date/ Time</u>	<u>Analyst</u>	<u>Status</u> <u>Count</u>	<u>Method</u>	<u>Comment</u>
<b>Ra-228 - EPA 904.0</b>	pCi/L	5.180	0.850	0.570	10/17/2019 11:23	JW	Not Applicable	EPA 904.0	
<b>Ra-226-EPA 903.0</b>	pCi/L	6.010	0.330	0.160	11/5/2019 16:55	JW	Not Applicable	EPA 903.0	

**Sample Specific Comments**

(1)= Analyte was analyzed for, but not detected above the SDWA DL

(2)= Analyte was analyzed for, but not detected above the MDA

\* The uncertainty reported is an expanded uncertainty of 1.96-sigma.

\* For NJ Rapid Gross Alpha, the uncertainty reported is an expanded uncertainty of 1.65-sigma.

\* The SDWA detection limit is defined in 40 CFR 141.25(c) as equal to the analyte concentration which can be counted with a precision of plus or minus 100% at the 95% confidence level (1.96σ where σ is the standard deviation of the net counting rate of the sample).

\* For drinking water, the regulatory limit for gross alpha is 15 pCi/L with an SDWA DL of 3 pCi/L..

\* For drinking water, the regulatory limit for combined radium-226 and radium-228 is 5 pCi/L with each having an SDWA DL of 1 pCi/L.

\* All analysis met quality control acceptance criteria unless specified on QC Report.

**Report Date**

11/7/2019

**Report Revision**

R0

**Revision Comments**

Initial Report

Dominic Gehret, Radiochemistry Laboratory Manager

In no event shall EMSL be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages, arising out of or in connection with EMSL's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. In no event shall EMSL be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereunder. The test results meets all NELAC requirements unless otherwise specified.

**EMSL Analytical, Inc.**

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<http://www.emsl.com> [cinnaminsonradonlab@emsl.com](mailto:cinnaminsonradonlab@emsl.com)EMSL Order #: **781908038**Customer ID: **JCBR50**Customer PO: **19-44415**

Attn: **Steven Muller**  
**J.C. Broderick & Associates**  
**1775 Expressway Drive North, Suite 1**  
**Hauppauge, NY 11788**

Phone: **631-584-5492**Fax: **Not Available**Project: **Central Boulevard ES / 60 Central Boulevard, Bethpage, NY 11714**Date Collected: **10/1/2019**Date Received: **10/4/2019**NELAC Certification #: **03036****Quality Control Report****Sample Identification: MW-1****Lab Sample #: 781908038-0001****Date/Time Collected: 10/1/2019 10:00 AM**

<u>Test Parameter</u>	<u>Tracer/Carrier 1</u>		<u>Tracer/Carrier 2</u>				<u>Tracer/Carrier 3</u>						
	<u>Spike</u>	<u>Result</u>	<u>% Rec.</u>	<u>Q</u>	<u>Spike</u>	<u>Result</u>	<u>% Rec.</u>	<u>Q</u>	<u>Spike</u>	<u>Result</u>	<u>% Rec.</u>	<u>Q</u>	
R020 Ra-228 - EPA 904.0	Barium Carrier	55.2	52.1	94		Yttrium Carrier	27.7	21.4	77		N/A		
R021 Ra-226-EPA 903.0	Barium Carrier	55.2	52.1	94		N/A					N/A		

% Recovery Criteria

30% - 125%

Qualifier Definitions

C= Carrier recovery was outside of acceptable limits.

T= Tracer recovery was outside of acceptable limits.

Report Date

11/7/2019

Report Revision

R0

Revision Comments

Initial Report

Dominic Gehret, Radiochemistry Laboratory Manager

In no event shall EMSL be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages, arising out of or in connection with EMSL's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. In no event shall EMSL be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereunder. The test results meets all NELAC requirements unless otherwise specified.

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<http://www.emsl.com> [cinnaminsonradonlab@emsl.com](mailto:cinnaminsonradonlab@emsl.com)EMSL Order #: **781908039**Customer ID: **JCBR50**Customer PO: **19-44415**

Attn: **Steven Muller**  
**J.C. Broderick & Associates**  
**1775 Expressway Drive North, Suite 1**  
**Hauppauge, NY 11788**

Phone: **631-584-5492**Fax: **Not Available**Project: **Central Boulevard ES / 60 Central Boulevard, Bethpage, NY 11714**Date Collected: **10/1/2019**Date Received: **10/4/2019**NELAC Certification #: **03036**

## Analytical Report

**Sample Identification: MW-2****Lab Sample #: 781908039-0001****Date/Time Collected: 10/1/2019 10:30 AM**

<u>Test Parameter</u>	<u>Units</u>	<u>Result</u>	<u>Uncertainty</u>	<u>SDWA DL</u>	<u>Start Count</u> <u>Date/ Time</u>	<u>Analyst</u>	<u>Status</u> <u>Count</u>	<u>Method</u>	<u>Comment</u>
<b>Ra-228 - EPA 904.0</b>	pCi/L	1.240	0.700	0.660	10/17/2019 11:23	JW	Not Applicable	EPA 904.0	
<b>Ra-226-EPA 903.0</b>	pCi/L	0.830	0.120	0.180	11/5/2019 16:55	JW	Not Applicable	EPA 903.0	

**Sample Specific Comments**

(1)= Analyte was analyzed for, but not detected above the SDWA DL

(2)= Analyte was analyzed for, but not detected above the MDA

\* The uncertainty reported is an expanded uncertainty of 1.96-sigma.

\* For NJ Rapid Gross Alpha, the uncertainty reported is an expanded uncertainty of 1.65-sigma.

\* The SDWA detection limit is defined in 40 CFR 141.25(c) as equal to the analyte concentration which can be counted with a precision of plus or minus 100% at the 95% confidence level (1.96σ where σ is the standard deviation of the net counting rate of the sample).

\* For drinking water, the regulatory limit for gross alpha is 15 pCi/L with an SDWA DL of 3 pCi/L..

\* For drinking water, the regulatory limit for combined radium-226 and radium-228 is 5 pCi/L with each having an SDWA DL of 1 pCi/L.

\* All analysis met quality control acceptance criteria unless specified on QC Report.

**Report Date**

11/7/2019

**Report Revision**

R0

**Revision Comments**

Initial Report

Dominic Gehret, Radiochemistry Laboratory Manager

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Attn: **Steven Muller**  
**J.C. Broderick & Associates**  
**1775 Expressway Drive North, Suite 1**  
**Hauppauge, NY 11788**

Phone: **631-584-5492**Fax: **Not Available**Project: **Central Boulevard ES / 60 Central Boulevard, Bethpage, NY 11714**Date Collected: **10/1/2019**Date Received: **10/4/2019**NELAC Certification #: **03036****Quality Control Report****Sample Identification: MW-2****Lab Sample #: 781908039-0001****Date/Time Collected: 10/1/2019 10:30 AM**

<u>Test Parameter</u>	<u>Tracer/Carrier 1</u>					<u>Tracer/Carrier 2</u>					<u>Tracer/Carrier 3</u>				
	<u>Spike</u>	<u>Result</u>	<u>% Rec.</u>	<u>Q</u>	<u>Q</u>	<u>Spike</u>	<u>Result</u>	<u>% Rec.</u>	<u>Q</u>	<u>Q</u>	<u>Spike</u>	<u>Result</u>	<u>% Rec.</u>	<u>Q</u>	
R020 Ra-228 - EPA 904.0	Barium Carrier	55.2	55	100		Yttrium Carrier	27.7	20.5	74						
R021 Ra-226-EPA 903.0	Barium Carrier	55.2	55	100		N/A									

% Recovery Criteria

30% - 125%

Qualifier Definitions

C= Carrier recovery was outside of acceptable limits.

T= Tracer recovery was outside of acceptable limits.

Report Date

11/7/2019

Report Revision

R0

Revision Comments

Initial Report

Dominic Gehret, Radiochemistry Laboratory Manager

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<http://www.emsl.com> [cinnaminsonradonlab@emsl.com](mailto:cinnaminsonradonlab@emsl.com)EMSL Order #: **781908040**Customer ID: **JCBR50**Customer PO: **19-44415**

Attn: **Steven Muller**  
**J.C. Broderick & Associates**  
**1775 Expressway Drive North, Suite 1**  
**Hauppauge, NY 11788**

Phone: **631-584-5492**Fax: **Not Available**Project: **Central Boulevard ES / 60 Central Boulevard, Bethpage, NY 11714**Date Collected: **10/1/2019**Date Received: **10/4/2019**NELAC Certification #: **03036**

## Analytical Report

**Sample Identification: MW-3****Lab Sample #: 781908040-0001****Date/Time Collected: 10/1/2019 10:55 AM**

<u>Test Parameter</u>	<u>Units</u>	<u>Result</u>	<u>Uncertainty</u>	<u>SDWA DL</u>	<u>Start Count</u> <u>Date/ Time</u>	<u>Analyst</u>	<u>Status</u> <u>Count</u>	<u>Method</u>	<u>Comment</u>
<b>Ra-228 - EPA 904.0</b>	pCi/L	2.420	0.740	0.620	10/17/2019 11:23	JW	Not Applicable	EPA 904.0	
<b>Ra-226-EPA 903.0</b>	pCi/L	1.420	0.160	0.130	11/5/2019 16:55	JW	Not Applicable	EPA 903.0	

**Sample Specific Comments**

(1)= Analyte was analyzed for, but not detected above the SDWA DL

(2)= Analyte was analyzed for, but not detected above the MDA

\* The uncertainty reported is an expanded uncertainty of 1.96-sigma.

\* For NJ Rapid Gross Alpha, the uncertainty reported is an expanded uncertainty of 1.65-sigma.

\* The SDWA detection limit is defined in 40 CFR 141.25(c) as equal to the analyte concentration which can be counted with a precision of plus or minus 100% at the 95% confidence level (1.96σ where σ is the standard deviation of the net counting rate of the sample).

\* For drinking water, the regulatory limit for gross alpha is 15 pCi/L with an SDWA DL of 3 pCi/L..

\* For drinking water, the regulatory limit for combined radium-226 and radium-228 is 5 pCi/L with each having an SDWA DL of 1 pCi/L.

\* All analysis met quality control acceptance criteria unless specified on QC Report.

**Report Date**

11/7/2019

**Report Revision**

R0

**Revision Comments**

Initial Report

Dominic Gehret, Radiochemistry Laboratory Manager

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<http://www.emsl.com> [cinnaminsonradonlab@emsl.com](mailto:cinnaminsonradonlab@emsl.com)EMSL Order #: **781908040**Customer ID: **JCBR50**Customer PO: **19-44415**

Attn: **Steven Muller**  
**J.C. Broderick & Associates**  
**1775 Expressway Drive North, Suite 1**  
**Hauppauge, NY 11788**

Phone: **631-584-5492**Fax: **Not Available**Project: **Central Boulevard ES / 60 Central Boulevard, Bethpage, NY 11714**Date Collected: **10/1/2019**Date Received: **10/4/2019**NELAC Certification #: **03036****Quality Control Report****Sample Identification: MW-3****Lab Sample #: 781908040-0001****Date/Time Collected: 10/1/2019 10:55 AM**

<u>Test Parameter</u>	<u>Tracer/Carrier 1</u>					<u>Tracer/Carrier 2</u>					<u>Tracer/Carrier 3</u>				
	<u>Spike</u>	<u>Result</u>	<u>% Rec.</u>	<u>Q</u>		<u>Spike</u>	<u>Result</u>	<u>% Rec.</u>	<u>Q</u>		<u>Spike</u>	<u>Result</u>	<u>% Rec.</u>	<u>Q</u>	
R020 Ra-228 - EPA 904.0	Barium Carrier	55.2	54.9	99		Yttrium Carrier	27.7	19.8	71		N/A				
R021 Ra-226-EPA 903.0	Barium Carrier	55.2	54.9	99		N/A					N/A				

% Recovery Criteria

30% - 125%

Qualifier Definitions

C= Carrier recovery was outside of acceptable limits.

T= Tracer recovery was outside of acceptable limits.

Report Date

11/7/2019

Report Revision

R0

Revision Comments

Initial Report

Dominic Gehret, Radiochemistry Laboratory Manager

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EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

### Radiochemical Analysis Chain of Custody

EMSL Order Number (Lab Use Only):

781908 -

RECEIVED  
EMSL  
CINNAMINSON, NJ

2019 OCT -4 P 8:21

Contact Name: Steven Muller	Bill To Company: JC Broderick and Associates, Inc.	Sampled By (Sign):
Company Name: JC Broderick & Associates, Inc.	Attention To:	Sampled By (Name): Steven Muller
Address: 1775 Express Drive North	Address:	Total # of Samples: 3
City: Hauppauge State: NY Zip Code: 11788	City: State: Zip Code:	Date of Shipping: 10-04-19
Telephone #: 631-584-5492 Fax: 631-584-3395	Telephone #: Fax:	Sample State/ Zip Code: New York / 11714
Email: smuller@jcbroderick.com	Project Name: Central Boulevard	Purchase Order: 19-44415

Turn Around Time:  4 weeks (Standard)  Client Specific:  48 Hours  96 Hours  1 week  2 weeks  3 Weeks

Field Use - All Information Required!						Analytes												
Client Sample ID	Lab ID (For Lab Use only)	Matrix	Size (mL, g)	Date/Time	Gross Alpha		Gross Beta	Ra-228	Ra-226	Total Uranium	Gamma Emitters	Actinides (U, Th, Pu, Am)	Sr-89, Sr-90	I-131	Radon	Tritium	Tc-99	Note
					NJ 48 Hrs	EPA 900												
MW-1	- 038	GW	1,000 ml	10-01-19 / 10:00 am				X	X									
MW-2	- 039	GW	1,000 ml	10-01-19 / 10:30 am				X	X									
MW-3	- 040	GW	1,000 ml	10-01-19 / 10:55 am				X	X									

Report Requirement\*:  Level One  Level Two  Level Three

Relinquished by:	Date/ Time	Received by:	Date/ Time	Note
Steven Muller	10-04-19	Suroogh Jhorilaw	10/4/19 1:45PM	Central Boulevard ES
<i>[Signature]</i>	10-04-19	<i>[Signature]</i>	10/4/19 8:52P	60 Central Boulevard, Bethpage, NY 11714

\*Level One = Results only; Level Two = Results and QC; Level Three = Results, QC, Logs, Worksheets, Printout/Spectrum and Calibrations

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