Steven P. Stucker, C.P.G.
Lead Environmental Engineer

January 29, 2018

Mr. Scott Deyette
Chief, Inspection Unit
New York State Department of Environmental Conservation
MGP Remedial Section, Division of Environmental Remediation
Bureau of Western Remedial Action, 11th Floor
625 Broadway
Albany, New York 12233-7012

Re: 2017 Post-Remediation Groundwater Sampling
Liberty Street Non-Owned Former Manufactured Gas Plant (MGP) Site Troy, New York
NYSDEC Site # V000482

Dear Mr. Deyette:

On behalf of National Grid, Groundwater & Environmental Services, Inc., (GES) has prepared this 2017 Groundwater Sampling Report describing groundwater monitoring activities conducted at the National Grid Troy Liberty Street Non-Owned Former MGP Site in Troy, New York (the "Site", see Figure 1). Activities at the site consist of an annual inspection and groundwater sampling/monitoring event. GES took over the long-term monitoring program from GEI Consultants, Inc., P.C., in October 2017.

The following piezometers and monitoring wells were decommissioned prior to remediation in 2014, with concurrence from New York State Department of Environmental Conservation:

- B/MW-103(05), B/MW-201(06), B/MW-301(10) through B/MW-303(10) and B/MW-324(10), and B/PZ-407(11) through B/PZ-411(11).
- Wells B/MW-101(05), B/MW-102(05), B/MW-104(05), B/MW-202(06), B/MW-203(06), and B/MW-404(11) continue to be sampled.

Table 1 presents the construction details for the wells that were sampled. Figure 2 presents former structures and current conditions.

Field Procedures

A full round of groundwater gauging and sampling took place at the Site (Figure 2) on October 12, 2017. GES obtained static fluid level measurements and groundwater samples from six (6) wells, including B/MW-101(05), B/MW-102(05), B/MW-104(05), B/MW-202(06), B/MW-203(06), and B/MW-404(11). Fluid levels were measured to the nearest 0.01 feet using an electronic oil-water interface probe to determine the depth from a surveyed mark on the top of the inner polyvinyl chloride (PVC) well casing to the groundwater within the well.

The wells were sampled in accordance with USEPA Low-Flow Groundwater Sampling Procedures [1996] using a peristaltic pump and Horiba U-52 water quality sonde. Field parameters (consisting of temperature, pH, oxidation-reduction potential, conductivity, turbidity, dissolved oxygen, and total dissolved solids) were monitored and recorded for each well (see Appendix A for sampling logs). The depth to water was monitored throughout the pumping process to minimize drawdown within the well. Well purging activities continued until field parameters stabilized. Groundwater samples were then collected from each well for analysis using low-flow sampling techniques.

Quality assurance/quality control (QA/QC) samples, including field duplicate (collected from monitoring well B/MW-202(05)), trip blank, matrix spike, and duplicate matrix spike samples were also submitted for laboratory analysis. Once collected, all samples were immediately placed on ice. Well sampling sheets are provided in Appendix A and final groundwater discharge parameters are provided in Table 2.

300 Erie Boulevard West, C-1, Syracuse, NY 13202
T: 315-428-5652 F: 315-428-3549 steven.stucker@us.ngrid.com www.nationalgrid.com

The Groundwater samples were submitted to Pace Analytical Services, LLC, (Pace) and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) via United States Environmental Protection Agency (EPA) Method 8260C and polycyclic aromatic hydrocarbons (PAHs) via EPA Method 8270D.

Validation

Groundwater analytical data was validated per appropriate EPA guidance, consistent with New York State Analytical Services Protocol Category B guidance. The data usability summary report is presented in Appendix B. All other laboratory data and documents are on file with GES. These documents are available upon request.

Groundwater Results Summary

2017 groundwater measurements and elevations are provided in Table 3. Groundwater contours and validated analytical data for the event are summarized in Figure 3. The groundwater contours developed from the October 2017 gauging measurements are consistent with historical contours. Overburden groundwater flow direction at the Site is from the east to west/northwest.

October 2017 and historical groundwater analytical data for BTEX and PAHs are provided in Table 4. Additional data for previous analytes (including non-BTEX VOC's, Pesticides, Cyanides, and additional PAH's) from 2010 and 2011 data are on file with GES and available upon request.

BTEX compounds (including Benzene, Ethylbenzene, and Xylenes) were detected in well B/MW-203(06). Only Benzene was detected at a concentration (8.2 µg/L) that exceeded NYSDEC Ambient Water Quality Standards (AWQS) for groundwater. Additionally, Acenaphthene, Benzo(a)anthracene, and Chrysene were all detected in well B/MW-203(06) at concentrations that exceeded NYSDEC AWQS values for groundwater.

Waste Disposal

Purged groundwater and decontamination fluids were containerized in a 55-gallon steel drum and were properly disposed of by Capitol Environmental on behalf of National Grid.

If you have any questions or require additional information, please feel free to contact me at (315) 428-5652.

Very truly yours,

for SPS

Steven P. Stucker, C.P.G.
Lead Environmental Engineer
National Grid

Enclosures

Cc: Devin Shay - Groundwater & Environmental Services, Inc.

Tables

Table 1

Monitoring Well Construction Details

Well ID	Date Installed	Ground Surface Elevation (ft, NAVD88)	Top of PVC Casing Elevation (ft, NAVD88)	Total Boring Depth (ft, bgs)	Top of Screen (ft, bgs)	Bottom of Screen (ft, bgs)	Well Bottom (ft, bgs)	Screen Midpoint (ft, bgs)	Top of Sand Pack (ft, bgs)	Well Screen Material	Unit Screened
B/MW-101(05)	12/5/2005	32.15	31.99	30	17	27	27	23	14	2-in ID Sch 40 PVC factory slotted	f sand, silt, gravel
B/MW-102(05)	12/7/2005	28.05	27.60	17.5	7	17	17	12	5	2-in ID Sch 40 PVC factory slotted	f-m sand, silt
B/MW-103(05)	12/5/2005	33.38	33.13	30	18	28	28	23	16	2-in ID Sch 40 PVC factory slotted	f-m sand, silt, clay, gravel
B/MW-104(05)	12/6/2005	29.42	29.14	24	12	22	22	17	11	2-in ID Sch 40 PVC factory slotted	f-m sand, gravel
B/MW-201(06)	12/14/2006	35.01	34.62	25	14	24	24	19	12	2-in ID Sch 40 PVC 0.010" slot	clay, silt, sand
B/MW-202(06)	12/12/2006	28.68	28.10	20	9.5	19.5	19.5	14.5	8	2-in ID Sch 40 PVC 0.010" slot	clay, silt, sand, gravel
B/MW-203(06)	12/12/2006	26.06	25.32	20	9.5	19.5	19.5	14.5	8	2-in ID Sch 40 PVC 0.010" slot	f-c sand, silt
B/MW-301(10)	11/1/2010	31.14	30.81	35	15	25	25	20	13	2-in ID Sch 40 PVC 0.010" slot	f-c sand, silty sand, gravel, silt, clay
B/MW-302(10)	11/1/2010	33.02	32.60	35	15	25	25	20	13	2-in ID Sch 40 PVC 0.010" slot	f-c sand, gravel, silt
B/MW-303(10)	10/29/2010	33.35	32.97	45	14	24	24	19	12	2-in ID Sch 40 PVC 0.010" slot	clay, f-c sand
B/MW-324(10)	10/29/2010	33.09	32.63	45	14	24	26	19	12	2-in ID Sch 40 PVC 0.010" slot	silty f-c sand, gravel, clay
B/MW-404(11)	4/14/2011	33.33	32.95	30	14	24	24	19	12	2-in ID Sch 40 PVC 0.010" slot	f-c sand, gravel, silt
B/PZ-407(11)	4/12/2011	29.81	29.26	30	14	24	24	19	10	1-in ID Sch 40 PVC 0.010" slot	f-c sand, gravel, clay
B/PZ-408(11)	4/12/2011	31.87	31.53	30	14	24	24	19	12	1-in ID Sch 40 PVC 0.010" slot	f-c sand, gravel
B/PZ-409(11)	4/12/2011	33.33	32.79	30	15	25	25	20	13	1-in ID Sch 40 PVC 0.010" slot	silty f-c sand, gravel
B/PZ-410(11)	4/12/2011	31.65	31.17	30	14	24	24	19	12	1-in ID Sch 40 PVC 0.010" slot	f-c sand, gravel, clay
B/PZ-411(11)	4/13/2011	30.61	30.21	30	14	24	24	19	12	1-in ID Sch 40 PVC 0.010" slot	f-c sand, gravel, clay

Notes:

ft, NAVD88 - feet above North American Vertical Datum of 1988

ft, bgs - feet below ground surface

B/MW-103(05) - Well decommissioned

B/PZ-407(11) - Piezometer decommissioned

Table 2

Final Groundwater Discharge Parameters

Well ID	Date Sampled	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH (S.U.)	Oxidation-Reduction Potential (mV)	Turbidity (NTU)
B/MW-101(05)	11/18/2010	15.22	1548*	14.26	6.78	137.4	3.1
B/MW-102(05)	11/19/2010	24.63	935*	0.16	6.86	176.1	6.7
B/MW-103(05)	11/19/2010	13.84	1265*	22.16	6.69	-151.0	10.6
B/MW-104(05)	11/18/2010	16.01	1052*	20.72	6.53	79.0	6.2
B/MW-201(06)	11/18/2010	14.66	1224*	19.55	6.6	130.9	0.3
B/MW-202(06)	11/18/2010	16.56	1644*	26.80	6.38	128.9	8.3
B/MW-203(06)	11/18/2010	14.55	1473*	1.86	7.06	316.4	5.8
B/MW-301(10)	11/18/2010	18.59	1876*	0.97	6.96	121.0	9.8
B/MW-302(10)	11/18/2010	15.40	1013*	0.67	7.30	357.1	2.6
B/MW-303(10)	11/18/2010	19.33	188*	1.98	7.8	310.1	4.6
B/MW-324(10)	11/19/2010	17.00	2203*	0.07	6.87	-47.2	-1.0
B/MW-101(05)	5/5/2011	12.77	1986*	6.49	6.75	157	18.8
B/MW-102(05)	5/5/2011	11.50	1884*	0.44	6.67	202.8	3.2
B/MW-103(05)	5/6/2011	14.06	1612*	6.60	6.66	-165.7	5.3
B/MW-104(05)	5/5/2011	12.93	2078*	2.03	6.55	151	2.7
B/MW-201(06)	5/5/2011	11.64	3299*	7.18	6.67	150.3	5.0
B/MW-202(06)	5/6/2011	14.03	2228*	6.99	6.45	45.7	1.3
B/MW-203(06)	5/5/2011	11.88	4767*	2.42	6.91	111.1	0.0
B/MW-301(10)	5/5/2011	13.34	2883*	12.00	6.67	-103.3	5.5
B/MW-302(10)	5/5/2011	12.53	1388*	12.03	7.02	181	0.0
B/MW-303(10)	5/5/2011	9.02	352*	27.29	8.02	80.8	0.2
B/MW-324(10)	5/6/2011	14.08	4558*	0.51	5.43	-213.5	-10.7
B/MW-404(11)	5/6/2011	9.95	522*	46.70	5.55	205.2	-5.6
B/MW-101(05)	8/19/2014	17.50	1260*	1.40	6.76	-13.8	1.4
B/MW-102(05)	8/19/2014	18.60	956*	0.01	6.45	39.9	1.0
B/MW-104(05)	8/19/2014	17.00	1597*	0.02	6.21	-4.0	0.1
B/MW-202(06)	8/19/2014	16.80	2152*	0.06	6.17	-27.2	2.6
B/MW-203(06)	8/19/2014	17.30	3135*	0.02	6.36	-33.9	8.2
B/MW-404(11)	8/19/2014	19.90	339*	2.09	6.69	41.0	0.2
B/MW-101(05)	10/7/2015	17.01	1368*	2.00	7.13	128.3	1.01
B/MW-102(05)	10/7/2015	19.34	1416*	0.26	6.80	258.3	4.10
B/MW-104(05)	10/7/2015	17.60	1589*	0.32	6.72	135.3	5.13
B/MW-202(06)	10/7/2015	17.54	2410*	0.31	6.58	137.5	4.91
B/MW-203(06)	10/7/2015	19.01	2806*	0.77	6.97	182.5	5.53
B/MW-404(11)	10/7/2015	17.18	1315*	0.35	6.50	146.5	3.15
B/MW-101(05)	11/9/2016	15.12	1907*	1.49	7.15	206.1	4.18
B/MW-104(05)	11/9/2016	16.88	1209*	0.29	6.86	203.1	4.87
B/MW-101(05)	10/12/2017	16.55	2.39	0.00	6.88	43.0	18.50
B/MW-102(05)	10/12/2017	16.10	1.50	0.00	6.71	179.0	1.80
B/MW-104(05)	10/12/2017	15.57	1.79	0.00	6.60	60.0	22.60
B/MW-202(06)	10/12/2017	14.41	2.13	1.64	5.81	64.0	5.80
B/MW-203(06)	10/12/2017	14.67	1.90	0.94	5.78	-169.0	7.40
B/MW-404(11)	10/12/2017	19.42	0.311	3.87	5.96	51.0	2.70

Notes:

°C	= degrees Celsius
mS/cm	= milliSiemens per centimeter
mg/L	= milligrams per liter
S.U.	= Standard units
mV	= milliVolts
NTU	= Nephelometric Turbidity Units
*	= value is in µS/cm (data collected by GEI)
µS/cm	= microSiemens per centimeter

Table 3

Groundwater Elevations

Well ID	Northing	Easting	Ground Surface Elevation (ft, NAVD88)	Top of PVC Casing Elevation (ft, NAVD88)	Top of Screen (ft, bgs)	Bottom of Screen (ft, bgs)	Well Bottom (ft, bgs)	Screen Midpoint (ft, bgs)
B/MW-101(05)	1418713.7909	709904.0096	32.15	31.99	17	27	27	23
B/MW-102(05)	1418829.6033	709787.6836	28.05	27.60	7	17	17	12
B/MW-103(05)	1418570.6710	709822.8544	33.38	33.13	18	28	28	23
B/MW-104(05)	1418760.6340	709802.7049	29.42	29.14	12	22	22	17
B/MW-201(06)	1418475.6220	709829.4970	35.01	34.62	14	24	24	19
B/MW-202(06)	1418742.2620	709740.6720	28.68	28.10	9.5	19.5	19.5	14.5
B/MW-203(06)	1418857.9290	709719.8990	26.06	25.32	9.5	19.5	19.5	14.5
B/MW-301(10)	1418812.6260	709911.3770	31.14	30.81	15	25	25	20
B/MW-302(10)	1418625.7960	709886.5990	33.02	32.60	15	25	25	20
B/MW-303(10)	1418539.6000	709753.7880	33.35	32.97	14	24	24	19
B/MW-324(10)	1418570.3330	709807.5630	33.09	32.63	14	24	26	19
B/MW-404(11)	1418558.6354	709772.8932	33.33	32.95	14	24	24	19
B/PZ-407(11)	1418816.8233	709849.1786	29.81	29.26	14	24	24	19
B/PZ-408(11)	1418758.7155	709932.5038	31.87	31.53	14	24	24	19
B/PZ-409(11)	1418656.4867	709931.7253	33.33	32.79	15	25	25	20
B/PZ-410(11)	1418668.8797	709837.9031	31.65	31.17	14	24	24	19
B/PZ-411(11)	1418687.3890	709791.6188	30.61	30.21	14	24	24	19

Table 3

Groundwater Elevations

Well ID	Depth to Water (12/2005) (ft, bgs)	Groundwater Elevation (12/2005) (ft, NAVD88)	Depth to Water (12/2006) (ft, bgs)	Groundwater Elevation (12/2006) (ft, NAVD88)	Depth to Water (11/18/10) (ft, bgs)	Groundwater Elevation (11/18/10) (ft, NAVD88)	Depth to Water (3/1/11) (ft, bgs)	Groundwater Elevation (3/1/11) (ft, NAVD88)
B/MW-101(05)	NA	15.12	NA	14.43	17.57	14.42	NM	NM
B/MW-102(05)	NA	14.84	NA	14.15	13.65	13.95	13.43	14.17
B/MW-103(05)	NA	14.68	NA	13.95	19.25	13.88	19.06	14.07
B/MW-104(05)	NA	14.67	NA	13.95	15.21	13.93	15.00	14.14
B/MW-201(06)	--	--	NA	14.00	20.80	13.82	20.62	14.00
B/MW-202(06)	--	--	NA	14.18	14.20	13.90	NM	NM
B/MW-203(06)	--	--	NA	14.50	11.70	13.62	NM	NM
B/MW-301(10)	--	--	--	--	16.85	13.96	16.64	14.17
B/MW-302(10)	--	--	--	--	18.73	13.87	NM	NM
B/MW-303(10)	--	--	--	--	16.65	16.32	13.94	19.03
B/MW-324(10)	--	--	--	--	18.73	13.9	18.55	14.08
B/MW-404(11)	--	--	--	--	--	--	--	--
B/PZ-407(11)	--	--	--	--	--	--	--	--
B/PZ-408(11)	--	--	--	--	--	--	--	--
B/PZ-409(11)	--	--	--	--	--	--	--	--
B/PZ-410(11)	--	--	--	--	--	--	--	--
B/PZ-411(11)	--	--	--	--	--	--	--	--

Table 3

Groundwater Elevations

Well ID	Depth to Water (4/13/11) (ft, bgs)	Groundwater Elevation (4/13/11) (ft, NAVD88)	Depth to Water (5/4/11) (ft, bgs)	Groundwater Elevation (5/4/11) (ft, NAVD88)	Depth to Water (8/19/2014) (ft, bgs)	Groundwater Elevation (8/19/2014) (ft, NAVD88)
B/MW-101(05)	16.00	15.99	16.06	15.93	17.24	14.75
B/MW-102(05)	12.10	15.50	12.15	15.45	13.17	14.43
B/MW-103(05)	17.62	15.51	17.66	15.47	NM	NM
B/MW-104(05)	13.64	15.50	13.64	15.50	14.75	14.39
B/MW-201(06)	19.15	15.47	19.2	15.42	NM	NM
B/MW-202(06)	12.70	15.40	NM	NM	13.76	14.34
B/MW-203(06)	10.18	15.14	10.25	15.07	11.33	13.99
B/MW-301(10)	15.30	15.51	15.35	15.46	NM	NM
B/MW-302(10)	17.09	15.51	17.15	15.45	NM	NM
B/MW-303(10)	15.85	17.12	16	16.97	NM	NM
B/MW-324(10)	17.17	15.46	17.21	15.42	NM	NM
B/MW-404(11)	17.51	15.44	17.51	15.44	18.61	14.34
B/PZ-407(11)	13.80	15.46	13.81	15.45	NM	NM
B/PZ-408(11)	15.98	15.55	16.01	15.52	NM	NM
B/PZ-409(11)	17.31	15.48	17.36	15.43	NM	NM
B/PZ-410(11)	15.70	15.47	15.74	15.43	NM	NM
B/PZ-411(11)	14.75	15.46	14.84	15.37	NM	NM

Table 3

Groundwater Elevations

Well ID	Depth to Water (10/07/2015) (ft, bgs)	Groundwater Elevation (10/07/2015) (ft, NAVD88)	Depth to Water (11/09/2016) (ft, bgs)	Groundwater Elevation (11/09/2016) (ft, NAVD88)	Depth to Water (10/12/2017) (ft, bgs)	Groundwater Elevation (10/12/2017 (ft, NAVD88)
B/MW-101(05)	17.82	14.17	18.7	13.29	17.77	14.22
B/MW-102(05)	13.8	13.8	14.7	12.90	13.80	13.80
B/MW-103(05)	NM	NM	NM	NM	NM	NM
B/MW-104(05)	15.32	13.82	16.23	12.91	15.38	13.76
B/MW-201(06)	NM	NM	NM	NM	NM	NM
B/MW-202(06)	14.31	13.79	15.22	12.88	14.41	13.69
B/MW-203(06)	11.89	13.43	12.8	12.52	12.60	12.72
B/MW-301(10)	NM	NM	NM	NM	NM	NM
B/MW-302(10)	NM	NM	NM	NM	NM	NM
B/MW-303(10)	NM	NM	NM	NM	NM	NM
B/MW-324(10)	NM	NM	NM	NM	NM	NM
B/MW-404(11)	19.23	13.72	20.14	12.81	19.30	13.65
B/PZ-407(11)	NM	NM	NM	NM	NM	NM
B/PZ-408(11)	NM	NM	NM	NM	NM	NM
B/PZ-409(11)	NM	NM	NM	NM	NM	NM
B/PZ-410(11)	NM	NM	NM	NM	NM	NM
B/PZ-411(11)	NM	NM	NM	NM	NM	NM

Notes:

ft, NAVD88 = feet above North American Vertical Datum of 1988
ft, bgs = feet below ground surface
NA = Not Available
NM = Not Measured

Table 4

Historical Groundwater Data
B/MW-101(05)

Parameter	NYSDEC AWQS (µg/L)	12/31/05	12/31/06	11/18/10	05/05/11	08/19/14	10/07/15	11/09/16	10/12/17
BTEX									
Benzene	1	ND (<0.39)	ND (<0.39)	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<0.5)	ND (<1.0)	ND (<1.0)
Ethylbenzene	5	ND (<0.45)	ND (<0.45)	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	ND (<1.0)
Toluene	5	ND (<0.36)	ND (<0.36)	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	ND (<1.0)
m&p-Xylene	5	ND (<0.12)	ND (<1.2)	NR	NR	NR	ND (<2.5)	ND (<1.0)	ND (<2.0)
o-Xylene	5	ND (<0.46)	ND (<0.46)	NR	NR	NR	ND (<2.5)	ND (<1.0)	ND (<1.0)
Xylene (Total)	5	NR	NR	ND (<5.0)	ND (<5.0)	ND (<2.0)	ND (<2.5)	ND (<2.0)	ND (<3.0)
Total BTEX	NA	ND	ND	ND	ND	ND	ND	ND	ND
PAHs									
Acenaphthene	20	ND (<2.7)	ND (<1.4)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Acenaphthylene	NA	ND (<2.6)	ND (<1.3)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Anthracene	50	ND (<2.8)	ND (<1.4)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Benzo(a)anthracene	0.002	ND (<2.2)	ND (<1.1)	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Benzo(a)pyrene	NA	ND (<1.5)	ND (<1.2)	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Benzo(b)fluoranthene	0.002	ND (<2.2)	ND (<0.76)	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Benzo(g,h,i)perylene	NA	ND (<2.3)	ND (<1.1)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Benzo(k)fluoranthene	0.002	ND (<2.6)	ND (<1.9)	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Chrysene	0.002	ND (<3.3)	ND (<1.7)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Dibenz(a,h)anthracene	NA	NR	ND (<0.87)	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Fluoranthene	50	ND (<2.4)	ND (<1.2)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Fluorene	50	ND (<2.8)	ND (<1.4)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Indeno(1,2,3-cd)pyrene	0.002	ND (<1.7)	ND (<0.84)	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.099)
2-Methylnaphthalene	NA	ND (<2.2)	NR	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Naphthalene	10	ND (<2.8)	ND (<1.4)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Phenanthrene	50	ND (<2.8)	ND (<1.4)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Pyrene	50	ND (<2.9)	ND (<1.5)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.099)
Total PAHs	NA	ND	ND	ND	ND	ND	ND	ND	ND

NYSDEC = New York State Department of Environmental Conservation
AWQS = Ambient Water Quality Standards
µg/L = Micrograms/Liter
BTEX = Benzene, Toluene, Ethylbenzene, & Xylenes
PAH = Polycyclic Aromatic Hydrocarbons
J = Estimated Concentration
NA = Not Applicable
NR = Not Recorded
ND (<#) = Not Detected (# is laboratory reporting limit)
Bolded = values indicate exceedance of the NYSDEC AWQS

Table 4

Historical Groundwater Data
B/MW-102(05)

Parameter	NYSDEC AWQS (µg/L)	12/20/05	12/31/06	11/19/10	05/05/11	08/19/14	10/07/15	11/09/16	10/12/17
BTEX									
Benzene	1	ND (<0.39)	ND (<0.39)	ND (<5.0)	ND (<5.0)	0.086 J	ND (<0.5)	ND (<1.0)	ND (<1.0)
Ethylbenzene	5	ND (<0.45)	ND (<0.45)	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	ND (<1.0)
Toluene	5	ND (<0.36)	ND (<0.36)	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	ND (<1.0)
m&p-Xylene	5	ND (<0.12)	ND (<1.2)	NR	NR	NR	ND (<2.5)	ND (<1.0)	ND (<2.0)
o-Xylene	5	0.72 J	ND (<0.46)	NR	NR	NR	ND (<2.5)	ND (<1.0)	ND (<1.0)
Xylene (Total)	5	NR	NR	ND (<5.0)	ND (<5.0)	ND (<2.0)	ND (<2.5)	ND (<2.0)	ND (<3.0)
Total BTEX	NA	0.72	ND	ND	ND	0.086	ND	ND	ND
PAHs									
Acenaphthene	20	**42**	15 J	ND (<4.4)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Acenaphthylene	NA	1.8 J	9.4 J	ND (<4.4)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Anthracene	50	6.9 J	23 J	ND (<4.4)	ND (<4.0)	1.3 J	ND (<0.2)	0.03 J	ND (<0.10)
Benzo(a)anthracene	0.002	**2.7 J**	**39 J**	ND (<4.4)	ND (<4.0)	**1.8**	ND (<0.2)	**0.056 J**	ND (<0.10)
Benzo(a)pyrene	NA	2.9 J	46 J	ND (<4.4)	ND (<4.0)	1.8 J	ND (<0.2)	0.046 J	ND (<0.10)
Benzo(b)fluoranthene	0.002	**3 J**	**40 J**	ND (<4.4)	ND (<4.0)	**1.9**	ND (<0.2)	**0.075 J**	ND (<0.10)
Benzo(g,h,i)perylene	NA	2.5 J	50 J	ND (<4.4)	ND (<4.0)	ND (<10)	ND (<0.2)	0.066 J	ND (<0.10)
Benzo(k)fluoranthene	0.002	NR	**25 J**	ND (<4.4)	ND (<4.0)	**0.82 J**	ND (<0.2)	**0.063 J**	ND (<0.10)
Chrysene	0.002	**3 J**	**36 J**	ND (<4.4)	ND (<4.0)	**2.2 J**	ND (<0.2)	**0.045 J**	ND (<0.10)
Dibenz(a,h)anthracene	NA	NR	ND (<4.5)	ND (<4.4)	ND (<4.0)	ND (<1.0)	ND (<0.2)	0.033 J	ND (<0.10)
Fluoranthene	50	12	**76**	ND (<4.4)	ND (<4.0)	3.4 J	ND (<0.2)	0.086 J	ND (<0.10)
Fluorene	50	24	ND (<7.2)	ND (<4.4)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Indeno(1,2,3-cd)pyrene	0.002	**2.7 J**	**33 J**	ND (<4.4)	ND (<4.0)	**0.89 J**	ND (<0.2)	**0.055 J**	ND (<0.10)
2-Methylnaphthalene	NA	8.9 J	NR	ND (<4.4)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Naphthalene	10	ND (<1.4)	ND (<7.1)	ND (<4.4)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Phenanthrene	50	40	27 J	ND (<4.4)	ND (<4.0)	ND (<10)	ND (<0.2)	0.046 J	ND (<0.10)
Pyrene	50	10 J	**190**	ND (<4.4)	ND (<4.0)	3.9 J	ND (<0.2)	0.078 J	ND (<0.10)
Total PAHs	NA	162.4	609.4	ND	ND	18.01	ND	0.679	ND

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µg/L = Micrograms/Liter
BTEX = Benzene, Toluene, Ethylbenzene, & Xylenes
PAH = Polycyclic Aromatic Hydrocarbons
J = Estimated Concentration
NA = Not Applicable
NR = Not Recorded
ND (<#) = Not Detected (# is laboratory reporting limit)
Bolded = values indicate exceedance of the NYSDEC AWQS

Table 4

Historical Groundwater Data
B/MW-104(05)

Parameter	NYSDEC AWQS (µg/L)	12/20/05	12/28/06	11/18/10	05/05/11	08/19/14	10/07/15	11/09/16	10/12/17
BTEX									
Benzene	1	**2.7 J**	**1.9 J**	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<0.5)	ND (<1.0)	ND (<1.0)
Ethylbenzene	5	1.3 J	ND (<0.45)	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	ND (<1.0)
Toluene	5	ND (<0.36)	ND (<0.36)	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	ND (<1.0)
m&p-Xylene	5	**6.2 J**	ND (<1.2)	NR	NR	NR	ND (<2.5)	ND (<1.0)	ND (<2.0)
o-Xylene	5	3.2 J	ND (<0.46)	NR	NR	NR	ND (<2.5)	ND (<1.0)	ND (<1.0)
Xylene (Total)	5	NR	NR	ND (<5.0)	ND (<5.0)	ND (<2.0)	ND (<2.5)	ND (<2.0)	ND (<3.0)
Total BTEX	NA	13.4	1.9	ND	ND	ND	ND	ND	ND
PAHs									
Acenaphthene	20	14	**22 J**	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Acenaphthylene	NA	3.6 J	25 J	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Anthracene	50	7.2 J	32 J	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	0.029 J	ND (<0.10)
Benzo(a)anthracene	0.002	**2.2 J**	**56**	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Benzo(a)pyrene	NA	1.6 J	10 J	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Benzo(b)fluoranthene	0.002	**1.6 J**	**47 J**	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Benzo(g,h,i)perylene	NA	ND (<1.1)	ND (<36)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Benzo(k)fluoranthene	0.002	NR	**31 J**	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Chrysene	0.002	**2 J**	**50 J**	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Dibenz(a,h)anthracene	NA	NR	ND (<4.4)	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Fluoranthene	50	9.3 J	**73**	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	0.046 J	ND (<0.10)
Fluorene	50	17	21 J	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Indeno(1,2,3-cd)pyrene	0.002	**1 J**	**28 J**	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.10)
2-Methylnaphthalene	NA	ND (<1.1)	NR	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Naphthalene	10	ND (<1.4)	7.6 J	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)
Phenanthrene	50	24	**89**	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	0.064 J	ND (<0.10)
Pyrene	50	6.2 J	**160**	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	0.04 J	ND (<0.10)
Total PAHs	NA	89.7	651.6	ND	ND	ND	ND	0.179	ND

NYSDEC = New York State Department of Environmental Conservation
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µg/L = Micrograms/Liter
BTEX = Benzene, Toluene, Ethylbenzene, & Xylenes
PAH = Polycyclic Aromatic Hydrocarbons
J = Estimated Concentration
NA = Not Applicable
NR = Not Recorded
ND (<#) = Not Detected (# is laboratory reporting limit)
Bolded = values indicate exceedance of the NYSDEC AWQS

Table 4

Historical Groundwater Data
B/MW-202(06)

Parameter	NYSDEC AWQS (µg/L)	12/31/06	11/18/10	05/06/11	08/19/14	10/07/15	11/09/16	10/12/17
BTEX								
Benzene	1	**1.6 J**	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<0.5)	ND (<1.0)	ND (<1.0)
Ethylbenzene	5	ND (<0.45)	ND (<5.0)	1 J	ND (<1.0)	ND (<2.5)	ND (<1.0)	ND (<1.0)
Toluene	5	ND (<0.36)	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	ND (<1.0)
m&p-Xylene	5	ND (<1.2)	NR	NR	NR	ND (<2.5)	ND (<1.0)	ND (<2.0)
o-Xylene	5	ND (<0.46)	NR	NR	NR	ND (<2.5)	ND (<1.0)	ND (<1.0)
Xylene (Total)	5	NR	ND (<5.0)	ND (<5.0)	ND (<2.0)	ND (<2.5)	ND (<2.0)	ND (<3.0)
Total BTEX	NA	1.6	ND	1	ND	ND	ND	ND
PAHs								
Acenaphthene	20	ND (<1.4)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.097)
Acenaphthylene	NA	ND (<1.3)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.097)
Anthracene	50	ND (<1.4)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.097)
Benzo(a)anthracene	0.002	ND (<1.1)	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.097)
Benzo(a)pyrene	NA	ND (<1.2)	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.097)
Benzo(b)fluoranthene	0.002	ND (<0.76)	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.097)
Benzo(g,h,i)perylene	NA	ND (<1.1)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.097)
Benzo(k)fluoranthene	0.002	ND (<1.9)	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.097)
Chrysene	0.002	ND (<1.7)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.097)
Dibenz(a,h)anthracene	NA	ND (<0.87)	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.097)
Fluoranthene	50	ND (<1.2)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	0.035 J	ND (<0.097)
Fluorene	50	ND (<1.4)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.097)
Indeno(1,2,3-cd)pyrene	0.002	ND (<0.84)	ND (<4.3)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.097)
2-Methylnaphthalene	NA	NR	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.097)
Naphthalene	10	ND (<1.4)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.097)
Phenanthrene	50	ND (<1.4)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	0.12 J	ND (<0.097)
Pyrene	50	ND (<1.5)	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	0.03 J	ND (<0.097)
Total PAHs	NA	ND	ND	ND	ND	ND	0.185	ND

NYSDEC = New York State Department of Environmental Conservation
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µg/L = Micrograms/Liter
BTEX = Benzene, Toluene, Ethylbenzene, & Xylenes
PAH = Polycyclic Aromatic Hydrocarbons
J = Estimated Concentration
NA = Not Applicable
NR = Not Recorded
ND (<#) = Not Detected (# is laboratory reporting limit)
Bolded = values indicate exceedance of the NYSDEC AWQS

Table 4

Historical Groundwater Data
B/MW-203(06)

Parameter	NYSDEC AWQS (µg/L)	12/31/06	11/18/10	05/06/11	08/19/14	10/07/15	11/09/16	10/12/17
BTEX								
Benzene	1	ND (<0.39)	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<0.5)	ND (<1.0)	**8.2**
Ethylbenzene	5	ND (<0.45)	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	2.6
Toluene	5	ND (<0.36)	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	ND (<1.0)
m&p-Xylene	5	ND (<1.2)	NR	NR	NR	ND (<2.5)	ND (<1.0)	ND (<2.0)
o-Xylene	5	ND (<0.46)	NR	NR	NR	ND (<2.5)	ND (<1.0)	2.0
Xylene (Total)	5	NR	ND (<5.0)	ND (<5.0)	ND (<2.0)	ND (<2.5)	ND (<2.0)	3.1
Total BTEX	NA	ND	ND	ND	ND	ND	ND	15.9
PAHs								
Acenaphthene	20	ND (<1.4)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	**48.3**
Acenaphthylene	NA	ND (<1.3)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	0.45
Anthracene	50	ND (<1.4)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	0.93
Benzo(a)anthracene	0.002	ND (<1.1)	ND (<4.2)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	**0.26**
Benzo(a)pyrene	NA	ND (<1.2)	ND (<4.2)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Benzo(b)fluoranthene	0.002	ND (<0.76)	ND (<4.2)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Benzo(g,h,i)perylene	NA	ND (<1.1)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Benzo(k)fluoranthene	0.002	ND (<1.9)	ND (<4.2)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Chrysene	0.002	ND (<1.7)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	**0.16**
Dibenz(a,h)anthracene	NA	ND (<0.88)	ND (<4.2)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Fluoranthene	50	ND (<1.2)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	9.5
Fluorene	50	ND (<1.4)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	5.4
Indeno(1,2,3-cd)pyrene	0.002	ND (<0.84)	ND (<4.2)	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)
2-Methylnaphthalene	NA	NR	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Naphthalene	10	ND (<1.4)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	0.95
Phenanthrene	50	ND (<1.4)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	1.7
Pyrene	50	ND (<1.5)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	7.0
Total PAHs	NA	ND	ND	ND	ND	ND	ND	74.7

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BTEX = Benzene, Toluene, Ethylbenzene, & Xylenes
PAH = Polycyclic Aromatic Hydrocarbons
J = Estimated Concentration
NA = Not Applicable
NR = Not Recorded
ND (<#) = Not Detected (# is laboratory reporting limit)
Bolded = values indicate exceedance of the NYSDEC AWQS

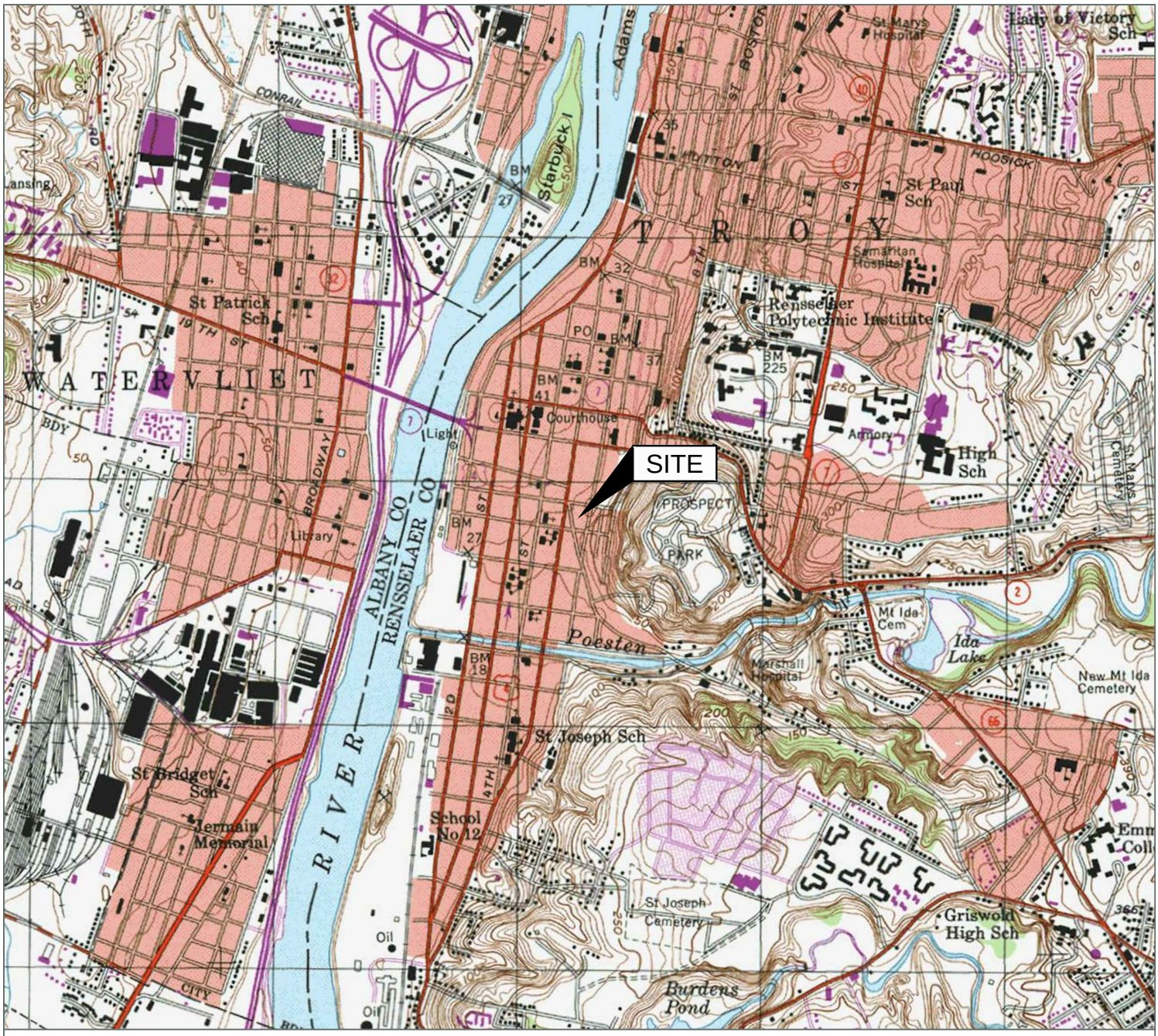
Table 4

Historical Groundwater Data
B/MW-404(11)

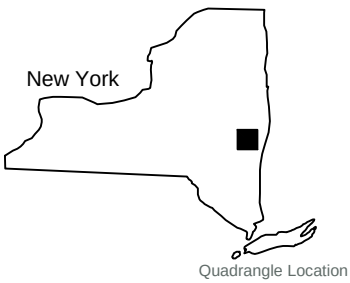
Parameter	NYSDEC AWQS (µg/L)	05/06/11	08/19/14	10/07/15	11/09/16	10/12/17
BTEX						
Benzene	1	ND (<5.0)	ND (<1.0)	ND (<0.5)	ND (<1.0)	ND (<1.0)
Ethylbenzene	5	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	ND (<1.0)
Toluene	5	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	ND (<1.0)
m&p-Xylene	5	NR	NR	ND (<2.5)	ND (<1.0)	ND (<2.0)
o-Xylene	5	NR	NR	ND (<2.5)	ND (<1.0)	ND (<1.0)
Xylene (Total)	5	ND (<5.0)	ND (<2.0)	ND (<2.5)	ND (<2.0)	ND (<3.0)
Total BTEX	NA	ND	ND	ND	ND	ND
PAHs						
Acenaphthene	20	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Acenaphthylene	NA	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Anthracene	50	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Benzo(a)anthracene	0.002	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Benzo(a)pyrene	NA	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Benzo(b)fluoranthene	0.002	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Benzo(g,h,i)perylene	NA	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Benzo(k)fluoranthene	0.002	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Chrysene	0.002	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Dibenz(a,h)anthracene	NA	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Fluoranthene	50	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Fluorene	50	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Indeno(1,2,3-cd)pyrene	0.002	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)
2-Methylnaphthalene	NA	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Naphthalene	10	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Phenanthrene	50	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Pyrene	50	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)
Total PAHs	NA	ND	ND	ND	ND	ND

NYSDEC = New York State Department of Environmental Conservation
AWQS = Ambient Water Quality Standards
µg/L = Micrograms/Liter
BTEX = Benzene, Toluene, Ethylbenzene, & Xylenes
PAH = Polycyclic Aromatic Hydrocarbons
J = Estimated Concentration
NA = Not Applicable
NR = Not Recorded
ND (<#) = Not Detected (# is laboratory reporting limit)
Bolded = values indicate exceedance of the NYSDEC AWQS

Figures



Source:
USGS 7.5 Minute Series
Topographic Quadrangle, 1980
Troy South, New York
Contour Interval = 10'



Site Location Map

National Grid
Liberty Street
Troy, New York

Drawn
W.G.S.
Designed

Approved

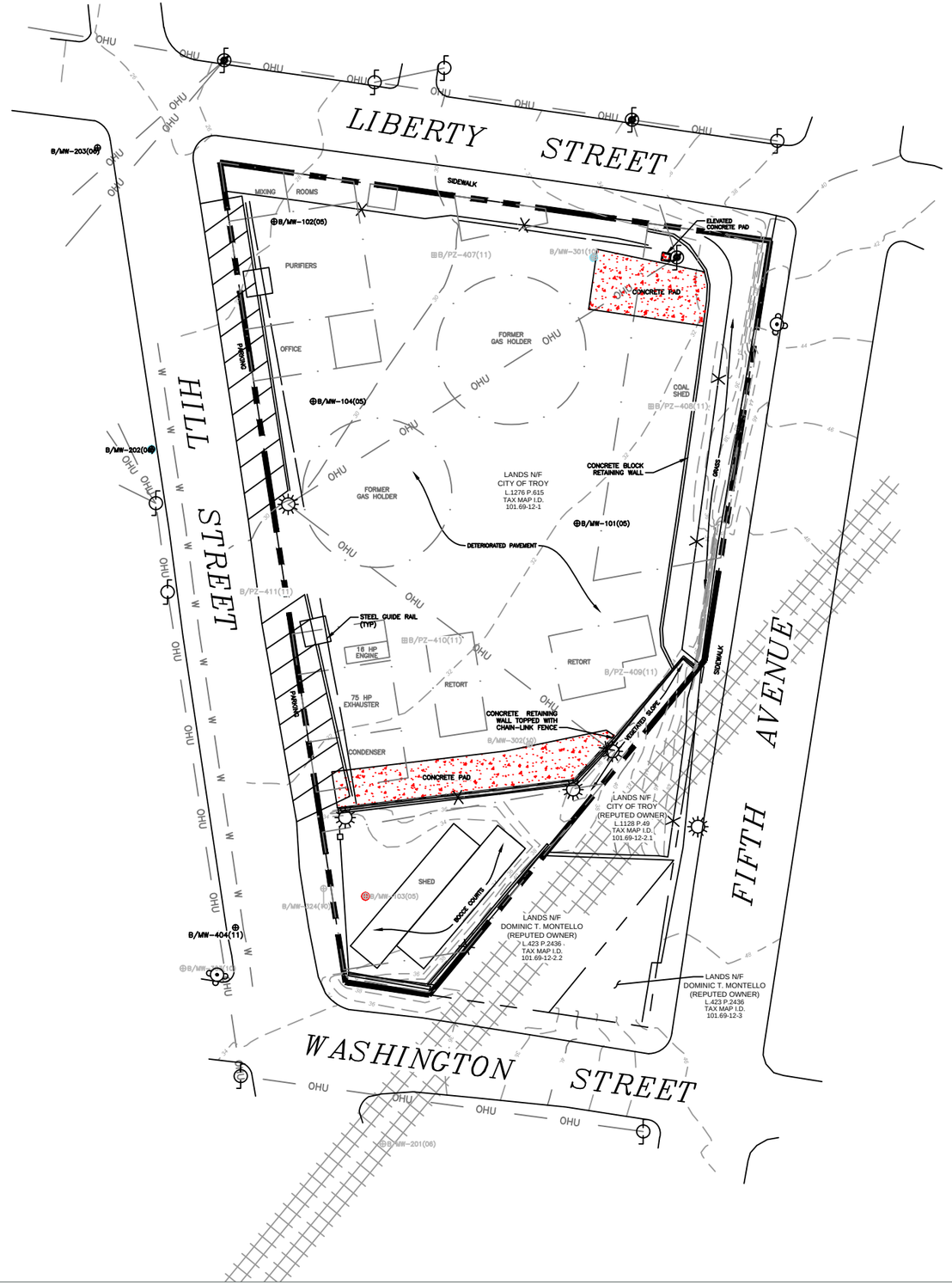
Date
1-15-18
Figure
1

N

Scale In Feet
0 2000

GES
Groundwater & Environmental Services, Inc.

M:\Graphics\0600-Syracuse\Misc\National Grid\Troy (Liberty Street)\Troy (Liberty Street) SLM.dwg, Template SLM, WShea



LEGEND

- PROPERTY BOUNDARY
- FIRE HYDRANT
- LIGHT POLE
- UTILITY POLE
- W — UNDERGROUND WATER LINE
- OHU — OVERHEAD UTILITIES

Site Map

National Grid
Liberty Street
Troy, New York

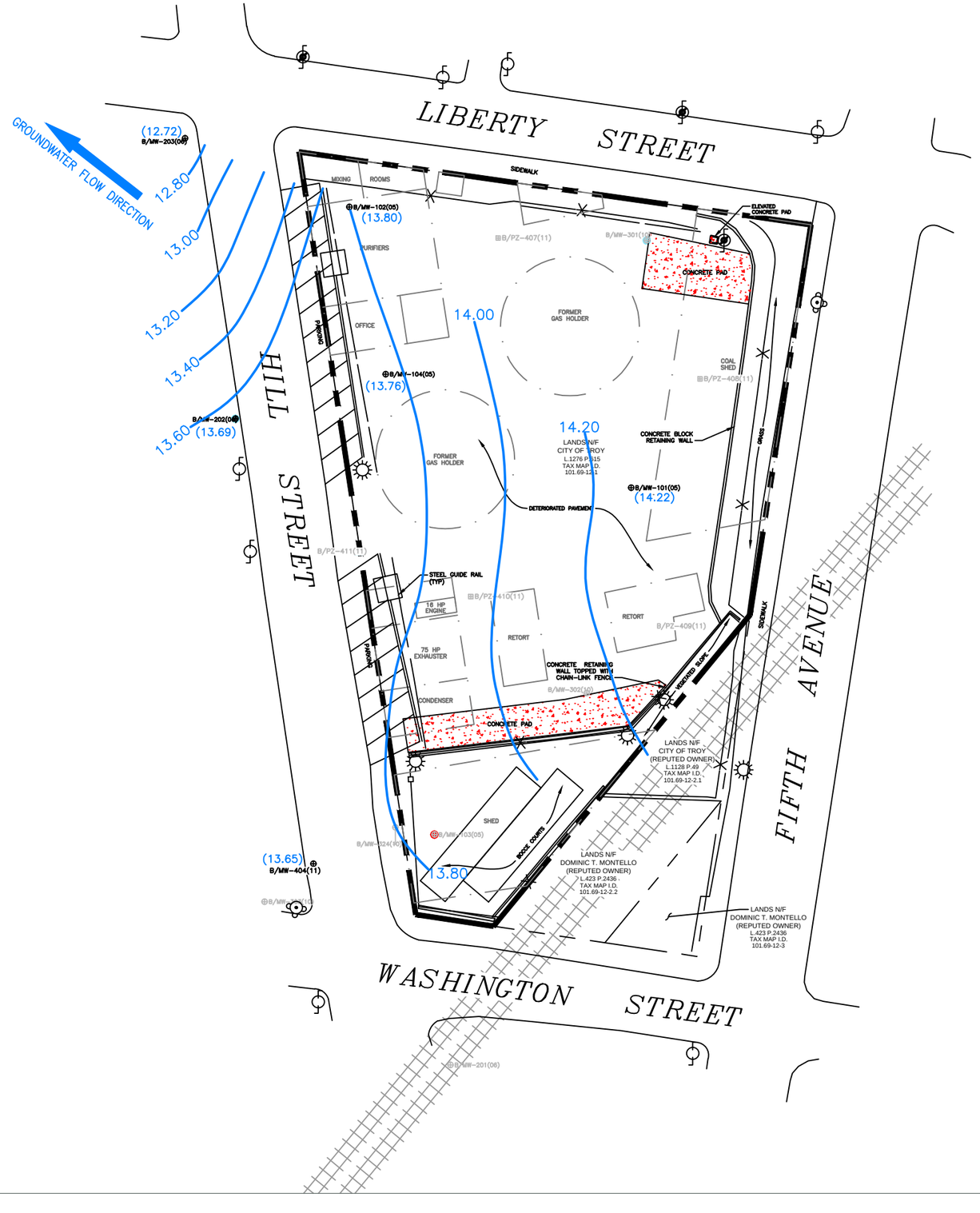
Drawn: W.G.S.
Designed:
Approved:

Date: 1-19-18
Figure: 2

Scale In Feet
0 50

Groundwater & Environmental Services, Inc.

M:\Graphics\0600-SyracuseMisc\National Grid\Troy (Liberty Street)\Troy (Liberty Street) SM.dwg, Template B, WShea



LEGEND

- PROPERTY BOUNDARY
- FIRE HYDRANT
- LIGHT POLE
- UTILITY POLE
- (14.22) GROUNDWATER ELEVATION (feet)
- NOT SAMPLED

Groundwater Contour Map
October 12, 2017

National Grid
Liberty Street
Troy, New York

Drawn
W.G.S.
Designed

Approved

Date
1-19-18
Figure
3

Scale In Feet
0 50

Groundwater & Environmental Services, Inc.

M:\Graphics\0600-SyracuseMisc\National Grid\Troy (Liberty Street)\Troy (Liberty Street) SM.dwg, Template B, WShea

Appendix A – Well Sampling Sheets

National Grid
Liberty Street, Troy New York

Sampling Personnel: PD
Date: 10/12/17
Job Number: 06-02882
Weather: 55° - CLEAR
Well Id. **B/MW-101(05)**
Time In: 0945 Time Out: 1040

Well Information

		TOC	Other
Depth to Water:	(feet)	~~13.20~~ NP	17.77
Depth to Product:	(feet)	~~NP~~ NP	NP
Depth to Bottom:	(feet)	~~16.40~~ NP	26.90
Length of Water Column:	(feet)	9.13	
Volume of Water in Well:	(gal)	1.5g	
Three Well Volumes:	(gal)	4.4g	

Well Type: Flushmount ☐ Stick-Up ☐
Well Locked: Yes ☐ No ☐
Measuring Point Marked: Yes ☐ No ☐
Well Material: PVC ☒ SS ☐ Other: ____
Well Diameter: 1" ☐ 2" ☒ Other: ____
Comments:

Purging Information

Purging Method:		Bailer ☐	Peristaltic ☒	Grundfos Pump ☐	
Tubing/Bailer Material:		Teflon ☐	Stainless St. ☐	Polyethylene ☒	
Sampling Method:		Bailer ☐	Peristaltic ☒	Grundfos Pump ☐	
Average Pumping Rate:	(ml/min)	160			
Duration of Pumping:	(min)	30			
Total Volume Removed:	(gal)	1.5g			

Did well go dry? Yes ☐ No ☑

Horiba U-52 Water Quality Meter Used? Yes ☒ No ☐

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	Temp (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
0955	17.80	16.32	6.90	125	2.46	310	0	1.58
1000	17.80	16.42	6.90	116	2.48	~~310~~ 280	0	1.58
1005	17.80	16.49	6.90	82	2.47	45	0	1.58
1010	17.80	16.49	6.90	66	2.45	29.0	0	1.57
1015	17.80	16.55	6.90	~~53~~	2.42	23.1	0	1.55
1020	17.80	16.65	6.89	47	2.40	19.5	0	1.54
1025	17.80	16.55	6.88	43	2.39	18.5	0	1.53

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
3	40 mL	Glass	HCl	BTEX	EPA Method 8260B
2	1 L	Glass	Unpreserved	PAH's	EPA Method 8270C

Sample ID: B/MW-101(05)-1017 Duplicate? Yes ☐ No ☒
Sample Time: 1025 MS/MSD? Yes ☐ No ☒

Shipped: Drop-off Albany Service Center ☒ Fed-Ex ☐ Courier ☐

Comments/Notes:

Laboratory: PACE Analytical Greensburg, PA

National Grid
Liberty Street, Troy New York

Sampling Personnel: PD
Job Number: 06-02882
Well Id. **B/MW-102(05)**

Date: 10/12/17
Weather: 50°. - CLEAR
Time In: 0830 Time Out: 0930

Well Information

		TOC	Other
Depth to Water:	(feet)	13.30	
Depth to Product:	(feet)	NP	
Depth to Bottom:	(feet)	16.90	
Length of Water Column:	(feet)	2.6'	
Volume of Water in Well:	(gal)	0.42g	
Three Well Volumes:	(gal)	1.2g	

Well Type: Flushmount ☐ Stick-Up ☐
Well Locked: Yes ☐ No ☐
Measuring Point Marked: Yes ☐ No ☐
Well Material: PVC ☒ SS ☐ Other: ____
Well Diameter: 1" ☐ 2" ☒ Other: ____
Comments:

Purging Information

Purging Method:	Bailer ☐	Peristaltic ☒	Grundfos Pump ☐	
Tubing/Bailer Material:	Teflon ☐	Stainless St. ☐	Polyethylene ☒	
Sampling Method:	Bailer ☐	Peristaltic ☒	Grundfos Pump ☐	
Average Pumping Rate: (ml/min)	160			
Duration of Pumping: (min)	30			
Total Volume Removed: (gal)	~1.5g			

Did well go dry? Yes ☐ No ☑

Horiba U-52 Water Quality Meter Used? Yes ☒ No ☐

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	Temp (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
0840	14.00	14.03	6.69	162	1.51	22.3	0	0.963
0845	14.13	14.75	6.67	187	1.47	11.1	0	0.938
0850	14.21	15.18	6.68	192	1.45	6.0	0	0.930
0855	14.30	15.49	6.69	193	1.47	3.5	0	0.940
0900	14.36	15.81	6.70	191	1.47	3.2	0	0.942
0905	14.41	16.01	6.71	185	1.48	2.3	0	0.950
0910	14.46	16.10	6.71	179	1.50	1.8	0	0.952

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
3	40 mL	Glass	HCl	BTEX	EPA Method 8260B
2	1 L	Glass	Unpreserved	PAH's	EPA Method 8270C

Sample ID: B/MW-102(05)-1017
Sample Time: 0910

Duplicate? Yes ☐ No ☒
MS/MSD? Yes ☐ No ☒

Shipped: Drop-off Albany Service Center ☒
Fed-Ex ☐ UPS ☐

Comments/Notes:

Laboratory: PACE Analytical
Greensburg, PA

National Grid
Liberty Street, Troy New York

Sampling Personnel: PD
Job Number: 06-02882
Well Id. **B/MW-104(05)**

Date: 10/12
Weather: 50° - CLEAR
Time In: 0715 Time Out: 0830

Well Information

		TOC	Other
Depth to Water:	(feet)	15.38	
Depth to Product:	(feet)	NP	
Depth to Bottom:	(feet)	21.15	
Length of Water Column:	(feet)	5.77	
Volume of Water in Well:	(gal)	0.9 g	
Three Well Volumes:	(gal)	2.7 g	

Well Type: Flushmount ☐ Stick-Up ☐
Well Locked: Yes ☐ No ☐
Measuring Point Marked: Yes ☐ No ☐
Well Material: PVC ☒ SS ☐ Other: ____
Well Diameter: 1" ☐ 2" ☒ Other: ____
Comments: MS/MSD HERE

Purging Information

Purging Method:		Bailer ☐	Peristaltic ☒	Grundfos Pump ☐	
Tubing/Bailer Material:		Teflon ☐	Stainless St. ☐	Polyethylene ☒	
Sampling Method:		Bailer ☐	Peristaltic ☒	Grundfos Pump ☐	
Average Pumping Rate:	(ml/min)	160			
Duration of Pumping:	(min)	30			
Total Volume Removed:	(gal)	4.5 g			

Did well go dry? Yes ☐ No ☑

Horiba U-52 Water Quality Meter Used? Yes ☒ No ☐

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	Temp (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
0725	15.52	15.02	6.68	52	1.82	126	0	1.17
0730	15.54	15.26	6.62	58	1.82	105	0	1.16
0735	15.54	15.59	6.64	58	1.32	60	0	1.16
0740	15.54	15.71	6.65	57	1.21	39.5	0	1.16
0745	15.55	15.69	6.63	57	1.80	36.0	0	1.15
0750	15.54	15.55	6.61	58	1.79	28.4	0	1.15
0755	15.54	15.57	6.60	60	1.79	22.6	0	1.14

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
3	40 mL	Glass	HCl	BTEX	EPA Method 8260B
2	1 L	Glass	Unpreserved	PAH's	EPA Method 8270C

Sample ID: B/MW-104(05)-1017
Sample Time: 0755

Duplicate? Yes ☐ No ☒
MS/MSD? Yes ☒ No ☒ PD

Shipped: Drop-off Albany Service Center ☒
Fed-Ex ☐ UPS ☐

Laboratory: PACE Analytical Greensburg, PA

Comments/Notes:

National Grid
Liberty Street, Troy New York

Sampling Personnel: VE
Job Number: 06-02882
Well Id. **B/MW-202(05)**

Date: 10/12/17
Weather: PC 48
Time In: 07:45 Time Out: 08:55

Well Information

		TOC	Other
Depth to Water:	(feet)	14.41	
Depth to Product:	(feet)	NP	
Depth to Bottom:	(feet)	19.55	
Length of Water Column:	(feet)	5.14	
Volume of Water in Well:	(gal)	.82	
Three Well Volumes:	(gal)	2.46	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other: ____
Well Diameter: 1" [ ] 2" [X] Other: ____
Comments:

Purging Information

Purging Method:	Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	
Tubing/Bailer Material:	Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	
Sampling Method:	Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]	
Average Pumping Rate: (ml/min)	160			
Duration of Pumping: (min)	30			
Total Volume Removed: (gal)	1.5			

Did well go dry? Yes [ ] No [X]

Horiba U-52 Water Quality Meter Used? Yes [X] No [ ]

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	Temp (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
8:00	14.42	12.51	6.39	18	2.64	73.2	3.90	1.69
8:05	14.45	13.39	6.13	44	2.49	50.1	2.25	1.60
8:10	14.45	13.79	6.02	50	2.40	36.0	1.96	1.53
8:15	14.45	14.22	5.89	58	2.25	13.5	1.76	1.44
8:20	14.45	14.31	5.85	60	2.19	10.5	1.63	1.40
8:25	14.45	14.38	5.82	63	2.15	6.1	1.65	1.37
8:30	14.45	14.41	5.81	64	2.13	5.8	1.64	1.35

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
3	40 mL	Glass	HCl	BTEX	EPA Method 8260B
2	1 L	Glass	Unpreserved	PAH's	EPA Method 8270C

Field Dup-1017

Sample ID: B/MW-202(06)-1017 Duplicate? Yes [X] No [ ]
Sample Time: 8:36 MS/MSD? Yes [ ] No [X]

Shipped: PACE COURIER PICK UP
~~Drop-off Albany Service Center~~ [X]
Fed-Ex [ ] UPS [ ]

Comments/Notes:

Laboratory: PACE Analytical
Greensburg, PA

National Grid
Liberty Street, Troy New York

Sampling Personnel: KC
Job Number: 06-02882
Well Id. **B/MW-203(06)**

Date: 10/12/12
Weather: Sunny 60°
Time In: ~~0715~~ 955 Time Out:

Well Information

		TOC	Other
Depth to Water:	(feet)	12.60	
Depth to Product:	(feet)	ND	
Depth to Bottom:	(feet)	15.92	
Length of Water Column:	(feet)	3.32	
Volume of Water in Well:	(gal)	.53	
Three Well Volumes:	(gal)	1.59	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other: ____
Well Diameter: 1" [ ] 2" [X] Other: ____
Comments:
Removed 1.75" Bailer from well
Allowed to settle for 2.75 hrs

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]		
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]		
Sampling Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]		
Average Pumping Rate:	(ml/min)	160				
Duration of Pumping:	(min)					
Total Volume Removed:	(gal)					

Did well go dry? Yes [ ] No [ ]

Horiba U-52 Water Quality Meter Used? Yes [X] No [ ]

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	Temp (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
10:00	13.13	19.23	5.61	-159	2.29	304	1.39	1.46
10:05	13.06	18.05	5.76	-167	2.02	114	1.18	1.29
10:10	13.10	17.84	5.77	-165	1.96	46.9	1.14	1.26
10:15	13.13	17.72	5.77	-167	1.92	25.2	1.01	1.23
10:20	13.13	17.68	5.79	-167	1.91	20.1	0.96	1.22
10:25	13.13	17.66	5.78	-169	1.90	14.3	0.96	1.22
10:30	13.13	17.67	5.78	-169	1.90	9.1	0.94	1.21

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
3	40 mL	Glass	HCl	BTEX	EPA Method 8260B
2	1 L	Glass	Unpreserved	PAH's	EPA Method 8270C

B/MW-203(06)-MS-1017 and B/MW-203(06)-MSD-1017

Sample ID: B/MW-203(06)-1017 Duplicate? Yes [ ] No [X]
Sample Time: 10:30 MS/MSD? Yes [X] No [X]

Shipped: Pace Courier Drop-off Albany Service Center [X] Fed-Ex [ ] UPS [ ]

Comments/Notes:

Laboratory: PACE Analytical Greensburg, PA

National Grid
Liberty Street, Troy New York

Sampling Personnel: KL
Date: 10/12/17
Job Number: 06-02882
Weather: Sunny 60°
Well Id. **B/MW-404(11)**
Time In: 09:00 Time Out: 9:57

Well Information

		TOC	Other
Depth to Water:	(feet)	19.30	
Depth to Product:	(feet)	ND	
Depth to Bottom:	(feet)	23.85	
Length of Water Column:	(feet)	4.55	
Volume of Water in Well:	(gal)	.72	
Three Well Volumes:	(gal)	2.19	

Well Type: Flushmount [X] Stick-Up [ ]
Well Locked: Yes [X] No [ ]
Measuring Point Marked: Yes [X] No [ ]
Well Material: PVC [X] SS [ ] Other: ____
Well Diameter: 1" [ ] 2" [X] Other: ____
Comments:

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]
Sampling Method:		Bailer [ ]	Peristaltic [X]	Grundfos Pump [ ]
Average Pumping Rate:	(ml/min)	190		
Duration of Pumping:	(min)	30		
Total Volume Removed:	(gal)	1.5		

Did well go dry? Yes [ ] No [X]

Horiba U-52 Water Quality Meter Used? Yes [X] No [ ]

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	Temp (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
09:00	19.30	16.80	6.05	50	0.719	16.7	4.48	0.466
09:05	19.30	17.41	6.18	49	0.390	25.6	4.46	0.251
09:10	19.30	18.14	6.13	49	0.327	35.6	4.36	0.212
09:15	19.30	19.04	6.10	51	0.318	5.2	4.12	0.206
09:20	19.30	19.24	5.97	52	0.315	6.3	3.96	0.205
09:25	19.30	19.12	5.96	51	0.311	7.7	3.87	0.202
09:30								

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
3	40 mL	Glass	HCl	BTEX	EPA Method 8260B
2	1 L	Glass	Unpreserved	PAH's	EPA Method 8270C

Sample ID: B/MW-404(11)-1017
Sample Time: 09:30
Duplicate? Yes [ ] No [X]
MS/MSD? Yes [ ] No [X]

Shipped: Pace courier Drop-off Albany Service Center [X]
Fed-Ex [ ] UPS [ ]

Laboratory: PACE Analytical Greensburg, PA

Comments/Notes:

Appendix B – Data Usability Summary Reports

Groundwater
& Environmental Services, Inc.

1750 Kraft Drive, Suite 2700 • Blacksburg, Virginia 24060 • (866) 756 0788

January 24, 2018

Devin Shay
Groundwater & Environmental Services
5 Technology Place, Suite 4
East Syracuse, NY 13057

RE: Data Usability Summary Report for National Grid- Troy Liberty Street- Site Data Package:

Groundwater & Environmental Services, Inc. (GES) reviewed one data package (Laboratory Pace Project No.: 30232978) from Pace Analytical Services, Inc., for the analysis of samples collected on October 12, 2017 from monitoring wells located at the National Grid: Troy Liberty Street Site. Eight aqueous samples and a field duplicate were analyzed for BTEX and PAHs. Methodologies utilized are those of USEPA SW846 methods 8260B and 8270C with additional QC requirements of the NYSDEC ASP.

The data packages submitted contain full deliverables for validation, but this usability report is generated from review of the summary form information, with full validation review of sample raw data, and limited review of associated QC raw data. The reported summary forms have been reviewed for application of validation qualifiers, using guidance from the National Grid generic QAPP, USEPA Region 2 validation SOPs, the USEP A National Functional Guidelines for Data Review, and professional judgment, as affects the usability of the data. The following items were reviewed:

- Laboratory Narrative Discussion
- Custody Documentation
- Holding Times
- Surrogate Recoveries
- Matrix Spike Recoveries/Duplicate (M S / M S D) Correlations
- Field Duplicate Correlations
- Laboratory Control Sample (LCS)
- Preparation/Calibration Blanks
- Instrument MDLs
- Sample Quantitation and Identification

The items listed above which show deficiencies are discussed within the text of this narrative.

All of the other items are determined to be acceptable for the DUSR level review.

Table 1. Laboratory – Field Cross Reference

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
30232978001	B/MW-101(05)-1017	Water	10/12/17 10:25	10/13/17 09:50
30232978002	B/MW-102(05)-1017	Water	10/12/17 09:10	10/13/17 09:50
30232978003	B/MW-104(05)-1017	Water	10/12/17 07:55	10/13/17 09:50
30232978004	B/MW-202(06)-1017	Water	10/12/17 08:30	10/13/17 09:50
30232978005	B/MW-203(06)-1017	Water	10/12/17 10:30	10/13/17 09:50
30232978006	B/MW-404(11)-1017	Water	10/12/17 09:30	10/13/17 09:50
30232978007	Field Dup-1017	Water	10/12/17 00:00	10/13/17 09:50
30232978008	Trip Blank	Water	10/12/17 00:01	10/13/17 09:50
30232978009	B/MW-104(05)1017 MS	Water	10/12/17 07:55	10/13/17 09:50
30232978010	B/MW-104(05)1017 MSD	Water	10/12/17 07:55	10/13/17 09:50

In summary, sample results are usable as reported.

The laboratory case narratives and sample identification summary forms are attached to this text, and should be reviewed in conjunction with this report. Also included with this narrative are sample results forms.

BTEX and TCL Volatiles by EPA 8260C/NYSDEC ASP

Sample holding times are met. Surrogate and recoveries are within required limits. The blind field duplicate correlations, where applicable, fall within guidance limits.

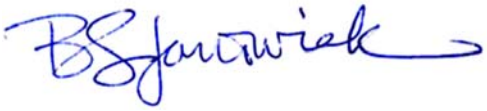
PAHs by EPA8270D/NYSDEC ASP

Holding times are met. Surrogate recoveries are within analytical and validation guidelines. Blanks show no contamination. The blind field duplicate correlations, where applicable, fall within guidance limits.

Data Package Completeness

The NYSDEC Category B deliverables was included in the laboratory data package, all information required for validation of the data is present.

Please do not hesitate to contact me if you have comments or questions regarding this report.



Bonnie Janowiak, Ph.D.
Project Chemist
701 N Main, Suite 201
Blacksburg, VA 24060

VALIDATION DATA QUALIFIER DEFINITIONS

U The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.

J The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.

J- The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.

J+ The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.

UJ The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.

NJ The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.

R The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.

Sample Summaries

and

Laboratory Case Narratives

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: National Grid - Troy Liberty S
Pace Project No.: 30232978

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30232978001	**B/MW-101(05)-1017**	Water	10/12/17 10:25	10/13/17 09:50
30232978002	**B/MW-102(05)-1017**	Water	10/12/17 09:10	10/13/17 09:50
30232978003	**B/MW-104(05)-1017**	Water	10/12/17 07:55	10/13/17 09:50
30232978004	**B/MW-202(06)-1017**	Water	10/12/17 08:30	10/13/17 09:50
30232978005	**B/MW-203(06)-1017**	Water	10/12/17 10:30	10/13/17 09:50
30232978006	**B/MW-404(11)-1017**	Water	10/12/17 09:30	10/13/17 09:50
30232978007	**Field Dup-1017**	Water	10/12/17 00:00	10/13/17 09:50
30232978008	**Trip Blank**	Water	10/12/17 00:01	10/13/17 09:50
30232978009	**B/MW-104(05)1017 MS**	Water	10/12/17 07:55	10/13/17 09:50
30232978010	**B/MW-104(05)1017 MSD**	Water	10/12/17 07:55	10/13/17 09:50

Pace Analytical Services, LLC
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Greensburg, PA 15601
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PROJECT NARRATIVE

Project: National Grid - Troy Liberty S
Pace Project No.: 30232978

Method: **EPA 8270D by SIM**
Description: 8270D MSSV PAH by SIM
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: January 10, 2018

General Information:
9 samples were analyzed for EPA 8270D by SIM. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

ip: Benzo(b)fluoranthene and benzo(k)fluoranthene were separated in the check standard but did not meet the resolution criteria in SW846 Method 8270D. Whereas sample results included are reported as individual isomers, the lab and the customer must recognize them as an isomeric pair.

- B/MW-101(05)-1017 (Lab ID: 30232978001)
- B/MW-102(05)-1017 (Lab ID: 30232978002)
- B/MW-104(05)-1017 (Lab ID: 30232978003)
- B/MW-203(06)-1017 (Lab ID: 30232978005)

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
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PROJECT NARRATIVE

Project: National Grid - Troy Liberty S
Pace Project No.: 30232978

Method: **EPA 8260C**
Description: 8260C MSV
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: January 10, 2018

General Information:
10 samples were analyzed for EPA 8260C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.