nationalgrid

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

March 1, 2022

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: **Liberty Street Non-Owned Former Manufactured Gas Plant (MGP) Site**
Troy, NY
Annual Groundwater Monitoring Report
NYSDEC Site # V000482

Dear Mr. Deyette:

Attached for your information is the annual Groundwater Monitoring Report detailing the groundwater monitoring activities conducted in 2021 at the National Grid Troy (Liberty Street) Site. Site activities were conducted in accordance with the NYSDEC-approved Site Management Plan dated April 2015.

Groundwater and Environmental Services, Inc., (GES), the OM&M contractor for National Grid, conducts all long-term OM&M activities at the site. Quarterly site inspections were conducted in March, June, September, and December of 2021. Annual groundwater sampling was completed on September 2, 2021. The site is generally in good shape and in compliance.

Please contact me at 315-428-5652 if you have any questions.

Sincerely,

for SPS

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

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National Grid

2021 Groundwater Monitoring Report

National Grid Troy Liberty Street Site
Liberty Street
Troy, NY

March 2022

Version 1

2021 Groundwater Monitoring Report

National Grid -Troy
Liberty Street
Troy, NY

Prepared for:
National Grid
300 Erie Boulevard West, C-1
Syracuse, NY 13202

Prepared by:
Groundwater & Environmental Services, Inc.
6780 Northern Blvd. Suite 100
East Syracuse, NY 13057
TEL: 800-220-3069
www.gesonline.com

GES Project:
0603275.121801.221

Date:
March 1, 2022

Devin T. Shay Digitally signed by Devin T. Shay

Devin T. Shay, PG
Program Manager / Principal Hydrogeologist

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Acronyms

AWQS	Ambient Water Quality Standards
BTEX	Benzene, Toluene, Ethylbenzene, and Total Xylenes
DNAPL	Dense Non-Aqueous Phase Liquid
DUSR	Data Usability Summary Report
GES	Groundwater & Environmental Services, Inc.
gpm	Gallons per Minute
IRM	Interim Remedial Measures
LNAPL	Light Non-Aqueous Phase Liquid
MGP	Manufactured Gas Plant
NYSDEC	New York State Department of Environmental Conservation
OM&M	Operation, Maintenance, and Monitoring
OU	Operable Unit
Pace	Pace Analytical Services, LLC
PAH	Polycyclic Aromatic Hydrocarbons
POTW	Publically Owned Treatment Works
QA/QC	Quality Assurance / Quality Control
ROD	Record of Decision
SMP	Site Management Plan
USEPA	United States Environmental Protection Agency
WPCF	Water Pollution Control Facility

1 Introduction

1.1 Overview

Groundwater & Environmental Services, Inc. (GES) has prepared this 2021 Groundwater Monitoring Report (covering January 1, 2021 – December 31, 2021) for the Troy (Liberty Street) Site, Troy, New York**.** The groundwater monitoring activities described in this letter were completed as part of the annual inspection and groundwater sampling/monitoring event, in accordance to the Site Management Plan (SMP) dated April 2015.

The following activities conducted during this reporting period are summarized below:

- Quarterly site inspections.
- Annual groundwater elevation data.
- Annual groundwater sampling, analysis and data validation. Water samples are submitted to Pace Analytical Services, LLC (Pace) for laboratory analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) via United States Environmental Protection Agency (EPA) Method 8260C, and polycyclic aromatic hydrocarbons (PAHs) via EPA Method 8270D.
- Any site maintenance that comes about as a result of the quarterly inspections.

1.2 Site Description

The Troy-Liberty Street former MGP Site is located in an urban residential/light commercial area in Troy's "Little Italy" neighborhood, and is approximately 1.016 acres. The Site is bordered to the east by Fifth Avenue, to the south of Washington Street, to the west by Hill Street, and to the north by Liberty Street. The Site Location is presented on **Figure 1**, and the current Site Map is presented on **Figure 2**. The Site is mainly comprised of an asphalt parking lot, with two (2) small bocce courts at the south end. The courts are constructed on top of the existing asphalt surface. It is bordered by a metal fence with brick pillars on the western side and a chain link fence on the northern side. The Site has gates which can be locked but it is common to find them unlocked.

2 Quarterly Site Inspections and Groundwater Monitoring Activities

2.1 Quarterly Site Inspections

GES conducted quarterly site inspections during this reporting period on March 4, June 10, September 2, and December 22, 2021.

In general, the Site is in good condition and in compliance. The exterior cover system is intact. No visible saw cutting, holes from burrowing animals, or evidence of any other intrusive activities were noted in 2021. The groundwater monitoring wells are secured and operable.

Attachment A includes the Quarterly Site Inspection Forms.

2.2 Groundwater Well Gauging

Groundwater level measurements are collected at the Site to accomplish the following:

- To determine the general groundwater flow direction on site.

Annual gauging field data is presented in **Table 3**. In general, site groundwater flows from east to west/northwest, consistent with past groundwater elevation data.

2.3 Groundwater Well Sampling and Analysis

Groundwater samples were collected from five (5) monitoring wells {B/MW-101(05), B/MW-102(05), B/MW-104(05), B/MW-203(06), and B/MW-404(11)}, on September 2, 2021. The wells were purged using a peristaltic pump. Field Measurements of pH, conductivity, turbidity, dissolved oxygen, temperature, total dissolved solids and oxidation-reduction potential were recorded using a Horiba U-52 water quality meter during sample collection. Samples were collected once field parameters stabilized. Field monitoring data and the chain-of-custody record are included in **Appendix B**.

Five (5) aqueous field samples, a field duplicate, and trip blank were analyzed for TCL VOCs, and TCL SVOCs. The samples were analyzed by Pace in accordance with the NYSDEC Analytical Services Protocol. Analytical results are summarized in **Table 4**. The Analytical Lab Report and Data Usability Summary Report are presented in **Appendix C.**

B/MW-101(05) had detections below standards of benzo(a)pyrene, and exceedances above the AWQS of benzo(b)fluoranthene and benzo(k)fluoranthene. B/MW-104(05) had exceedances of benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene. B/MW-104(05) also had detections below the standards in acenaphthylene, benzo(a)pyrene, benzo(g,h,i)perylene, fluoranthene, phenanthrene, and pyrene. B/MW-203(06) had exceedances of benzene, ethylbenzene, xylenes, acenaphthene, benzo(a)anthracene, and chrysene. Monitoring well B/MW-203(06) also had detections below the standards in acenaphthylene, anthracene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene.

There were no detections of TCL VOCs or TCL SVOCs observed in the groundwater samples of B/MW-102(05), and B/MW-404(11).

2.4 Waste Disposal

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

3 Conclusions and Recommendations

3.1 Conclusions

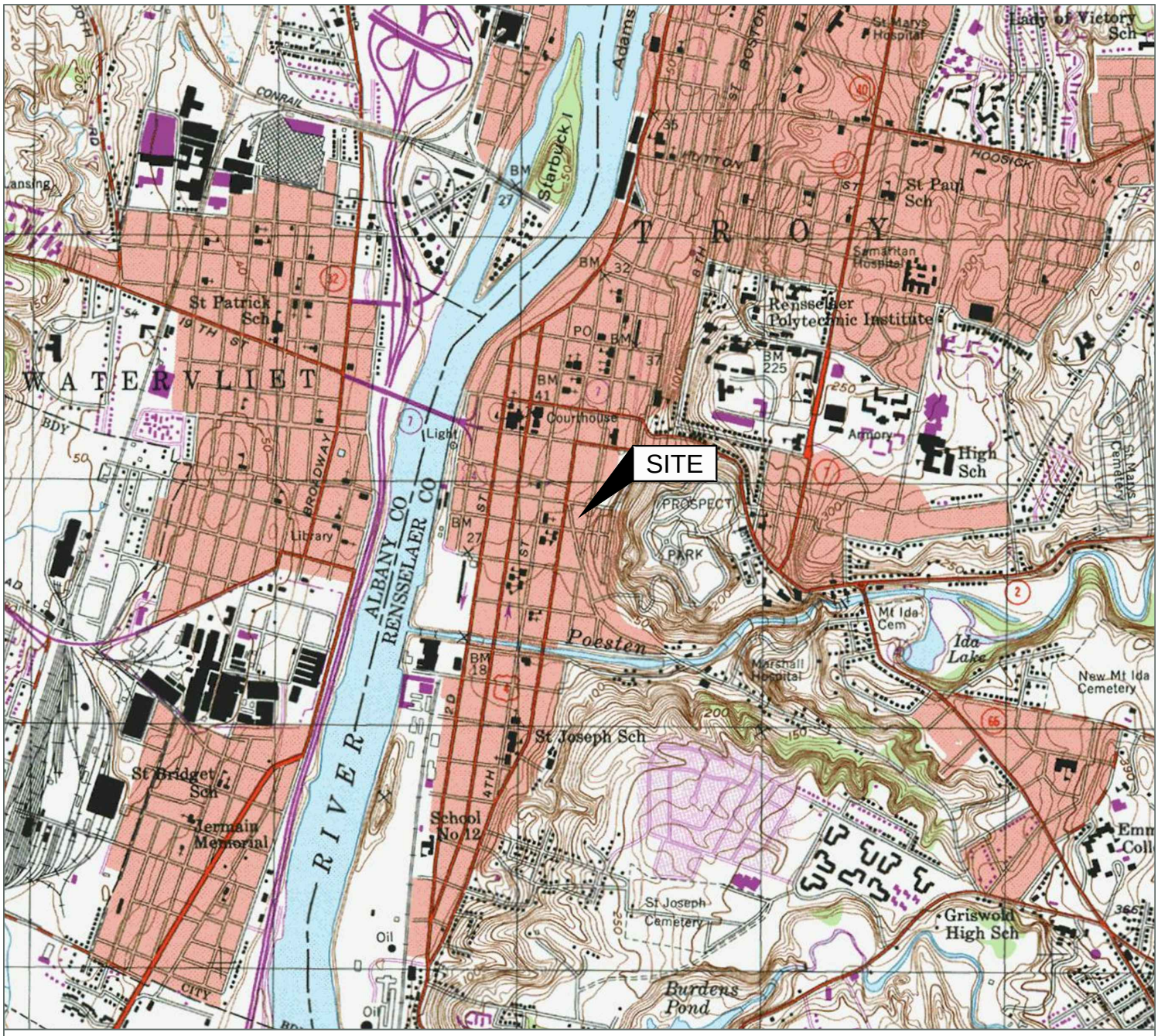
Based on the results of the past year's activities, the following conclusions were made:

- Quarterly site inspections demonstrate that the site is in good condition and in compliance.
- Groundwater beneath the Site appears to flow in a general east to west/northwest direction.
- The groundwater samples collected in September 2021 had exceedances of benzene, ethylbenzene, xylenes, acenaphthene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene. There were no detections of TCL VOCs or TCL SVOCs observed in two of the five groundwater samples.
- Site groundwater quality has not changed significantly from 2020.

3.2 Recommendations

It is recommended that all groundwater monitoring activities continue, with the next report due in January 2023.

Figures



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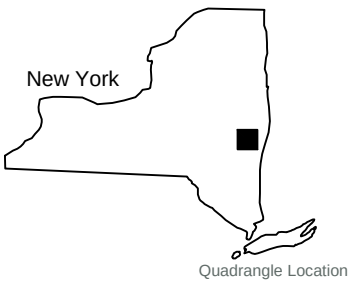
USGS 7.5 Minute Series
Topographic Quadrangle, 1980
Troy South, New York
Contour Interval = 10'



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.

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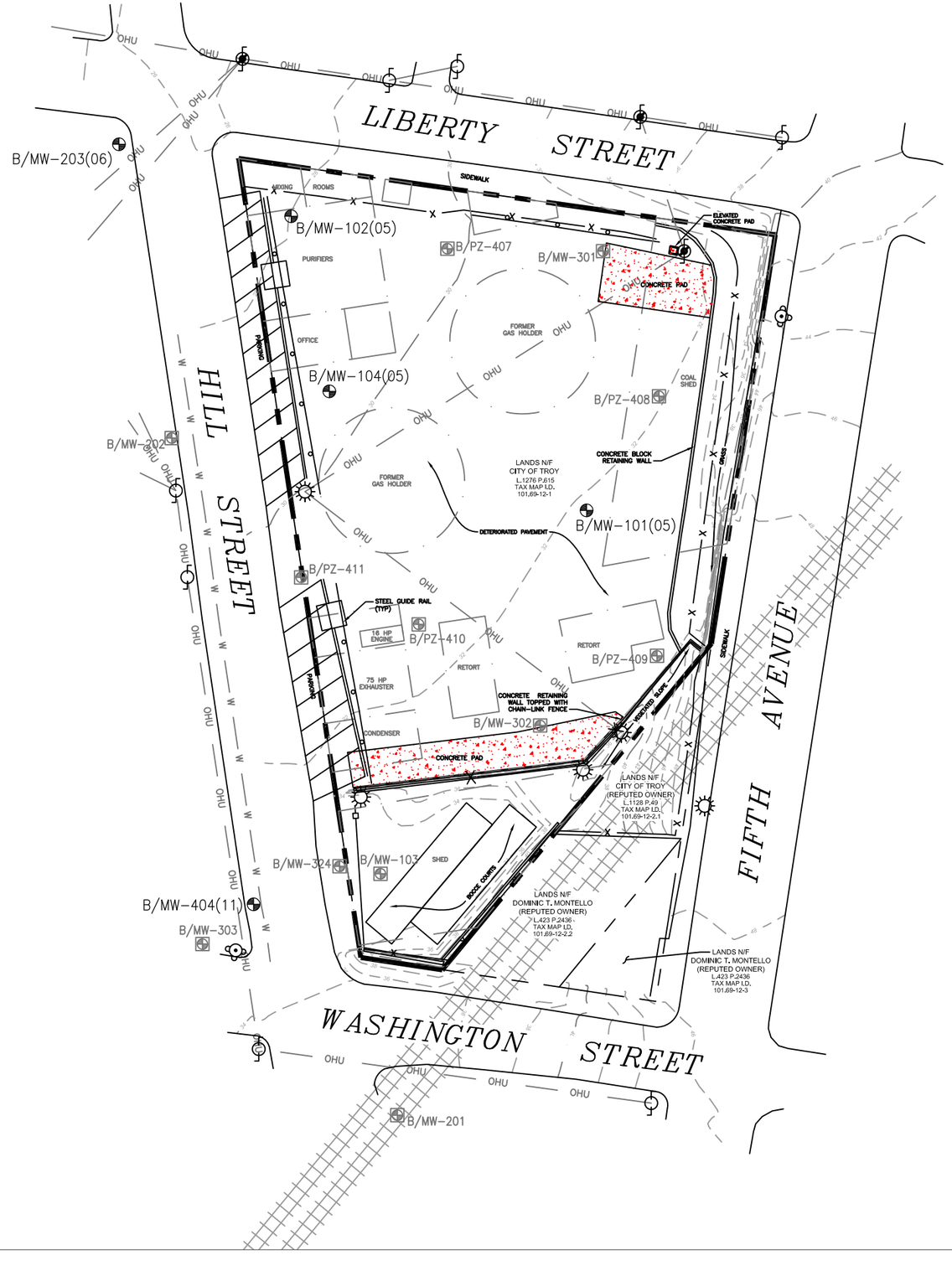

LEGEND

- PROPERTY BOUNDARY
- FIRE HYDRANT
- LIGHT POLE
- UTILITY POLE
- MONITORING WELL
- DESTROYED MONITORING WELL
- UNDERGROUND WATER LINE
- OVERHEAD UTILITIES

Site Map

National Grid
Liberty Street
Troy, New York

Drawn
W.G.S.
Designed

Approved

Date
10/1/21
Figure
2

Scale In Feet
0 50

Groundwater & Environmental Services, Inc.

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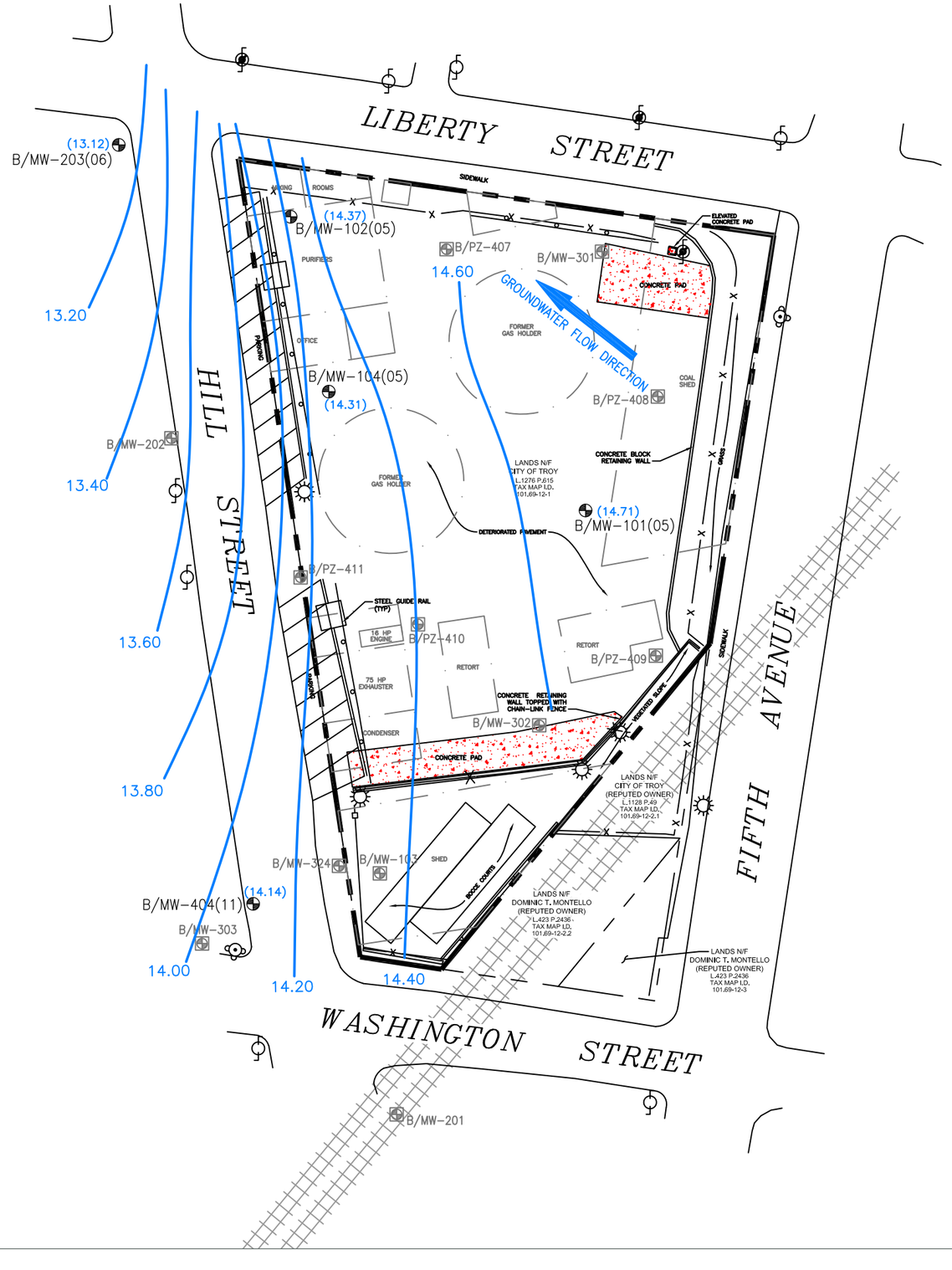

LEGEND

- PROPERTY BOUNDARY
- FIRE HYDRANT
- LIGHT POLE
- UTILITY POLE
- MONITORING WELL
- DESTROYED MONITORING WELL
- (14.71) GROUNDWATER ELEVATION (feet)
- GROUNDWATER CONTOUR DASHED WHERE INFERRED

Groundwater Contour Map
September 2, 2021

National Grid
Liberty Street
Troy, New York

Drawn: W.G.S.
Designed:
Approved:
Date: 10/1/21
Figure: 3

Scale In Feet
0 50

Groundwater & Environmental Services, Inc.

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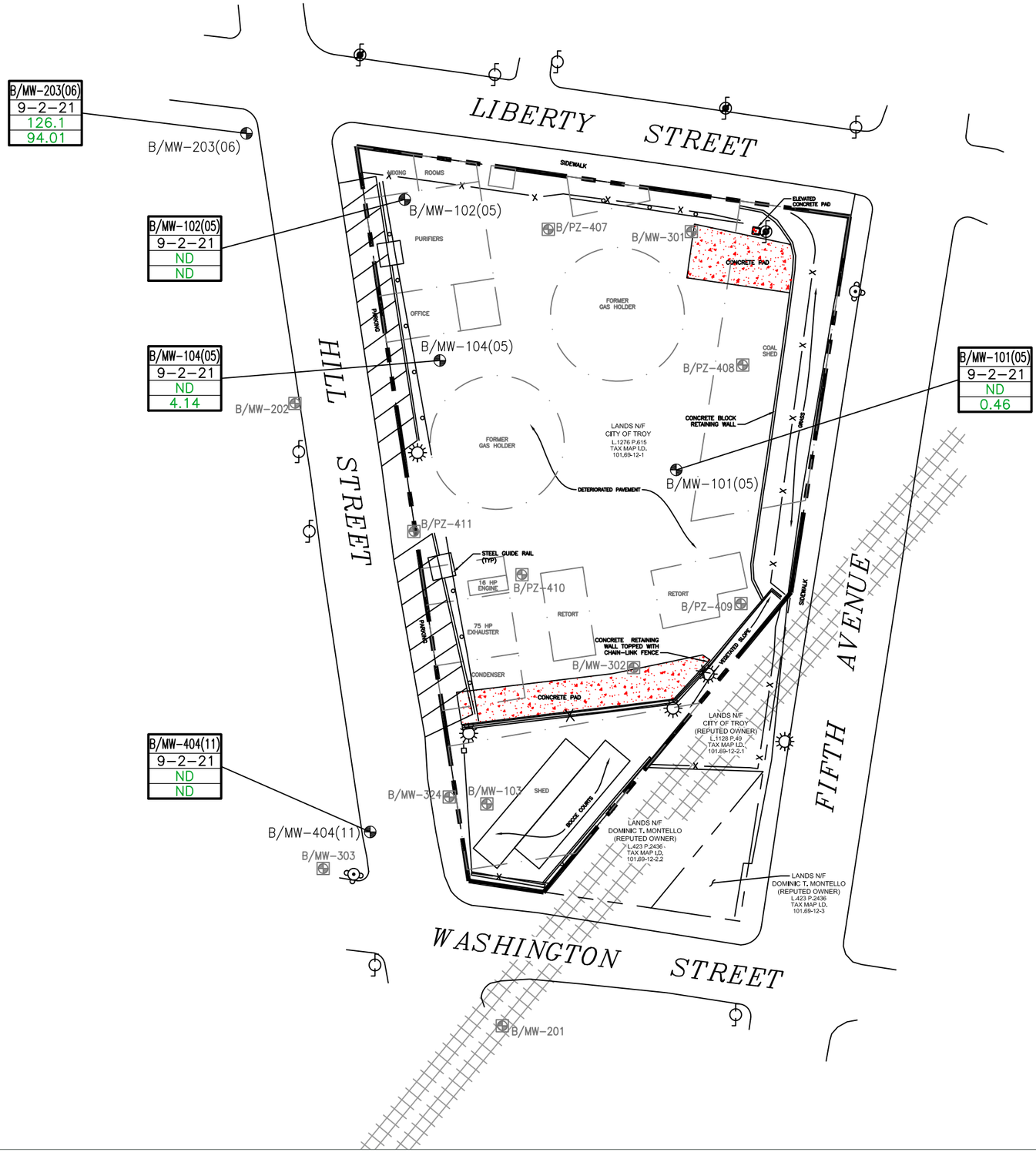

LEGEND

— - - —	PROPERTY BOUNDARY
	FIRE HYDRANT
	LIGHT POLE
	UTILITY POLE
	MONITORING WELL
	DESTROYED MONITORING WELL
B/MW-101(05) 9-2-21 ND 0.46	WELL IDENTIFICATION SAMPLE DATE BTEX CONCENTRATION (ug/L) PAHs CONCENTRATION (ug/L)
ug/L	MICROGRAMS PER LITER
BTEX	BENZENE, TOLUENE, ETHYLBENZENE, XYLENES
PAHs	POLYCYCLIC AROMATIC HYDROCARBONS
ND	NOT DETECTED

Groundwater Monitoring Map
September 2, 2021

National Grid
Liberty Street
Troy, New York

Drawn: W.G.S.
Designed:
Approved:
Date: 10/1/21
Figure: 4

N

Scale In Feet
0 50

GES
Groundwater & Environmental Services, Inc.

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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

B/MW-202(06) - Well destroyed

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
B/MW-101(05)	10/13/2018	15.97	1.740	0.00	6.97	153.0	6.00
B/MW-102(05)	10/13/2018	19.07	0.987	0.00	6.97	240.0	2.30
B/MW-104(05)	10/13/2018	17.17	1.350	0.01	6.73	130.0	2.00
B/MW-202(06)	10/13/2018	15.75	2.490	4.91	6.47	51.0	8.30
B/MW-203(06)	10/13/2018	15.12	2.270	0.92	6.62	-77.0	17.30
B/MW-404(11)	10/13/2018	16.65	1.500	0.29	6.20	105.0	7.00
B/MW-101(05)	10/31/2019	16.39	1.610	0.22	7.16	178.0	131.00
B/MW-102(05)	10/31/2019	19.27	0.873	0.00	7.08	-33.0	16.50
B/MW-104(05)	10/31/2019	17.97	1.150	1.34	6.95	88.0	79.60
B/MW-202(06)	10/31/2019	17.60	3.110	0.00	6.76	132.0	47.80
B/MW-203(06)	10/31/2019	18.38	1.310	0.00	6.97	-99.0	16.70
B/MW-404(11)	10/31/2019	16.97	1.650	0.00	6.59	117.0	1.40
B/MW-101(05)	9/3/2020	17.22	1.810	0.94	7.20	-79.0	74.80
B/MW-102(05)	9/3/2020	22.21	0.731	0.43	7.01	87.0	0.00
B/MW-104(05)	9/3/2020	20.22	1.230	0.53	6.95	-107.0	1.40
B/MW-203(06)	9/3/2020	15.51	1.770	4.62	5.79	-134.0	1.12
B/MW-404(11)	9/3/2020	14.27	1.81	6.23	5.91	29.0	0.0
B/MW-101(05)	9/2/2021	17.23	1.82	3.01	6.83	203	72.3
B/MW-102(05)	9/2/2021	18.99	1.58	0.00	6.36	329	0.0
B/MW-104(05)	9/2/2021	19.17	1.37	0.05	6.41	113	15.7
B/MW-203(06)	9/2/2021	19.90	1.74	1.16	6.65	-105	4.1
B/MW-404(11)	9/2/2021	17.69	1.40	0.91	6.45	166	0.4

Notes:

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

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)	Depth to Water (10/07/2015) (ft, bgs)	Groundwater Elevation (10/07/2015) (ft, NAVD88)
B/MW-101(05)	16.00	15.99	16.06	15.93	17.24	14.75	17.82	14.17
B/MW-102(05)	12.10	15.50	12.15	15.45	13.17	14.43	13.8	13.8
B/MW-103(05)	17.62	15.51	17.66	15.47	NM	NM	NM	NM
B/MW-104(05)	13.64	15.50	13.64	15.50	14.75	14.39	15.32	13.82
B/MW-201(06)	19.15	15.47	19.2	15.42	NM	NM	NM	NM
B/MW-202(06)	12.70	15.40	NM	NM	13.76	14.34	14.31	13.79
B/MW-203(06)	10.18	15.14	10.25	15.07	11.33	13.99	11.89	13.43
B/MW-301(10)	15.30	15.51	15.35	15.46	NM	NM	NM	NM
B/MW-302(10)	17.09	15.51	17.15	15.45	NM	NM	NM	NM
B/MW-303(10)	15.85	17.12	16	16.97	NM	NM	NM	NM
B/MW-324(10)	17.17	15.46	17.21	15.42	NM	NM	NM	NM
B/MW-404(11)	17.51	15.44	17.51	15.44	18.61	14.34	19.23	13.72
B/PZ-407(11)	13.80	15.46	13.81	15.45	NM	NM	NM	NM
B/PZ-408(11)	15.98	15.55	16.01	15.52	NM	NM	NM	NM
B/PZ-409(11)	17.31	15.48	17.36	15.43	NM	NM	NM	NM
B/PZ-410(11)	15.70	15.47	15.74	15.43	NM	NM	NM	NM
B/PZ-411(11)	14.75	15.46	14.84	15.37	NM	NM	NM	NM

Table 3

Groundwater Elevations

Well ID	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)	Depth to Water (10/18/2018) (ft, bgs)	Groundwater Elevation (10/18/2018) (ft, NAVD88)	Depth to Water (10/31/2019) (ft, bgs)	Groundwater Elevation (10/31/2019) (ft, NAVD88)
B/MW-101(05)	18.7	13.29	17.77	14.22	16.60	15.39	16.31	15.68
B/MW-102(05)	14.7	12.90	13.80	13.80	12.65	14.95	12.83	14.77
B/MW-103(05)	NM	NM	NM	NM	NM	NM	NM	NM
B/MW-104(05)	16.23	12.91	15.38	13.76	14.15	14.99	13.81	15.33
B/MW-201(06)	NM	NM	NM	NM	NM	NM	NM	NM
B/MW-202(06)	15.22	12.88	14.41	13.69	13.20	14.90	12.80	15.30
B/MW-203(06)	12.8	12.52	12.60	12.72	11.51	13.81	11.14	14.18
B/MW-301(10)	NM	NM	NM	NM	NM	NM	NM	NM
B/MW-302(10)	NM	NM	NM	NM	NM	NM	NM	NM
B/MW-303(10)	NM	NM	NM	NM	NM	NM	NM	NM
B/MW-324(10)	NM	NM	NM	NM	NM	NM	NM	NM
B/MW-404(11)	20.14	12.81	19.30	13.65	18.15	14.80	17.84	15.11
B/PZ-407(11)	NM	NM	NM	NM	NM	NM	NM	NM
B/PZ-408(11)	NM	NM	NM	NM	NM	NM	NM	NM
B/PZ-409(11)	NM	NM	NM	NM	NM	NM	NM	NM
B/PZ-410(11)	NM	NM	NM	NM	NM	NM	NM	NM
B/PZ-411(11)	NM	NM	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 3

Groundwater Elevations

Well ID	Depth to Water (09/03/20) (ft, bgs)	Groundwater Elevation (09/03/20) (ft, NAVD88)	Depth to Water (09/02/21) (ft, bgs)	Groundwater Elevation (09/02/21) (ft, NAVD88)
B/MW-101(05)	17.79	14.20	17.28	14.71
B/MW-102(05)	13.80	13.80	13.23	14.37
B/MW-103(05)	NM	NM	NM	NM
B/MW-104(05)	15.36	13.78	14.83	14.31
B/MW-201(06)	NM	NM	NM	NM
B/MW-202(06)	NM	NM	NM	NM
B/MW-203(06)	12.78	12.54	12.20	13.12
B/MW-301(10)	NM	NM	NM	NM
B/MW-302(10)	NM	NM	NM	NM
B/MW-303(10)	NM	NM	NM	NM
B/MW-324(10)	NM	NM	NM	NM
B/MW-404(11)	19.35	13.60	18.81	14.14
B/PZ-407(11)	NM	NM	NM	NM
B/PZ-408(11)	NM	NM	NM	NM
B/PZ-409(11)	NM	NM	NM	NM
B/PZ-410(11)	NM	NM	NM	NM
B/PZ-411(11)	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	10/18/18	10/31/19	09/03/20	09/02/21
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)	ND (<1.0)	ND (<1.0)	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)	ND (<1.0)	ND (<1.0)	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)	ND (<1.0)	ND (<1.0)	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)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)
o-Xylene	5	ND (<0.46)	ND (<0.46)	NR	NR	NR	ND (<2.5)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	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)	ND (<3.0)	ND (<3.0)	ND (<3.0)	ND (<3.0)
Total BTEX	NA	ND	ND	ND	ND	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)	ND (<0.11)	ND (<0.099)	ND (<0.097)	ND (<0.10)
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)	ND (<0.11)	ND (<0.099)	ND (<0.097)	ND (<0.10)
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)	ND (<0.11)	ND (<0.099)	ND (<0.097)	ND (<0.10)
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)	ND (<0.11)	ND (<0.099)	ND (<0.097)	ND (<0.10)
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)	ND (<0.11)	ND (<0.099)	ND (<0.097)	0.13
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)	ND (<0.11)	ND (<0.099)	ND (<0.097)	**0.17**
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)	ND (<0.11)	ND (<0.099)	ND (<0.097)	ND (<0.10)
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)	ND (<0.11)	ND (<0.099)	ND (<0.097)	**0.16**
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)	ND (<0.11)	ND (<0.099)	ND (<0.097)	ND (<0.10)
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)	ND (<0.11)	ND (<0.099)	ND (<0.097)	ND (<0.10)
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)	ND (<0.11)	ND (<0.099)	ND (<0.097)	ND (<0.10)
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)	ND (<0.11)	ND (<0.099)	ND (<0.097)	ND (<0.10)
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)	ND (<0.11)	ND (<0.099)	ND (<0.097)	ND (<0.10)
2-Methylnaphthalene	NA	ND (<2.2)	NR	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.099)	ND (<0.11)	ND (<0.099)	ND (<0.097)	ND (<0.10)
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)	ND (<0.11)	ND (<0.099)	0.098	ND (<0.10)
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)	ND (<0.11)	ND (<0.099)	ND (<0.097)	ND (<0.10)
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)	ND (<0.11)	ND (<0.099)	ND (<0.099)	ND (<0.10)
Total PAHs	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.098	0.46

NYSDEC = New York State Department of Environmental Conservation
AWQS = Ambient Water Quality Standards
µg/L = Micrograms per 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	10/18/18	10/31/19	09/03/20	09/02/21
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)	ND (<1.0)	ND (<1.0)	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)	ND (<1.0)	ND (<1.0)	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)	ND (<1.0)	ND (<1.0)	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)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)
o-Xylene	5	0.72 J	ND (<0.46)	NR	NR	NR	ND (<2.5)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	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)	ND (<3.0)	ND (<3.0)	ND (<3.0)	ND (<3.0)
Total BTEX	NA	0.72	ND	ND	ND	0.086	ND	ND	ND	ND	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)	ND (<0.11)	ND (<0.099)	ND (<0.098)	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)	ND (<0.11)	ND (<0.099)	ND (<0.098)	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)	ND (<0.11)	ND (<0.099)	ND (<0.098)	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)	ND (<0.11)	ND (<0.099)	ND (<0.098)	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)	ND (<0.11)	ND (<0.099)	ND (<0.098)	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)	0.16	ND (<0.099)	ND (<0.098)	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)	ND (<0.11)	ND (<0.099)	ND (<0.098)	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)	0.14	ND (<0.099)	ND (<0.098)	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)	ND (<0.11)	ND (<0.099)	ND (<0.098)	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)	ND (<0.11)	ND (<0.099)	ND (<0.098)	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)	ND (<0.11)	0.17	ND (<0.098)	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)	ND (<0.11)	ND (<0.099)	ND (<0.098)	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)	ND (<0.11)	ND (<0.099)	ND (<0.098)	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)	ND (<0.11)	ND (<0.099)	ND (<0.098)	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)	ND (<0.11)	ND (<0.099)	ND (<0.098)	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)	ND (<0.11)	ND (<0.099)	ND (<0.098)	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)	0.15	0.19	ND (<0.098)	ND (<0.10)
Total PAHs	NA	162.4	609.4	ND	ND	18.01	ND	0.679	ND	0.45	0.36	ND	ND

NYSDEC = New York State Department of Environmental Conservation
AWQS = Ambient Water Quality Standards
µg/L = Micrograms per 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	10/18/18	10/31/19	09/03/20	09/02/21
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)	ND (<1.0)	ND (<1.0)	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)	ND (<1.0)	ND (<1.0)	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)	ND (<1.0)	ND (<1.0)	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)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)
o-Xylene	5	3.2 J	ND (<0.46)	NR	NR	NR	ND (<2.5)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	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)	ND (<3.0)	ND (<3.0)	ND (<3.0)	ND (<3.0)
Total BTEX	NA	13.4	1.9	ND	ND	ND	ND	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)	ND (<0.11)	ND (<0.099)	ND (<0.099)	ND (<0.098)
Acenaphthylene	NA	3.6 J	25 J	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)	ND (<0.11)	ND (<0.099)	ND (<0.099)	0.17
Anthracene	50	7.2 J	32 J	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	0.029 J	ND (<0.10)	ND (<0.11)	ND (<0.099)	ND (<0.099)	ND (<0.098)
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)	ND (<0.11)	**0.12**	ND (<0.099)	**0.39**
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)	ND (<0.11)	0.13	ND (<0.099)	0.46
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)	ND (<0.11)	**0.15**	ND (<0.099)	**0.63**
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)	ND (<0.11)	ND (<0.099)	ND (<0.099)	0.20
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)	ND (<0.11)	ND (<0.099)	ND (<0.099)	**0.58**
Chrysene	0.002	**2 J**	**50 J**	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)	ND (<0.11)	**0.11**	ND (<0.099)	**0.33**
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)	ND (<0.11)	ND (<0.099)	ND (<0.099)	ND (<0.098)
Fluoranthene	50	9.3 J	**73**	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	0.046 J	ND (<0.10)	ND (<0.11)	0.19	ND (<0.099)	0.56
Fluorene	50	17	21 J	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)	ND (<0.11)	ND (<0.099)	ND (<0.099)	ND (<0.098)
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)	ND (<0.11)	ND (<0.099)	ND (<0.099)	**0.18**
2-Methylnaphthalene	NA	ND (<1.1)	NR	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.10)	ND (<0.11)	ND (<0.099)	ND (<0.099)	ND (<0.098)
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)	ND (<0.11)	ND (<0.099)	ND (<0.099)	ND (<0.098)
Phenanthrene	50	24	**89**	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	0.064 J	ND (<0.10)	ND (<0.11)	ND (<0.099)	ND (<0.099)	0.13
Pyrene	50	6.2 J	**160**	ND (<4.3)	ND (<4.0)	ND (<10)	ND (<0.2)	0.04 J	ND (<0.10)	ND (<0.11)	0.16	ND (<0.099)	0.51
Total PAHs	NA	89.7	651.6	ND	ND	ND	ND	0.179	ND	ND	0.86	ND	4.14

NYSDEC = New York State Department of Environmental Conservation
AWQS = Ambient Water Quality Standards
µg/L = Micrograms per 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	10/18/18	10/31/19	09/03/20	09/02/21
BTEX												
Benzene	1	ND (<0.39)	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<0.5)	ND (<1.0)	**8.2**	ND (<1.0)	ND (<1.0)	**131**	**92.5**
Ethylbenzene	5	ND (<0.45)	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	2.6	ND (<1.0)	**25.0**	**45.0**	**13.0**
Toluene	5	ND (<0.36)	ND (<5.0)	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	**9.6**	ND (<1.0)
m&p-Xylene	5	ND (<1.2)	NR	NR	NR	ND (<2.5)	ND (<1.0)	ND (<2.0)	ND (<2.0)	**7.6**	**5.0**	**7.3**
o-Xylene	5	ND (<0.46)	NR	NR	NR	ND (<2.5)	ND (<1.0)	2.0	ND (<1.0)	ND (<1.0)	**19.8**	**13.3**
Xylene (Total)	5	NR	ND (<5.0)	ND (<5.0)	ND (<2.0)	ND (<2.5)	ND (<2.0)	3.1	ND (<3.0)	**7.6**	**24.9**	**20.6**
Total BTEX	NA	ND	ND	ND	ND	ND	ND	13.9	ND	32.6	210.4	126.1
PAHs												
Acenaphthene	20	ND (<1.4)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	**48.3**	4.9	2.3	**40.4**	**60.9**
Acenaphthylene	NA	ND (<1.3)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	0.45	ND (<0.098)	ND (<0.097)	0.54	0.64
Anthracene	50	ND (<1.4)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	0.93	0.3	0.17	0.54	0.60
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**	**0.19**	**0.10**	**0.25**	**0.16**
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)	ND (<0.098)	ND (<0.097)	ND (<0.99)	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)	ND (<0.098)	ND (<0.097)	ND (<0.99)	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)	ND (<0.098)	ND (<0.097)	ND (<0.99)	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)	ND (<0.098)	ND (<0.097)	ND (<0.99)	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**	**0.13**	ND (<0.097)	**0.15**	**0.11**
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)	ND (<0.098)	ND (<0.097)	ND (<0.99)	ND (<0.098)
Fluoranthene	50	ND (<1.2)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	9.5	6.0	2.7	7.0	7.3
Fluorene	50	ND (<1.4)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	5.4	0.63	0.41	6.1	12.4
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)	ND (<0.098)	ND (<0.097)	ND (<0.99)	ND (<0.098)
2-Methylnaphthalene	NA	NR	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.098)	ND (<0.097)	ND (<0.99)	ND (<0.098)
Naphthalene	10	ND (<1.4)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	0.95	ND (<0.098)	0.28	**23.2**	4.9
Phenanthrene	50	ND (<1.4)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	1.7	0.31	0.29	1.3	1.4
Pyrene	50	ND (<1.5)	ND (<4.2)	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	7.0	5.1	2.3	5.5	5.6
Total PAHs	NA	ND	ND	ND	ND	ND	ND	74.7	17.6	8.6	85.0	94.01

NYSDEC = New York State Department of Environmental Conservation
AWQS = Ambient Water Quality Standards
µg/L = Micrograms per 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-404(11)

Parameter	NYSDEC AWQS (µg/L)	05/06/11	08/19/14	10/07/15	11/09/16	10/12/17	10/18/18	10/31/19	09/03/20	09/02/21
BTEX										
Benzene	1	ND (<5.0)	ND (<1.0)	ND (<0.5)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Ethylbenzene	5	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Toluene	5	ND (<5.0)	ND (<1.0)	ND (<2.5)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
m&p-Xylene	5	NR	NR	ND (<2.5)	ND (<1.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)
o-Xylene	5	NR	NR	ND (<2.5)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Xylene (Total)	5	ND (<5.0)	ND (<2.0)	ND (<2.5)	ND (<2.0)	ND (<3.0)	ND (<3.0)	ND (<3.0)	ND (<3.0)	ND (<3.0)
Total BTEX	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
PAHs										
Acenaphthene	20	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Acenaphthylene	NA	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Anthracene	50	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Benzo(a)anthracene	0.002	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Benzo(a)pyrene	NA	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Benzo(b)fluoranthene	0.002	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Benzo(g,h,i)perylene	NA	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Benzo(k)fluoranthene	0.002	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Chrysene	0.002	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Dibenz(a,h)anthracene	NA	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Fluoranthene	50	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Fluorene	50	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Indeno(1,2,3-cd)pyrene	0.002	ND (<4.0)	ND (<1.0)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
2-Methylnaphthalene	NA	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Naphthalene	10	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Phenanthrene	50	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Pyrene	50	ND (<4.0)	ND (<10)	ND (<0.2)	ND (<0.18)	ND (<0.098)	ND (<0.13)	ND (<0.098)	ND (<0.099)	ND (<0.099)
Total PAHs	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND

NYSDEC = New York State Department of Environmental Conservation
AWQS = Ambient Water Quality Standards
µg/L = Micrograms per 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

Appendix A – Quarterly Inspection Forms

Troy Liberty St
Non-Owned Former MGP Site
Site Wide Inspection

Date: 12/22/2021 Time: 12:30
Technician: KL Weather: Cloudy 30

Cover System			
Soil intrusion activities being performed?	YES	NO	COMMENTS:
Signs of soil intrusive activities?	YES	NO	COMMENTS:
Evidence of saw cutting?	YES	NO	COMMENTS:
Evidence of excavation or trenching?	YES	NO	COMMENTS:
Burrowing animals?	YES	NO	COMMENTS:

Site Monitoring Wells			
Well ID.	***Location Secure***		
B/MW-101(05)	YES	NO	
B/MW-102(05)	YES	NO	
B/MW-104(05)	YES	NO	
B/MW-202(06)	YES	NO	Well Destroyed by the City of Troy doing construction Fall of 2020.
B/MW-203(06)	YES	NO	
B/MW-404(11)	YES	NO	

General Comments/Suggested Action Items:

Troy Liberty St
Non-Owned Former MGP Site
Site Wide Inspection

Date: 9/2/2021 Time: 9:30
Technician: KL/PL Weather: Sunny 64

Cover System			
Soil intrusion activities being performed?	YES	NO	COMMENTS:
Signs of soil intrusive activities?	YES	NO	COMMENTS:
Evidence of saw cutting?	YES	NO	COMMENTS:
Evidence of excavation or trenching?	YES	NO	COMMENTS:
Burrowing animals?	YES	NO	COMMENTS:

Site Monitoring Wells			
Well ID.	***Location Secure***		
B/MW-101(05)	YES	NO	
B/MW-102(05)	YES	NO	
B/MW-104(05)	YES	NO	
B/MW-202(06)	YES	NO	Well Destroyed by the City of Troy doing construction Fall of 2020.
B/MW-203(06)	YES	NO	
B/MW-404(11)	YES	NO	

General Comments/Suggested Action Items:

Troy Liberty St
Non-Owned Former MGP Site
Site Wide Inspection

Date: 6/10/2021 Time: 10:30
Technician: KL Weather: Sunny 75

Cover System			
Soil intrusion activities being performed?	YES	NO	COMMENTS:
Signs of soil intrusive activities?	YES	NO	COMMENTS:
Evidence of saw cutting?	YES	NO	COMMENTS:
Evidence of excavation or trenching?	YES	NO	COMMENTS:
Burrowing animals?	YES	NO	COMMENTS:

Site Monitoring Wells			
Well ID.	***Location Secure***		
B/MW-101(05)	YES	NO	
B/MW-102(05)	YES	NO	
B/MW-104(05)	YES	NO	
B/MW-202(06)	YES	NO	Well Destroyed by the City of Troy doing construction Fall of 2020.
B/MW-203(06)	YES	NO	
B/MW-404(11)	YES	NO	

General Comments/Suggested Action Items:

Troy Liberty St
Non-Owned Former MGP Site
Site Wide Inspection

Date: 3/4/2021 Time: 10:00
Technician: KL Weather: Cloudy 35

Cover System			
Soil intrusion activities being performed?	YES	NO	COMMENTS:
Signs of soil intrusive activities?	YES	NO	COMMENTS:
Evidence of saw cutting?	YES	NO	COMMENTS:
Evidence of excavation or trenching?	YES	NO	COMMENTS:
Burrowing animals?	YES	NO	COMMENTS:

Site Monitoring Wells			
Well ID.	***Location Secure***		
B/MW-101(05)	YES	NO	
B/MW-102(05)	YES	NO	
B/MW-104(05)	YES	NO	
B/MW-202(06)	YES	NO	Well Destroyed by the City of Troy doing construction Fall of 2020.
B/MW-203(06)	YES	NO	
B/MW-404(11)	YES	NO	

General Comments/Suggested Action Items:

Appendix B – Well Sampling Field Data

Well ID.	Sample?	Well Size	Well Material	Stickup-Flush	DTP	DTW	DTB	Comments
B/MW-101(05)	Yes	2"	PVC	Flush		17.28	26.90	
B/MW-102(05)	Yes	2"	PVC	Flush		13.23	16.40	
B/MW-104(05)	Yes	2"	PVC	Flush		14.83	21.15	
~~B/MW-202(06)~~	~~Yes~~	~~2"~~	~~PVC~~	~~Flush~~			~~19.55~~	*well destroyed Fall 2020*
B/MW-203(06)	Yes	2"	PVC	Flush		12.20	15.92	MS/MSD
B/MW-404(11)	Yes	2"	PVC	Flush		~~12.20~~ 18.81	23.85	Field Duplicate

National Grid
Liberty Street, Troy New York

Sampling Personnel: Peter Lyon
Job Number: 0603275-121801-221
Well Id. **B/MW-101(05)**

Date: 9/2/21
Weather: Sunny 70°
Time In: 0942 Time Out: 1040

Well Information

		TOC	Other
Depth to Water:	(feet)	17.29	
Depth to Product:	(feet)	—	
Depth to Bottom:	(feet)	26.90	
Length of Water Column:	(feet)	6.62	
Volume of Water in Well:	(gal)	1.53	
Three Well Volumes:	(gal)	4.61	

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)	200		
Duration of Pumping:	(min)	30		
Total Volume Removed:	(gal)	2		

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)
1005	17.27	21.16	7.75	18	2.12	93.3	1.27	1.37
1010	17.28	18.96	6.87	127	2.12	68.7	.90	1.35
1015	17.28	17.60	6.62	167	2.05	52.7	1.33	1.31
1020	17.28	17.35	6.57	183	2.04	90.4	1.44	1.31
1025	17.29	17.03	6.56	193	2.01	140	1.70	1.28
1030	17.29	17.16	6.55	200	1.95	93.0	1.92	1.24
1035	17.27	17.28	6.53	203	1.82	72.3	3.01	1.16

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
3	40 mL	Glass	HCl	BTEX	EPA Method 8260B
2	100 mL	Glass	Unpreserved	PAH's	EPA Method 8270C

Sample ID: B/MW-101(05)-0921
Sample Time: 1035
Duplicate? Yes [ ] No [X]
MS/MSD? Yes [ ] No [X]

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

Laboratory: PACE Analytical Greensburg, PA

Comments/Notes:

National Grid
Liberty Street, Troy New York

Sampling Personnel: Peter Lyon
Date: 9/2/21
Job Number: 0603275-121801-221
Weather: 70° Sunny
Well Id. ~~B/MW-102~~(05) 104 (05)
Time In: 1133 Time Out: 1210

Well Information

		TOC	Other
Depth to Water:	(feet)	14.83	
Depth to Product:	(feet)	—	
Depth to Bottom:	(feet)	16.40	
Length of Water Column:	(feet)	1.57	
Volume of Water in Well:	(gal)	0.94	
Three Well Volumes:	(gal)	2.82	

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)	200			
Duration of Pumping:	(min)	30			
Total Volume Removed:	(gal)	2			

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)
1135	14.99	20.46	6.33	44	1.39	817	0.00	.890
1140	14.99	20.40	6.30	60	1.37	542	0.02	.882
1145	14.99	20.02	6.30	89	1.37	315	0.06	.876
1150	15.00	20.00	6.36	102	1.37	77.4	0.42	.872
1155	15.00	19.99	6.35	105	1.37	50.4	0.05	.875
1200	15.00	20.26	6.41	107	1.37	44.2	0.01	.881
1205	15.00	19.71	6.41	113	1.37	15.7	0.05	.876

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
3	40 mL	Glass	HCl	BTEX	EPA Method 8260B
2	100 mL	Glass	Unpreserved	PAH's	EPA Method 8270C

Sample ID: ~~B/MW-102~~ 104 (05)-0921
Sample Time: 1205
Duplicate? Yes [ ] No [X]
MS/MSD? Yes [ ] No [X]

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

Laboratory: PACE Analytical Greensburg, PA

Comments/Notes:

National Grid
Liberty Street, Troy New York

Sampling Personnel: Peter Lyon
Job Number: 0603275-121801-221
Well Id. B/MW-~~[illegible]~~ 102 (05)

Date: 9/2/21
Weather: Sunny 70°
Time In: 1045 Time Out: 1130

Well Information

		TOC	Other
Depth to Water:	(feet)	13.23	
Depth to Product:	(feet)	—	
Depth to Bottom:	(feet)	21.15	
Length of Water Column:	(feet)	7.92	
Volume of Water in Well:	(gal)	1.26	
Three Well Volumes:	(gal)	3.80	

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)	200
Duration of Pumping:	(min)	30
Total Volume Removed:	(gal)	2

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)
1050	13.76	19.49	6.56	256	1.74	86.6	2.88	1.11
1055	13.99	19.06	6.38	317	1.61	34.4	1.96	1.03
1100	14.18	19.01	6.35	325	1.63	8.7	1.18	1.04
1105	14.31	18.99	6.36	329	1.64	1.6	.37	1.05
1110	14.52	19.06	6.37	331	1.62	0.0	.08	1.04
1115	14.44	18.96	6.38	310	1.60	0.0	.42	1.02
1120	14.50	18.99	6.36	329	1.58	0.0	0.00	1.01

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
9	40 mL	Glass	HCl	BTEX	EPA Method 8260B
6	100 mL	Glass	Unpreserved	PAH's	EPA Method 8270C

B/MW-~~[illegible]~~(05)-MS-0921 and B/MW-~~[illegible]~~(05)-MSD-0921

Sample ID: B/MW-~~[illegible]~~(05)-0921 (102(05)) Duplicate? Yes [ ] No [X]
Sample Time: 1120 MS/MSD? Yes [X] No [X]

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

Comments/Notes:

Laboratory: PACE Analytical
Greensburg, PA

National Grid
Liberty Street, Troy New York

Sampling Personnel: K
Job Number: 0603275-121801-221
Well Id. **B/MW-203(06)**

Date: 9/2/21
Weather: Sunny 70
Time In: 10:55 Time Out: 12:2

Well Information

		TOC	Other
Depth to Water:	(feet)	12.20	
Depth to Product:	(feet)	—	
Depth to Bottom:	(feet)	15.92	
Length of Water Column:	(feet)	3.72	
Volume of Water in Well:	(gal)	.595	
Three Well Volumes:	(gal)	1.78	

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)	200		
Duration of Pumping:	(min)	30		
Total Volume Removed:	(gal)	2		

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)
11:05	12.40	22.95	6.63	43	2.31	213	3.18	1.51
11:10	12.48	20.39	6.69	-106	2.37	109	1.60	1.52
11:15	12.46	20.06	6.69	-106	1.98	11.6	1.19	1.26
11:20	12.68	20.05	6.67	-105	1.86	8.3	1.18	1.19
11:25	12.78	19.97	6.65	-105	1.77	4.0	1.18	1.13
11:30	12.86	19.91	6.65	-105	1.75	4.0	1.18	1.11
11:35	12.93	19.90	6.65	-105	1.74	4.1	1.16	1.11

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
3	40 mL	Glass	HCl	BTEX	EPA Method 8260B
2	100 mL	Glass	Unpreserved	PAH's	EPA Method 8270C

Sample ID: B/MW-203(06)-0921
Sample Time: 11:35
Duplicate? Yes [ ] No [X]
MS/MSD? Yes [ ] No [X]

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

Laboratory: PACE Analytical
Greensburg, PA

Comments/Notes:

National Grid
Liberty Street, Troy New York

Sampling Personnel: K
Job Number: 0603275-121801-221
Well Id. **B/MW-404(11)**

Date: 9/2/21
Weather: Sunny 64
Time In: 10:00 Time Out:

Well Information

		TOC	Other
Depth to Water:	(feet)	18.91	
Depth to Product:	(feet)	—	
Depth to Bottom:	(feet)	23.85	
Length of Water Column:	(feet)	5.04	
Volume of Water in Well:	(gal)	1.80	
Three Well Volumes:	(gal)	5.41	

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)	200		
Duration of Pumping:	(min)	30		
Total Volume Removed:	(gal)	7		

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)
10:15	18.83	18.02	7.78	-78	1.74	32.4	2.52	1.10
10:20	18.83	17.54	6.86	192	1.56	2.6	1.35	0.996
10:25	18.83	17.43	6.62	190	1.46	2.5	1.08	0.935
10:30	18.83	17.44	6.56	188	1.44	1.0	1.11	0.922
10:35	18.83	17.59	6.49	179	1.42	0.90	0.97	0.911
10:40	18.83	17.61	6.47	172	1.41	0.94	0.94	0.906
10:45	18.83	17.69	6.45	166	1.40	0.4	0.91	0.901

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
6	40 mL	Glass	HCl	BTEX	EPA Method 8260B
4	100 mL	Glass	Unpreserved	PAH's	EPA Method 8270C

FD-1021

Sample ID: B/MW-404(11)-0921
Sample Time: 10:45

Duplicate? Yes [ ] No [X]
MS/MSD? Yes [ ] No [X]

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

Laboratory: PACE Analytical Greensburg, PA

Comments/Notes:

Pace Analytical™
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

Section A Required Client Information:

Company: GES - Syracuse	
Address: 6780 Northern Blvd, Suite 100	
East Syracuse, New York 13057	
Email To: dshay@gesonline.com	
Phone: 800.220.3089 x4051	Fax: None
Requested Due Date/TAT: Standard	

Section B Required Project Information:

Report To: Devin Shay (GES) dshay@gesonline.com	
Report To: Tim Beaumont (GES) tbeaumont@gesonline.com	
Annual GWS	
Purchase Order No.:	
Project Name: Grid - Troy Liberty Street	National
Project Number: 0603275-121801-221-1106	

Section C Invoice Information:

Attention: Accounts Payable via email at ges-invoices@gesonline.com
Company Name: Groundwater & Environmental Services, Inc.
Address: 6780 Northern Blvd, Suite 100, East Syracuse, NY 13057
Pace Quote Reference:
Pace Project Manager: Rachel Christner
Pace Profile #:

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

UST RCRA OTHER_____

SITE LOCATION: GA IL IN MI NC OH SC WI OTHER____

Section D Required Client Information

SAMPLE ID

One Character per box.
(A-Z, 0-9 / ,-)
Samples IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED DATE (COMPOSITE START)	COLLECTED TIME (COMPOSITE START)	COLLECTED DATE (GRAB)	COLLECTED TIME (GRAB)	SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	NaOH and Zn Acetate	Benzylkonium Chloride	Requested Analysis: BTEX (8260C)	PAH (8270D) - Low Level	Pace Project Number / Lab I.D.
1	B/MW-101(05)-0921	WT	G			9/2/21	10:35		5	2			3					3	2	
2	B/MW-102(05)-0921	WT	G				11:20		5	2			3					3	2	
3	B/MW-104(05)-0921	WT	G				12:05		5	2			3					3	2	
4	B/MW-202(06)-0921	WT	G						5	2			3					3	2	
5	B/MW-203(06)-0921	WT	G				11:35		5	2			3					3	2	
6	B/MW-203(06)-MS-0921	WT	G				11:35		5	2			3					3	2	
7	B/MW-203(06)-MSD-0921	WT	G				11:35		5	2			3					3	2	
8	B/MW-404(11)-0921	WT	G				10:45		5	2			3					3	2	
9	Field Dup-0921	WT	G						5	2			3					3	2	
10	Trip Blank	WT	G						3				3					3		
11		WT	G																	
12		WT	G																	
13		WT	Lab																	

Additional Comments:

SAMPLES WILL ARRIVE IN # 1 COOLERS.

Please send reports to:

dshay@gesonline.com, tbeaumont@gesonline.com

neregion@gesonline.com, ges@equisonline.com

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	9/2/21				

SAMPLER NAME AND SIGNATURE

KEVIN LEO 9/2/21

SAMPLE CONDITIONS

°C	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

(Received on Ice / Custody Seals Intact / Samples Intact)

Appendix C – Data Usability Summary Report and Analytical Data

Groundwater & Environmental Services, Inc.

708 North Main Street, Suite 201
Blacksburg, VA 24060

T. 800.662.5067

October 21, 2021

Devin Shay
Groundwater & Environmental Services, Syracuse
6780 Northern Blvd., Suite 100
East Syracuse, NY 13057

RE: Data Usability Summary Report for National Grid - Troy Liberty Street Site - Data Package: 30438994

Groundwater & Environmental Services, Inc. (GES) reviewed one data package (Laboratory Project No.: 30438994) from Pace Analytical Services, LLC in Greensburg PA., for the analysis of samples collected on September 2, 2021 from monitoring wells located at the National Grid: Troy Liberty Street Site. Five aqueous samples and a field duplicate were analyzed for BTEX and PAHs. Methodologies utilized are those of USEPA SW846 methods 8260C and 8270D 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/ Matrix Spike Duplicate Correlations (MS/MSD)
- Field Duplicate Correlations
- Laboratory Control Sample (LCS)
- Preparation/Calibration/Method 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
30438994001	B/MW-101(05)-0921	Water	09/02/21 10:35
30438994002	B/MW-102(05)-0921	Water	09/02/21 11:20
30438994003	B/MW-104(05)-0921	Water	09/02/21 12:05
30438994004	B/MW-203(06)-0921	Water	09/02/21 11:35
30438994005	B/MW-203(06)-MS-0921	Water	09/02/21 11:35
30438994006	B/MW-203(06)-MSD-0921	Water	09/02/21 11:35
30438994007	B/MW-404(11)-0921	Water	09/02/21 10:45
30438994008	Field Dup-0921	Water	09/02/21 00:00
30438994009	Trip Blank	Water	09/02/21 00:00

Table 2 – Data Qualifications

Sample ID	Qualifier	Analyte	Reason for qualification
B/MW-203(06)	J+	Fluoranthene Naphthalene	MS/MSD high recoveries

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.

BTEX and TCL Volatiles by EPA 8260C/NYSDEC ASP

Sample holding times are met. Surrogate and recoveries are within required limits. Laboratory control sample recoveries are within laboratory-provided criteria. The MS/MSD recoveries and relative percent differenced (RPD) reported within laboratory-provided criteria. The blind field duplicate correlations associated with B/MW-404(11) were not calculated, as there were no detections. Per EPA guidance, precision can only be calculated using concentrations that are at least 2 times the RL.

PAHs by EPA8270D/NYSDEC ASP

Sample holding times are met. Surrogate and recoveries are within required limits. Laboratory control sample recoveries are within laboratory-provided criteria. The MS/MSD recoveries and relative percent differenced (RPD) reported within laboratory-provided criteria with the following exceptions:

- Acenaphthene reported high recoveries. The spiking concentration was less than ¼ the original concentration, so the high recovery is not representative of the method efficacy.
- Fluoranthene and Naphthalene both reported high recoveries, indicating a possible high bias. The data for both in **B/MW-203(06)** are qualified as estimated with a possible high bias (J+).

The blind field duplicate correlations associated with B/MW-404(11) were not calculated, as there were no detections. Per EPA guidance, precision can only be calculated using concentrations that are at least 2 times the RL.

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.
Senior Chemist
701 N Main, Suite 201
Blacksburg, VA 24060

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

SAMPLE SUMMARY

Project: National Grid Troy
Pace Project No.: 30438994

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30438994001	**B/MW-101(05)-0921**	Water	09/02/21 10:35	09/03/21 09:20
30438994002	**B/MW-102(05)-0921**	Water	09/02/21 11:20	09/03/21 09:20
30438994003	**B/MW-104(05)-0921**	Water	09/02/21 12:05	09/03/21 09:20
30438994004	**B/MW-203(06)-0921**	Water	09/02/21 11:35	09/03/21 09:20
30438994005	**B/MW-203(06)-MS-0921**	Water	09/02/21 11:35	09/03/21 09:20
30438994006	**B/MW-203(06)-MSD-0921**	Water	09/02/21 11:35	09/03/21 09:20
30438994007	**B/MW-404(11)-0921**	Water	09/02/21 10:45	09/03/21 09:20
30438994008	**Field Dup-0921**	Water	09/02/21 00:00	09/03/21 09:20
30438994009	**Trip Blank**	Water	09/02/21 00:00	09/03/21 09:20

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

PROJECT NARRATIVE

Project: National Grid Troy
Pace Project No.: 30438994

Method: **EPA 8270D by SIM**
Description: 8270D PAH SIM Reduced Volume
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: September 13, 2021

General Information:
8 samples were analyzed for EPA 8270D by SIM by Pace Analytical Services Greensburg. 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.

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.

QC Batch: 463160

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30438994004

MH: Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.

- MS (Lab ID: 2236235)
  - Acenaphthene
  - Fluoranthene
  - Fluorene
  - Naphthalene
- MSD (Lab ID: 2236236)
  - Acenaphthene
  - Fluoranthene
  - Fluorene

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

PROJECT NARRATIVE

Project: National Grid Troy
Pace Project No.: 30438994

Method: **EPA 8270D by SIM**
Description: 8270D PAH SIM Reduced Volume
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: September 13, 2021

QC Batch: 463160

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30438994004

MH: Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.

- Naphthalene
- Pyrene

Additional Comments:

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

PROJECT NARRATIVE

Project: National Grid Troy
Pace Project No.: 30438994

Method: **EPA 8260C**
Description: 8260C MSV
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: September 13, 2021

General Information:
9 samples were analyzed for EPA 8260C by Pace Analytical Services Greensburg. 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.