

February 1, 2022

Mr. Scott Deyette
Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation, BURC
625 Broadway
Albany, New York 12233-7014

**RE: National Grid Former Manufactured Gas Plant Site
Anthony Street, Watertown, New York
Annual Groundwater Monitoring Report**

Dear Mr. Deyette:

Enclosed for your review is the 2021 Annual Groundwater Monitoring Report for the NG Watertown Former MGP Site.

Groundwater and Environmental Service, Inc., (GES) OM&M contractor for National Grid, conducts all long-term OM&M activities at the site. Quarterly site inspections were conducted in 2021 (March, June, September and December). The site is generally in good shape and in compliance. There were detections of BTEX and/or PAH in all five monitoring wells sampled.

If you have any questions, then 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

Cc: Devin T. Shay – Groundwater and Environmental Services, Inc.

National Grid

Annual Groundwater Monitoring Report



National Grid Watertown (Anthony Street) Former MGP Site
Anthony Street, Watertown NY13601

February 2022

Version 1





Annual Groundwater Monitoring Report

National Grid Watertown (Anthony St.) Former
MGP Site
Anthony Street
Watertown, NY 13601

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

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

GES Project:
0603275.136010.221

Date:
February 1, 2022

A handwritten signature in black ink, appearing to read "D. Shay", is positioned above a horizontal line.

Devin T. Shay, PG
Program Manager / Principal Hydrogeologist



Table of Contents

1	Introduction	1
2	Annual Groundwater Monitoring	1
2.1	Objectives	1
2.2	Groundwater Well Gauging	1
2.3	Groundwater Well Sampling and Analytical Results	2
3	Quarterly Site-Wide Inspections	2
4	Recommendations	3

Figures

Figure 1 – Site Location Map

Figure 2 – Site Map

Figure 3 – Groundwater Contour Map

Figure 4 – Groundwater Analytical map

Tables

Table 1 – Groundwater Monitoring Well Gauging Data

Table 2 – Groundwater Analytical Data

Appendices

Appendix A – Field Inspection Reports

Appendix B – Well Sampling Field Data

Appendix C – Data Usability Summary Report

1 Introduction

This Annual Groundwater Monitoring Report presents results from the activities conducted at the Watertown (Anthony Street) former non-owned manufactured gas plant (MGP) site (the site) located in Watertown, New York (the Site). A site location map is presented on Figure 1, a site map is presented as Figure 2.

A detailed discussion of the annual monitoring activities and results is presented below.

2 Annual Groundwater Monitoring

2.1 Objectives

The objectives of the June 2021 groundwater monitoring activities were to:

- Obtain groundwater elevation data from monitoring wells in the vicinity of the site to evaluate groundwater flow direction and velocity, and compare the results with historical groundwater flow conditions.
- Obtain analytical data to assess potential changes in groundwater quality at the site and compare the results to the Class GA groundwater standards and guidance values presented in the NYSDEC document entitled, “Division of Water Technical and Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations” (TOGS 1.1.1), reissued June 1998 and amended April 2000 and June 2004.

2.2 Groundwater Well Gauging

The June 23, 2021 groundwater monitoring field activities were conducted by GES. Prior to collecting groundwater samples, static fluid level measurements were collected from MW-1, MW-2, MW-3, MW-3R, MW-4E, MW-5R, MW-6R and MW-7R. Water levels were measured to the nearest 0.01 foot 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 fluid level measurements obtained from each monitoring well were converted to groundwater elevations using the surveyed well elevations. The calculated groundwater elevations for each monitoring well are listed in Table 1, and are depicted on Figure 3. Table 1 also includes groundwater elevation measurements obtained during previous groundwater monitoring events.

Groundwater generally flows to the north-northwest from the Site toward the Black River. Groundwater elevations ranged from 422.12 feet above sea level (asl; well MW-7R) to 439.08 feet asl (well MW-2). Field data from the gauging event is presented in Appendix B.

2.3 Groundwater Well Sampling and Analytical Results

Groundwater samples were collected by GES from five (5) monitoring wells on June 23, 2021 (including MW-2, MW-4R, MW-5R, MW-6R and MW-7R). Low-flow sampling techniques were used to purge groundwater from each monitoring well prior to collecting groundwater samples. Field parameters (consisting of turbidity, temperature, pH, conductivity, oxidation reduction potential [ORP], and dissolved oxygen) were measured approximately every 5 to 10 minutes during well purging, and the depth to water was monitored throughout the pumping process to minimize drawdown within the well. Well purging activities continued at each well until the field parameters stabilized and the turbidity of the water in the wells was reduced to less than 50 nephelometric turbidity units (NTUs). Groundwater field data is presented in Appendix B.

Following purging, groundwater samples were collected. The groundwater samples were bottled and shipped to Pace Analytical for laboratory analysis for Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX; EPA Method 8260C), Semi-Volatile Polycyclic Aromatic Hydrocarbons (PAHs; EPA Method 8270D), as well as total cyanide (EPA Method 9012B). Quality assurance/quality control (QA/QC) samples, including a field duplicate, matrix spike, and duplicate matrix spike were also submitted for laboratory analysis. The laboratory analytical results for the groundwater samples were reported using NYSDEC Analytical Services Protocol (ASP) Category B data deliverable packages to facilitate data validation.

Purge water generated during the sampling activities was collected in 5-gallon buckets and transferred into 55-gallon steel drums for characterization prior to offsite treatment/disposal in accordance with applicable regulations.

Analytical results from the laboratory analysis report are summarized in Table 2 and compared to the Class GA groundwater standards and guidance values presented in TOGS 1.1.1. VOC exceedances are bolded on Table 2 and further shown on Figure 4. The Data Usability Summary Report (DUSR) is included in Appendix C.

There were BTEX and/or PAH detections in all the monitoring wells sampled. BTEX, acenaphthene, and naphthalene were detected above the regulatory criteria in one or more samples. Cyanide was detected in monitoring wells MW-2, MW-4R, and MW-5R. As shown on Table 2, in general, BTEX, PAHs, and total cyanide detected in groundwater during the June 2021 sampling event are lower or consistent compared to previous sampling results.

3 Quarterly Site-Wide Inspections

The quarterly site-wide inspections were completed on March 30, June 23, September 23, and December 10, 2021. The Site Inspection Forms are presented in Appendix A. In general, the Site is in compliance.

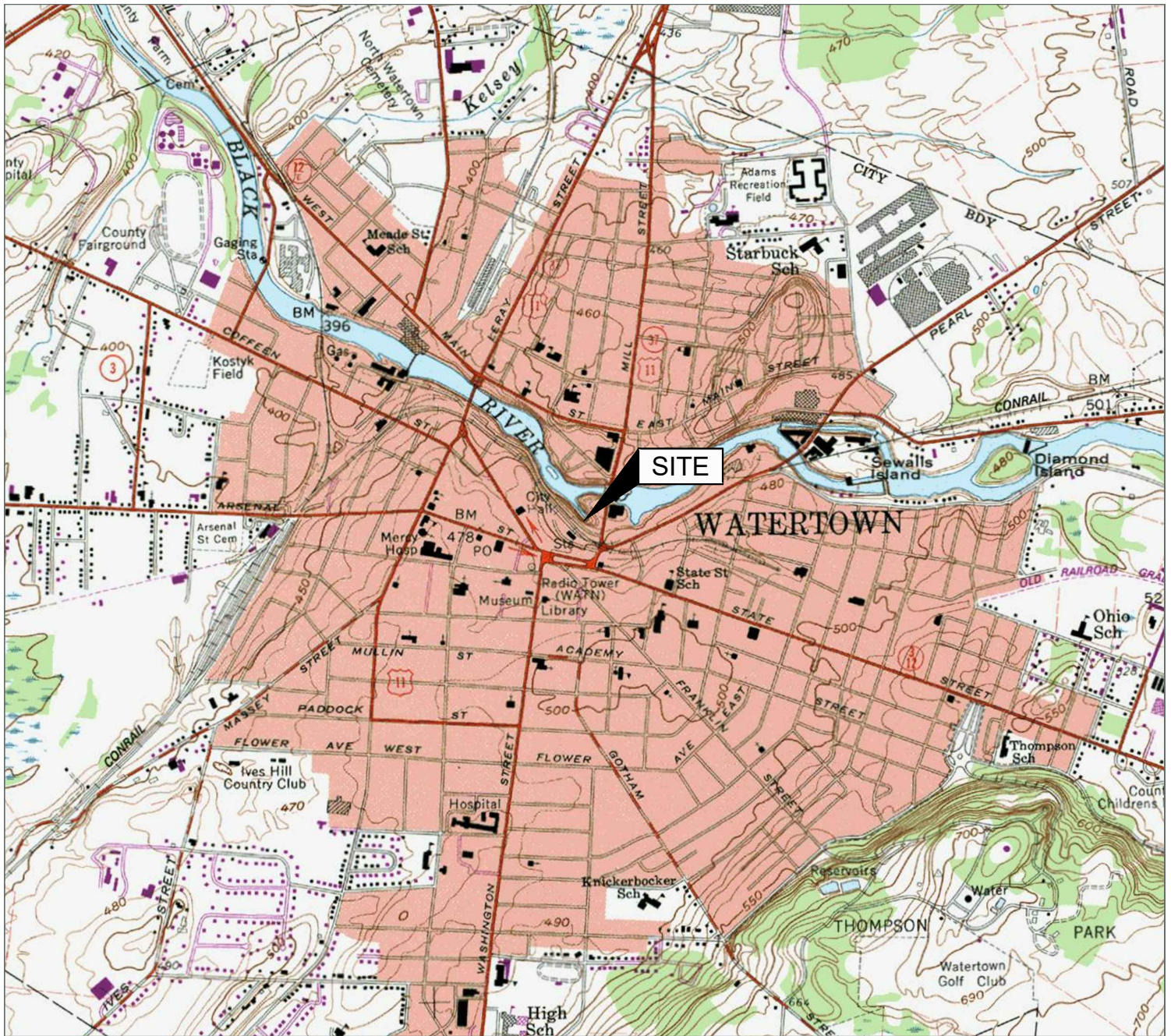


4 Recommendations

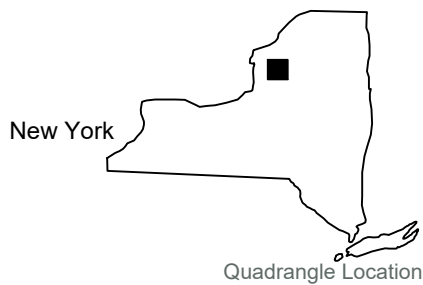
At this time, National Grid recommends continuing the annual monitoring activities. The next annual groundwater sampling event would be in the Summer 2022. Annual site-wide inspections are required; however, for internal security purposes, National Grid will continue to conduct quarterly site-wide inspections.



Figures



Source:
 USGS 7.5 Minute Series
 Topographic Quadrangle, 1982
 Watertown, New York
 Contour Interval = 10'



Site Location Map

National Grid
 Anthony Street
 Watertown, New York

Drawn
 W.G.S.
 Designed
 Approved

Date
 8/19/20
 Figure

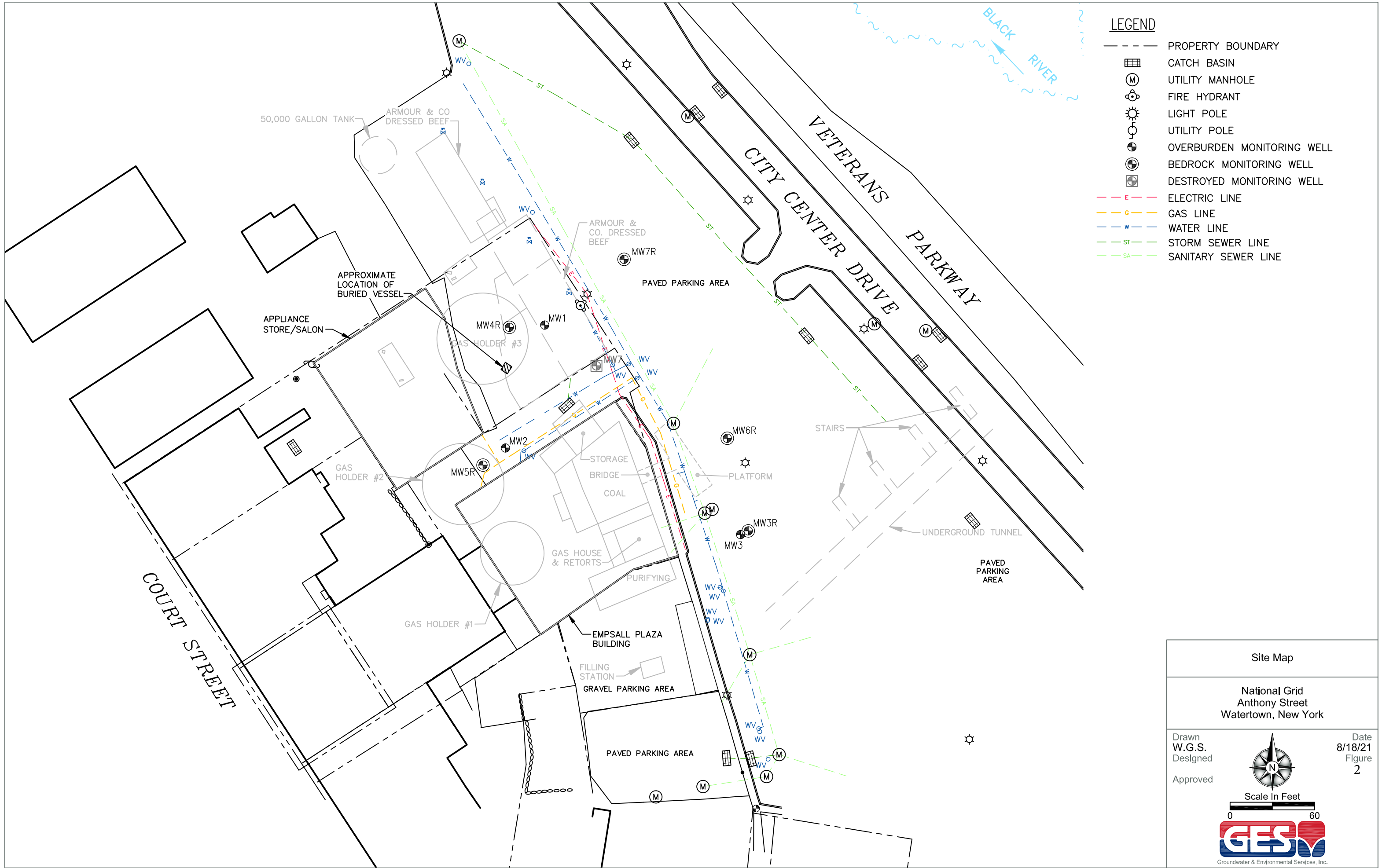


Scale In Feet

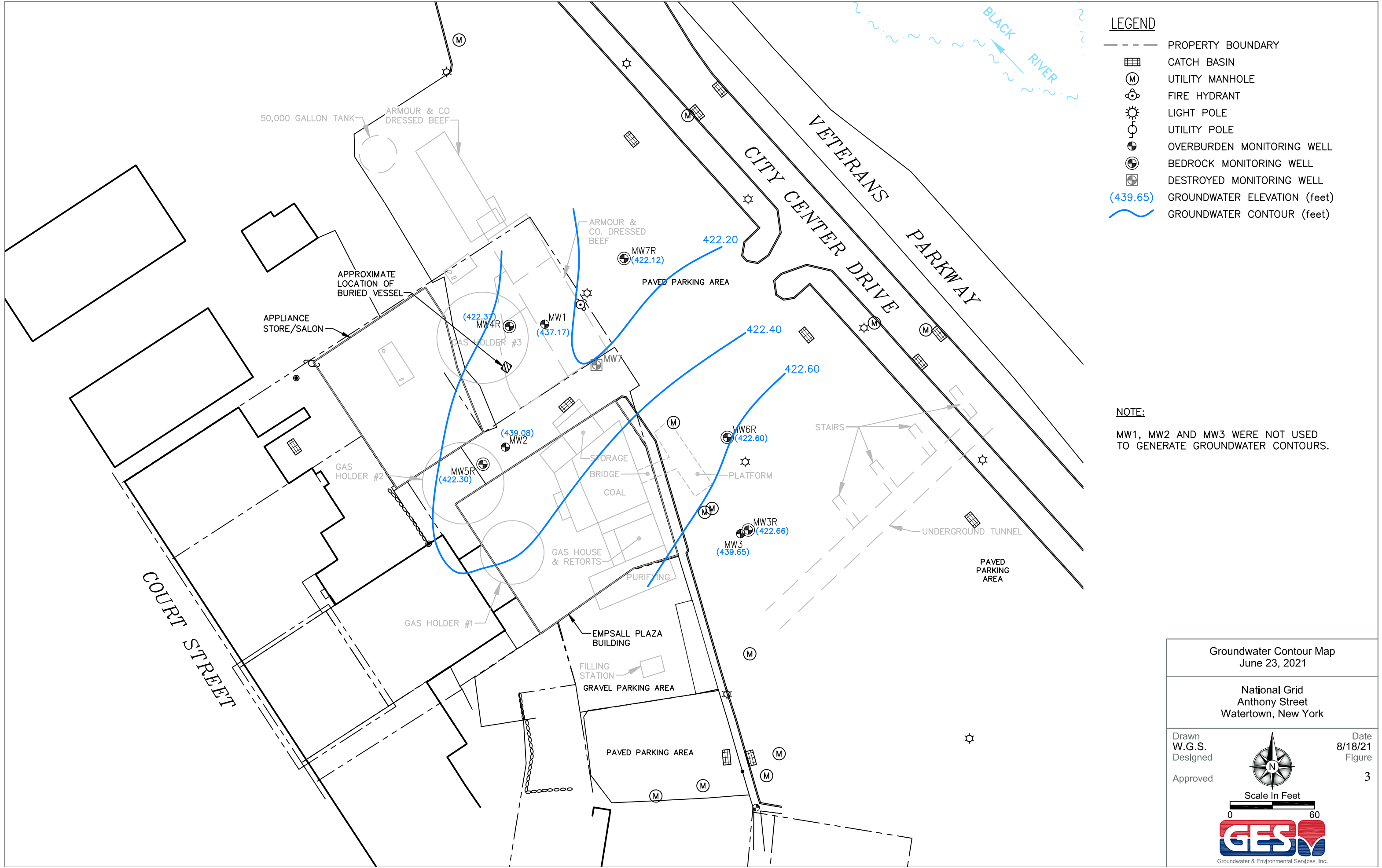


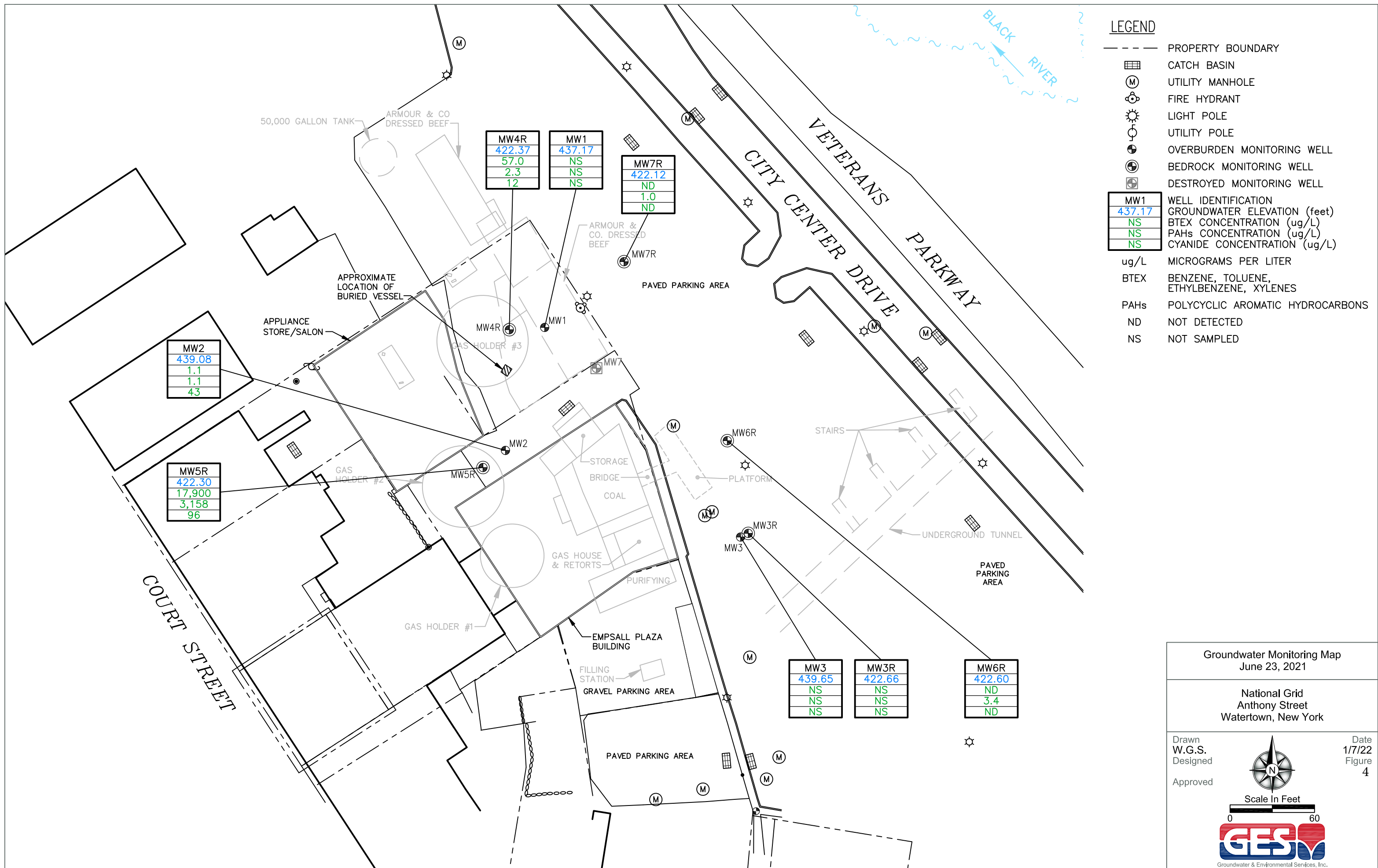
Groundwater & Environmental Services, Inc.

M:\Graphics\0600-Syracuse\Misc\National Grid\Watertown\Watertown SM.dwg, B60 sm, V\Shea



M:\Graphics\0600-Syracuse\Misc\National Grid\Watertown\Watertown SM.dwg, B60 sm, V\Shea







Tables

Table 1
Groundwater Monitoring Well Gauging Data

Well ID	Well Type & Diameter	Top of Inner Casing Elevation	Depth To Well Bottom	Well Bottom Elevation	Screen Elevation	Depth To Water (12/14/15)	Groundwater Elevation (12/14/15)	Depth To Water (08/11/20)	Groundwater Elevation (08/11/20)	Depth To Water (06/23/21)	Groundwater Elevation (06/23/21)
MW-1	Flushmount; PVC; 2-inch	444.62	8.50	436.12	3.00 - 8.00	7.47	436.92	7.11	437.51	7.45	437.17
MW-2	Flushmount; PVC; 2-inch	444.60	8.50	436.10	3.00 - 8.00	6.00	438.35	5.68	438.92	5.52	439.08
MW-3	Flushmount; PVC; 2-inch	445.39	8.70	436.69	3.20 - 8.20	7.25	438.40	DRY	-	5.74	439.65
MW-3R	Flushmount; PVC; 2-inch	445.48	24.40	421.08	14.40 - 24.00	22.81	422.52	22.82	422.66	22.82	422.66
MW-4R	Flushmount; PVC; 2-inch	444.76	50.00	394.76	20.00 - 40.00	23.11	421.22	22.28	422.48	22.39	422.37
MW-5R	Flushmount; PVC; 2-inch	444.60	50.00	394.60	20.00 - 40.00	22.02	422.04	22.00	422.60	22.30	422.30
MW-6R	Flushmount; PVC; 2-inch	445.16	50.00	395.16	18.00 - 40.00	22.56	421.69	22.57	422.59	22.56	422.60
MW-7R	Flushmount; PVC; 2-inch	443.60	45.00	398.60	18.00 - 40.00	21.45	421.67	21.40	422.20	21.48	422.12

Table 2

Groundwater Analytical Data
MW-1

	NYSDEC TOGS 1.1.1 Guidance Values	Units	10/27/05	09/08/10	06/25/13	12/15/15	08/11/20
BTEX			ND	ND	ND	ND	ND
Benzene	1	µg/L	ND	ND	ND	ND	ND
Ethylbenzene	5	µg/L	ND	ND	ND	ND	ND
Toluene	5	µg/L	ND	ND	ND	ND	ND
Total Xylenes	5	µg/L	ND	ND	ND	ND	ND
SVOCs			ND	ND	6.8 J	ND	0.95
Acenaphthene	20	µg/L	ND	ND	ND	ND	ND
Acenaphthylene	--	µg/L	ND	ND	ND	ND	ND
Anthracene	50	µg/L	ND	ND	ND	ND	ND
Benzo(a)anthracene	0.002	µg/L	ND	ND	0.86 J	ND	ND
Benzo(a)pyrene	ND	µg/L	ND	ND	0.79 J	ND	ND
Benzo(b)fluoranthene	0.002	µg/L	ND	ND	1.1 J	ND	ND
Benzo(g,h,i)perylene	--	µg/L	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.002	µg/L	ND	ND	ND	ND	ND
Chrysene	0.002	µg/L	ND	ND	0.78 J	ND	ND
Dibenz(a,h)anthracene	--	µg/L	ND	ND	ND	ND	ND
Fluoranthene	50	µg/L	ND	ND	ND	ND	ND
Fluorene	50	µg/L	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.002	µg/L	ND	ND	ND	ND	ND
Naphthalene	10	µg/L	ND	ND	ND	ND	0.95
Phenanthrene	50	µg/L	ND	ND	0.77 J	ND	ND
Pyrene	50	µg/L	ND	ND	1.2 J	ND	ND
Inorganics							
Cyanide, Total	200	µg/L	744	596	210	31	150

Notes:

Results are presented in units of micrograms per liter (µg/L).

E = Results exceeded calibration range

D = Compound quantitated using a secondary dilution

J = Analyte was detected at a concentration less than the laboratory reporting limit

ND (<#) = Not detected above laboratory reporting limit. # represents the laboratory reporting limit.

Bolded = values indicate exceedance of the NYSDEC AWQS

Table 2

Groundwater Analytical Data
MW-2

	NYSDEC TOGS 1.1.1 Guidance Values	Units	10/27/05	10/15/08	09/08/10	06/25/13	12/14/15	08/11/20	06/23/21
BTEX			4.0 J	5.5 J	4.2	2.8	1.4	3.2	1.1
Benzene	1	µg/L	4.0 J	4.3	2.4	2.8	1.4	3.2	1.1
Ethylbenzene	5	µg/L	ND	0.90 J	ND	ND	ND	ND	ND
Toluene	5	µg/L	ND	ND	1.8	ND	ND	ND	ND
Total Xylenes	5	µg/L	ND	0.30 J	ND	ND	ND	ND	ND
SVOCs			ND	4.3 J	2.4 J	ND	ND	1.3	1.1
Acenaphthene	20	µg/L	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	- -	µg/L	ND	ND	ND	ND	ND	ND	ND
Anthracene	50	µg/L	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	0.002	µg/L	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ND	µg/L	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.002	µg/L	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	- -	µg/L	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.002	µg/L	ND	ND	ND	ND	ND	ND	ND
Chrysene	0.002	µg/L	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	- -	µg/L	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	50	µg/L	ND	ND	ND	ND	ND	ND	ND
Fluorene	50	µg/L	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.002	µg/L	ND	ND	ND	ND	ND	ND	ND
Naphthalene	10	µg/L	ND	4.3 J	2.4 J	ND	ND	1.3	1.1
Phenanthrene	50	µg/L	ND	ND	ND	ND	ND	ND	ND
Pyrene	50	µg/L	ND	ND	ND	ND	ND	ND	ND
Inorganics									
Cyanide, Total	200	µg/L	98	90	127 J	61	50	70	43

Notes:

Results are presented in units of micrograms per liter (µg/L).

E = Results exceeded calibration range

D = Compound quantitated using a secondary dilution

J = Analyte was detected at a concentration less than the laboratory reporting limit

ND (<#) = Not detected above laboratory reporting limit. # represents the laboratory reporting limit.

Bolded = values indicate exceedance of the NYSDEC AWQS

Table 2

Groundwater Analytical Data
MW-3R

	NYSDEC TOGS 1.1.1 Guidance Values	Units	10/15/08	09/08/10	06/23/13	12/14/15	08/11/20
BTEX			ND	ND	ND	ND	ND
Benzene	1	µg/L	ND	ND	ND	ND	ND
Ethylbenzene	5	µg/L	ND	ND	ND	ND	ND
Toluene	5	µg/L	ND	ND	ND	ND	ND
Total Xylenes	5	µg/L	ND	ND	ND	ND	ND
SVOCs			ND	ND	ND	ND	1.1
Acenaphthene	20	µg/L	ND	ND	ND	ND	ND
Acenaphthylene	--	µg/L	ND	ND	ND	ND	ND
Anthracene	50	µg/L	ND	ND	ND	ND	ND
Benzo(a)anthracene	0.002	µg/L	ND	ND	ND	ND	ND
Benzo(a)pyrene	ND	µg/L	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.002	µg/L	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	--	µg/L	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.002	µg/L	ND	ND	ND	ND	ND
Chrysene	0.002	µg/L	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	--	µg/L	ND	ND	ND	ND	ND
Fluoranthene	50	µg/L	ND	ND	ND	ND	ND
Fluorene	50	µg/L	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.002	µg/L	ND	ND	ND	ND	ND
Naphthalene	10	µg/L	ND	ND	ND	ND	1.1
Phenanthrene	50	µg/L	ND	ND	ND	ND	ND
Pyrene	50	µg/L	ND	ND	ND	ND	ND
Inorganics							
Cyanide, Total	200	µg/L	2.5 J	ND	5.2 J	5.5 J	ND

Notes:

Results are presented in units of micrograms per liter (µg/L).

E = Results exceeded calibration range

D = Compound quantitated using a secondary dilution

J = Analyte was detected at a concentration less than the laboratory reporting limit

ND (<#) = Not detected above laboratory reporting limit. # represents the laboratory reporting limit.

Bolded = values indicate exceedance of the NYSDEC AWQS



Table 2

Groundwater Analytical Data
MW-4R

	NYSDEC TOGS 1.1.1 Guidance Values	Units	10/16/08	09/07/10	06/26/13	12/14/15	08/11/20	06/23/21
BTEX			2,239	769	23.8	7.2 J	2.1	57.0
Benzene	1	µg/L	1,200	670 D	22	7.2 J	2.1	55.5
Ethylbenzene	5	µg/L	510	51	1.8	ND	ND	1.5
Toluene	5	µg/L	49	6.6	ND	ND	ND	ND
Total Xylenes	5	µg/L	480	41	ND	ND	ND	ND
SVOCs			443 J	16.89 J	ND	ND	1.14	2.3
Acenaphthene	20	µg/L	4.3 J	ND	ND	ND	ND	ND
Acenaphthylene	--	µg/L	ND	ND	ND	ND	ND	ND
Anthracene	50	µg/L	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ND	µg/L	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	--	µg/L	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Chrysene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	--	µg/L	ND	ND	ND	ND	ND	ND
Fluoranthene	50	µg/L	ND	ND	ND	ND	ND	ND
Fluorene	50	µg/L	1.3 J	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Naphthalene	10	µg/L	430	16	ND	ND	1.0	2.3
Phenanthrene	50	µg/L	6.9 J	0.89 J	ND	ND	0.14	ND
Pyrene	50	µg/L	ND	ND	ND	ND	ND	ND
Inorganics								
Cyanide, Total	200	µg/L	ND	ND	11	13	19	12

Notes:

Results are presented in units of micrograms per liter (µg/L).

E = Results exceeded calibration range

D = Compound quantitated using a secondary dilution

J = Analyte was detected at a concentration less than the laboratory reporting limit

ND (<#) = Not detected above laboratory reporting limit. # represents the laboratory reporting limit.

Bolded = values indicate exceedance of the NYSDEC AWQS

Table 2

Groundwater Analytical Data
MW-5R

	NYSDEC TOGS 1.1.1 Guidance Values	Units	10/15/08	09/08/10	06/23/13	12/15/15	08/11/20	06/23/21
BTEX			20,300	12,800	27,100	8,340	29,290	17,900
Benzene	1	µg/L	3,800	4,200 D	6,600 D	3900	4,370	3,350
Ethylbenzene	5	µg/L	2,000	2,100 D	3,500 D	740	4,350	3,250
Toluene	5	µg/L	9,700	3,600 D	11,000 D	2600	13,200	6,720
Total Xylenes	5	µg/L	4,800	2,900 D	6,000 D	1100	7,370	4,580
SVOCs			1,927 J	2,461 J	3,598 J	2,231 J	7,647	3,158
Acenaphthene	20	µg/L	70 J	74	74 J	62 DJ	78.1	82.2
Acenaphthylene	--	µg/L	69 J	26	56 J	17 J	46.3	27.1
Anthracene	50	µg/L	11 J	4.7	5.5 J	ND	4.4	3.8
Benzo(a)anthracene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ND	µg/L	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	--	µg/L	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Chrysene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	--	µg/L	ND	ND	ND	ND	ND	ND
Fluoranthene	50	µg/L	ND	1.0 J	ND	0.66 J	0.92	0.85
Fluorene	50	µg/L	41 J	29	32 J	21 J	29.1	27.8
Indeno(1,2,3-cd)pyrene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Naphthalene	10	µg/L	1,700	2,300 D	3,400 D	2,200 D	7,460	2,990
Phenanthrene	50	µg/L	36 J	26	30 J	20 J	27.8	25.2
Pyrene	50	µg/L	ND	0.71 J	ND	0.56 J	0.74	0.70
Inorganics								
Cyanide, Total	200	µg/L	98	ND	180	89	86	96

Notes:

Results are presented in units of micrograms per liter (µg/L).

E = Results exceeded calibration range

D = Compound quantitated using a secondary dilution

J = Analyte was detected at a concentration less than the laboratory reporting limit

ND (<#) = Not detected above laboratory reporting limit. # represents the laboratory reporting limit.

Bolded = values indicate exceedance of the NYSDEC AWQS

Table 2

Groundwater Analytical Data
MW-6R

	NYSDEC TOGS 1.1.1 Guidance Values	Units	10/16/08	09/08/10	06/25/13	12/15/15	08/11/20	06/23/21
BTEX			ND	ND	0.52 J	ND	ND	ND
Benzene	1	µg/L	ND	ND	ND	ND	ND	ND
Ethylbenzene	5	µg/L	ND	ND	ND	ND	ND	ND
Toluene	5	µg/L	ND	ND	0.52 J	ND	ND	ND
Total Xylenes	5	µg/L	ND	ND	ND	ND	ND	ND
SVOCs			ND	ND	ND	ND	8.58	3.4
Acenaphthene	20	µg/L	ND	ND	ND	ND	0.20	ND
Acenaphthylene	--	µg/L	ND	ND	ND	ND	0.12	ND
Anthracene	50	µg/L	ND	ND	ND	ND	0.28	ND
Benzo(a)anthracene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ND	µg/L	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.002	µg/L	ND	ND	ND	ND	0.14	ND
Benzo(g,h,i)perylene	--	µg/L	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Chrysene	0.002	µg/L	ND	ND	ND	ND	0.19	ND
Dibenz(a,h)anthracene	--	µg/L	ND	ND	ND	ND	ND	ND
Fluoranthene	50	µg/L	ND	ND	ND	ND	0.38	ND
Fluorene	50	µg/L	ND	ND	ND	ND	0.59	ND
Indeno(1,2,3-cd)pyrene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Naphthalene	10	µg/L	ND	ND	ND	ND	3.7	3.4
Phenanthrene	50	µg/L	ND	ND	ND	ND	2.4	ND
Pyrene	50	µg/L	ND	ND	ND	ND	0.58	ND
Inorganics								
Cyanide, Total	200	µg/L	ND	ND	ND	ND	ND	ND

Notes:

Results are presented in units of micrograms per liter (µg/L).

E = Results exceeded calibration range

D = Compound quantitated using a secondary dilution

J = Analyte was detected at a concentration less than the laboratory reporting limit

ND (<#) = Not detected above laboratory reporting limit. # represents the laboratory reporting limit.

Bolded = values indicate exceedance of the NYSDEC AWQS



Table 2

Groundwater Analytical Data
MW-7R

	NYSDEC TOGS 1.1.1 Guidance Values	Units	10/16/08	09/07/10	06/25/13	12/15/15	08/11/20	06/23/21
BTEX			ND	ND	ND	ND	ND	ND
Benzene	1	µg/L	ND	ND	ND	ND	ND	ND
Ethylbenzene	5	µg/L	ND	ND	ND	ND	ND	ND
Toluene	5	µg/L	ND	ND	ND	ND	ND	ND
Total Xylenes	5	µg/L	ND	ND	ND	ND	ND	ND
SVOCs			ND	ND	ND	ND	2.4	1.0
Acenaphthene	20	µg/L	ND	ND	ND	ND	ND	ND
Acenaphthylene	--	µg/L	ND	ND	ND	ND	ND	ND
Anthracene	50	µg/L	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ND	µg/L	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	--	µg/L	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Chrysene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	--	µg/L	ND	ND	ND	ND	ND	ND
Fluoranthene	50	µg/L	ND	ND	ND	ND	ND	ND
Fluorene	50	µg/L	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.002	µg/L	ND	ND	ND	ND	ND	ND
Naphthalene	10	µg/L	ND	ND	ND	ND	2.4	1.0
Phenanthrene	50	µg/L	ND	ND	ND	ND	ND	ND
Pyrene	50	µg/L	ND	ND	ND	ND	ND	ND
Inorganics								
Cyanide, Total	200	µg/L	3.1 J	ND	ND	30	ND	ND

Notes:

Results are presented in units of micrograms per liter (µg/L).

E = Results exceeded calibration range

D = Compound quantitated using a secondary dilution

J = Analyte was detected at a concentration less than the laboratory reporting limit

ND (<#) = Not detected above laboratory reporting limit. # represents the laboratory reporting limit.

Bolded = values indicate exceedance of the NYSDEC AWQS



Appendix A – Field Inspection Reports

Site Management Plan Inspection Form**Anthony Street****Former MGP Site****Watertown, New York**Date: 12/10/2021Technician: KLTime: 8:00Weather: Cloudy 34**General Site Wide Conditions**

Any signs of ground-intrusive activities?	YES	NO	COMMENTS:	
Any soil disturbance regardless of quantity/extent?	YES	NO	COMMENTS:	
Any surface erosion?	YES	NO	COMMENTS:	
Any settlement?	YES	NO	COMMENTS:	
Bare or sparsely-vegetated areas?	YES	NO	COMMENTS:	
Excessive cracking or missing pavement?	YES	NO	COMMENTS:	
Any other conditions affecting the thickness or the integrity of the soil cover system?	YES	NO	COMMENTS:	
Any repairs, maintenace or corrective actions since the last inspection?	YES	NO	COMMENTS:	
Have the front lawns been mowed?	YES	NO	COMMENTS:	
Conditon of the asphalt pavement	GOOD	FAIR	POOR	COMMENTS:
Conditon of the front sidewalks?	GOOD	FAIR	POOR	COMMENTS:
Conditon of the building foundations?	GOOD	FAIR	POOR	COMMENTS:
Are the requirements of the SMP being met?	YES	NO	COMMENTS:	
Are there any needed changes?	YES	NO	COMMENTS:	
Are the site records complete and up to date?	YES	NO	COMMENTS:	

Site Monitoring Wells

Well ID.	Location Secure	
MW-1	YES	NO
MW-2	YES	NO
MW-3	YES	NO
MW-3R	YES	NO
MW-4R	YES	NO
MW-5R	YES	NO
MW-6R	YES	NO
MW-7R	YES	NO

General Comments:

All 8 Well manholes were replaced June 23-24, 2021.

Asphalt broken up near MW-1

Site Management Plan Inspection Form**Anthony Street****Former MGP Site****Watertown, New York**Date: 9/23/2021Technician: KLTime: 8:00Weather: Rain 67**General Site Wide Conditions**

Any signs of ground-intrusive activities?	YES	NO	COMMENTS:	
Any soil disturbance regardless of quantity/extent?	YES	NO	COMMENTS:	
Any surface erosion?	YES	NO	COMMENTS:	
Any settlement?	YES	NO	COMMENTS:	
Bare or sparsely-vegetated areas?	YES	NO	COMMENTS:	
Excessive cracking or missing pavement?	YES	NO	COMMENTS:	
Any other conditions affecting the thickness or the integrity of the soil cover system?	YES	NO	COMMENTS:	
Any repairs, maintenace or corrective actions since the last inspection?	YES	NO	COMMENTS:	
Have the front lawns been mowed?	YES	NO	COMMENTS:	
Conditon of the asphalt pavement	GOOD	FAIR	POOR	COMMENTS:
Conditon of the front sidewalks?	GOOD	FAIR	POOR	COMMENTS:
Conditon of the building foundations?	GOOD	FAIR	POOR	COMMENTS:
Are the requirements of the SMP being met?	YES	NO	COMMENTS:	
Are there any needed changes?	YES	NO	COMMENTS:	
Are the site records complete and up to date?	YES	NO	COMMENTS:	

Site Monitoring Wells

Well ID.	Location Secure	
MW-1	YES	NO
MW-2	YES	NO
MW-3	YES	NO
MW-3R	YES	NO
MW-4R	YES	NO
MW-5R	YES	NO
MW-6R	YES	NO
MW-7R	YES	NO

General Comments:

All 8 Well manholes were replaced June 23-24, 2021.

Asphalt broken up near MW-1

Site Management Plan Inspection Form**Anthony Street****Former MGP Site****Watertown, New York**Date: 6/23/2021Technician: KLTime: 7:30Weather: Sunny 56**General Site Wide Conditions**

Any signs of ground-intrusive activities?	YES	NO	COMMENTS:	
Any soil disturbance regardless of quantity/extent?	YES	NO	COMMENTS:	
Any surface erosion?	YES	NO	COMMENTS:	
Any settlement?	YES	NO	COMMENTS:	
Bare or sparsely-vegetated areas?	YES	NO	COMMENTS:	
Excessive cracking or missing pavement?	YES	NO	COMMENTS:	
Any other conditions affecting the thickness or the integrity of the soil cover system?	YES	NO	COMMENTS:	
Any repairs, maintenace or corrective actions since the last inspection?	YES	NO	COMMENTS:	
Have the front lawns been mowed?	YES	NO	COMMENTS:	
Conditon of the asphalt pavement	GOOD	FAIR	POOR	COMMENTS:
Conditon of the front sidewalks?	GOOD	FAIR	POOR	COMMENTS:
Conditon of the building foundations?	GOOD	FAIR	POOR	COMMENTS:
Are the requirements of the SMP being met?	YES	NO	COMMENTS:	
Are there any needed changes?	YES	NO	COMMENTS:	
Are the site records complete and up to date?	YES	NO	COMMENTS:	

Site Monitoring Wells

Well ID.	Location Secure	
MW-1	YES	NO
MW-2	YES	NO
MW-3	YES	NO
MW-3R	YES	NO
MW-4R	YES	NO
MW-5R	YES	NO
MW-6R	YES	NO
MW-7R	YES	NO

General Comments:

All 8 Well manholes are replaced June 23-24, 2021.

Asphalt broken up near MW-1

Site Management Plan Inspection Form**Anthony Street****Former MGP Site****Watertown, New York**Date: 3/30/2021Technician: KLTime: 7:30Weather: Sunny 35**General Site Wide Conditions**

Any signs of ground-intrusive activities?	YES	NO	COMMENTS:	
Any soil disturbance regardless of quantity/extent?	YES	NO	COMMENTS:	
Any surface erosion?	YES	NO	COMMENTS:	
Any settlement?	YES	NO	COMMENTS:	
Bare or sparsely-vegetated areas?	YES	NO	COMMENTS:	
Excessive cracking or missing pavement?	YES	NO	COMMENTS:	
Any other conditions affecting the thickness or the integrity of the soil cover system?	YES	NO	COMMENTS:	
Any repairs, maintenace or corrective actions since the last inspection?	YES	NO	COMMENTS:	
Have the front lawns been mowed?	YES	NO	COMMENTS:	
Conditon of the asphalt pavement	GOOD	FAIR	POOR	COMMENTS:
Conditon of the front sidewalks?	GOOD	FAIR	POOR	COMMENTS:
Conditon of the building foundations?	GOOD	FAIR	POOR	COMMENTS:
Are the requirements of the SMP being met?	YES	NO	COMMENTS:	
Are there any needed changes?	YES	NO	COMMENTS:	
Are the site records complete and up to date?	YES	NO	COMMENTS:	

Site Monitoring Wells

Well ID.	Location Secure	
MW-1	YES	NO
MW-2	YES	NO
MW-3	YES	NO
MW-3R	YES	NO
MW-4R	YES	NO
MW-5R	YES	NO
MW-6R	YES	NO
MW-7R	YES	NO

General Comments:

Well manholes should be replaced.



Appendix B – Well Sampling Field Data

Well ID	Sample?	Well Size	DTW	DTP	DTB	Comments
MW-1	Yes	2"	7.45		7.85	DRY, NO SAMPLE
MW-2	Yes	2"	5.52		7.30	
MW-3	Yes	2"	5.74		5.95	NO SAMPLE historically dry
MW-3R	Yes	2"	22.82		23.30	NO SAMPLE DRY
MW-4R	Yes	2"	22.39		44.80	MS/MSD
MW-5R	Yes	2"	22.30		44.45	Field Duplicate
MW-6R	Yes	2"	22.56		45.00	
MW-7R	Yes	2"	21.48		45.05	

DTW -depth to water

DTP -depth to product

DTB -depth to bottom

Sampling Personnel: K
Job Number: 0603200-136010-221
Well Id. MW-6R

Date: 6/23/21
Weather: Sunny 56
Time In: 08:40 Time Out: 0930

Well Information

		TOC	Other
Depth to Water:	(feet)	<u>22.56</u>	
Depth to Bottom:	(feet)	<u>45.00</u>	
Depth to Product:	(feet)	<u>✓</u>	
Length of Water Column:	(feet)	<u>22.4</u>	
Volume of Water in Well:	(gal)	<u>3.50</u>	
Three Well Volumes:	(gal)	<u>10-75</u>	

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:
Tubing/Bailer Material:
Sampling Method:

Bailer ☐ Peristaltic ☒
Teflon ☐ Stainless St. ☐
Bailer ☐ Peristaltic ☒

Grundfos Pump ☐
Polyethylene ☒
Grundfos Pump ☐

Conversion Factors
gal/ft. of water
1" ID 0.04
2" ID 0.16
4" ID 0.66
6" ID 1.47
1 gallon=3.785L=3785mL=133.7cu. feet

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 ☒ No ☐

Time	DTW (feet)	Temp (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
<u>08:50</u>	<u>22.57</u>	<u>14.53</u>	<u>7.70</u>	<u>15</u>	<u>4.81</u>	<u>2.5</u>	<u>2.29</u>	<u>23.1</u>
<u>08:55</u>	<u>22.57</u>	<u>14.22</u>	<u>7.53</u>	<u>1</u>	<u>5.46</u>	<u>2.8</u>	<u>0.77</u>	<u>7.9</u>
<u>09:00</u>	<u>22.57</u>	<u>14.17</u>	<u>7.52</u>	<u>16</u>	<u>5.58</u>	<u>2.4</u>	<u>0.29</u>	<u>3.02</u>
<u>09:05</u>	<u>22.57</u>	<u>14.21</u>	<u>7.51</u>	<u>39</u>	<u>5.58</u>	<u>2.4</u>	<u>0.00</u>	<u>2.52</u>
<u>09:10</u>	<u>22.57</u>	<u>14.30</u>	<u>7.51</u>	<u>52</u>	<u>5.58</u>	<u>2.5</u>	<u>0.00</u>	<u>3.51</u>
<u>09:15</u>	<u>22.57</u>	<u>14.35</u>	<u>7.51</u>	<u>58</u>	<u>5.56</u>	<u>2.3</u>	<u>0.00</u>	<u>3.50</u>
<u>09:20</u>	<u>22.57</u>	<u>14.47</u>	<u>7.51</u>	<u>123</u>	<u>5.54</u>	<u>2.3</u>	<u>0.00</u>	<u>3.49</u>

Sampling Information:

EPA SW-846 Method 8270 SVOC PAH's
EPA SW-846 Method 8260 VOC's BTEX
EPA SW-846 Method 9012 Total Cyanide

2 - 100ml ambers Yes ☒ No ☐
3 - 40 ml vials Yes ☒ No ☐
1 - 250 ml plastic Yes ☒ No ☐

Sample ID: MW-6R-0621 Duplicate? Yes ☐ No ☒
Sample Time: 09:20 MS/MSD? Yes ☐ No ☒

Shipped: Pace Courier Pickup ☒
Drop-off Albany Service Center ☐

Comments/Notes:

Laboratory: Pace Analytical
Greensburg, PA

Page 13 of 14

Sampling Personnel: K. Leo
Job Number: 0603200-136010-221
Well Id. **MW-7R**

Date: 6/23/21
Weather: Sunny 65°
Time In: 09:50 Time Out: 10:35

Well Information

	TOC	Other
Depth to Water: (feet)	<u>21.48</u>	
Depth to Bottom: (feet)	45.05	
Depth to Product: (feet)	<u>—</u>	
Length of Water Column: (feet)	<u>23.57</u>	
Volume of Water in Well: (gal)	<u>3.77</u>	
Three Well Volumes: (gal)	<u>11.31</u>	

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) 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 ☒ 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=133.7cu. feet

Time	DTW (feet)	Temp (°C)	pH	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
<u>09:55</u>	<u>21.50</u>	<u>18.36</u>	<u>7.68</u>	<u>10.2</u>	<u>3.87</u>	<u>5.2</u>	<u>3.42</u>	<u>2.46</u>
<u>10:00</u>	<u>21.50</u>	<u>16.93</u>	<u>7.67</u>	<u>11.3</u>	<u>3.88</u>	<u>4.8</u>	<u>2.68</u>	<u>2.48</u>
<u>10:05</u>	<u>21.50</u>	<u>16.42</u>	<u>7.61</u>	<u>12.3</u>	<u>3.89</u>	<u>2.9</u>	<u>3.39</u>	<u>2.49</u>
<u>10:10</u>	<u>21.50</u>	<u>16.06</u>	<u>7.58</u>	<u>13.3</u>	<u>3.90</u>	<u>2.9</u>	<u>4.37</u>	<u>2.50</u>
<u>10:15</u>	<u>21.50</u>	<u>16.05</u>	<u>7.57</u>	<u>13.6</u>	<u>3.90</u>	<u>3.0</u>	<u>4.28</u>	<u>2.50</u>
<u>10:20</u>	<u>21.50</u>	<u>16.03</u>	<u>7.50</u>	<u>14.1</u>	<u>3.90</u>	<u>2.7</u>	<u>4.18</u>	<u>2.49</u>
<u>10:25</u>	<u>21.50</u>	<u>16.04</u>	<u>7.57</u>	<u>14.3</u>	<u>3.89</u>	<u>2.9</u>	<u>4.13</u>	<u>2.49</u>

Sampling Information:

EPA SW-846 Method 8270 SVOC PAH's 2 - 100ml ambers Yes ☒ No ☐

EPA SW-846 Method 8260 VOC's BTEX 3 - 40 ml vials Yes ☒ No ☐

EPA SW-846 Method 9012 Total Cyanide 1 - 250 ml plastic Yes ☒ No ☐

Sample ID: **MW-7R-0621** Duplicate? Yes ☐ No ☒

Sample Time: 10:25 MS/MSD? Yes ☐ No ☒

Shipped: Pace Courier Pickup ☒

Drop-off Albany Service Center ☐

Comments/Notes:

Laboratory: Pace Analytical
Greensburg, PA

rrmt88-vm3\syracuse-01\Dashboard\Planning\850012.xlsm

Page 14 of 14

Sampling Personnel: KC
Job Number: 0603200-136010-221
Well Id. MW-5R

Date: 6/23/21
Weather: Sunny 65
Time In: 11:55 Time Out: 1250

Well Information		
	TOC	Other
Depth to Water: (feet)	<u>22.30</u>	
Depth to Bottom: (feet)	<u>44.45</u>	
Depth to Product: (feet)	<u>—</u>	
Length of Water Column: (feet)	<u>22.15</u>	
Volume of Water in Well: (gal)	<u>3.54</u>	
Three Well Volumes: (gal)	<u>10.63</u>	

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)	<u>200</u>	
Duration of Pumping: (min)	<u>30</u>	
Total Volume Removed: (gal)	<u>2</u>	
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)
12:05	22.75	18.38	7.44	-142	0.750	38.7	0.38	0.479
12:10	22.84	15.34	7.37	-148	0.724	35.9	0.00	0.463
12:15	22.91	14.88	7.39	-187	0.676	32.0	0.00	0.431
12:20	22.98	14.80	7.51	-224	0.631	19.5	0.00	0.403
12:25	22.90	14.50	7.56	-243	0.613	13.0	0.00	0.393
12:30	22.98	14.37	7.58	-251	0.616	8.8	0.00	0.394
12:35	22.98	14.34	7.57	-254	0.610	7.6	0.00	0.391

Sampling Information:

EPA SW-846 Method 8270	SVOC PAH's	4 - 100 ml ambers	Yes ☒ No ☐
EPA SW-846 Method 8260	VOC's BTEX	6 - 40 ml vials	Yes ☒ No ☐
EPA SW-846 Method 9012	Total Cyanide	2 - 250 ml plastic	Yes ☒ No ☐

Field Duplicate 0621

Sample ID: MW-5R-0621 Duplicate? Yes ☒ No ☐
Sample Time: 12:35 MS/MSD? Yes ☐ No ☒

Shipped: Pace Courier Pickup ☒
Drop-off Albany Service Center ☐

Laboratory: Pace Analytical
Greensburg, PA

Comments/Notes:

Sampling Personnel: K
Job Number: 0603200-136010-221
Well Id. **MW-2**

Date: 6/23/21
Weather: Sunny
Time In: 12:50 Time Out: 13:35

Well Information		
	TOC	Other
Depth to Water:	(feet) <u>5.52</u>	
Depth to Bottom:	(feet) <u>7.27</u>	
Depth to Product:	(feet) <u>—</u>	
Length of Water Column:	(feet) <u>1.75</u>	
Volume of Water in Well:	(gal) <u>0.28</u>	
Three Well Volumes:	(gal) <u>0.84</u>	

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) 1.5 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)
<u>12:55</u>	<u>5.87</u>	<u>16.98</u>	<u>7.52</u>	<u>-214</u>	<u>0.555</u>	<u>9.4</u>	<u>0.00</u>	<u>0.353</u>
<u>13:00</u>	<u>5.98</u>	<u>16.74</u>	<u>7.40</u>	<u>-199</u>	<u>0.526</u>	<u>8.0</u>	<u>0.00</u>	<u>0.335</u>
<u>13:05</u>	<u>5.98</u>	<u>16.65</u>	<u>7.39</u>	<u>-194</u>	<u>0.486</u>	<u>8.8</u>	<u>0.00</u>	<u>0.316</u>
<u>13:10</u>	<u>5.98</u>	<u>16.70</u>	<u>7.38</u>	<u>-194</u>	<u>0.484</u>	<u>7.1</u>	<u>0.00</u>	<u>0.314</u>
<u>13:15</u>	<u>5.98</u>	<u>16.73</u>	<u>7.38</u>	<u>-192</u>	<u>0.479</u>	<u>6.8</u>	<u>0.00</u>	<u>0.311</u>
<u>13:20</u>	<u>5.98</u>	<u>16.77</u>	<u>7.37</u>	<u>-190</u>	<u>0.473</u>	<u>5.2</u>	<u>0.00</u>	<u>0.308</u>
<u>13:25</u>	<u>5.98</u>	<u>16.75</u>	<u>7.36</u>	<u>-189</u>	<u>0.469</u>	<u>5.0</u>	<u>0.00</u>	<u>0.305</u>

Sampling Information:

EPA SW-846 Method 8270 SVOC PAH's 2 - 100ml ambers Yes ☒ No ☐
EPA SW-846 Method 8260 VOC's BTEX 3 - 40 ml vials Yes ☒ No ☐
EPA SW-846 Method 9012 Total Cyanide 1 - 250 ml plastic Yes ☒ No ☐
Sample ID: **MW-2-0621** Duplicate? Yes ☒ No ☐
Sample Time: 13:25 MS/MSD? Yes ☐ No ☒
Shipped: Pace Courier Pickup ☒
Drop-off Albany Service Center ☐
Laboratory: Pace Analytical
Greensburg, PA
Comments/Notes:
vrrmt88-vm3\syracuse-01\Dashboard\Planning\850012.xlsm

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: 5 Technology Place, Suite 4
East Syracuse, New York 13057
Email To: dshay@gesonline.com
Phone: 800.220.3069 Fax: None
x4051
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
Purchase Order No.:
Project Name: National Grid - Watertown
Anthony St, Watertown NY
Project Number:
0603200-136010-221-1106

Section C

Invoice Information:

Attention: Accounts Payable via email at ges-invoices@gesonline.com
Company Name: Groundwater & Environmental Services, Inc.
Address: 5 Technology Place, Suite 4, East Syracuse, NY 13057
Pace Quote Reference:
Pace Project Manager: Rachel Christner
Pace Profile #: Annual GWS

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

SITE

☐ GA ☐ L ☐ I ☐ J

LOCATION

☐ DH ☐ JC ☐ JI ☐ OTHER

Filtered (Y/N)

Requested Analysis:

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
CODE
DRINKING WATER DW
WATER WT
WASTE WATER WW
PRODUCT P
SOLID/SOLID SL
SLURRY SLP
SLURRY SLP
AIR A
OTHER
Tissue T

MATRIX CODE
SAMPLE TYPE
G+GRAB C+COMP

COLLECTED

COMPOSITE START GRAB

DATE TIME DATE TIME

SAMPLE TEMP AT COLLECTION

OF CONTAINERS

Preservatives

Unpreserved
H₂SO₄
HNO₃
HCl
NaOH
Na₂S₂O₃
Methanol
Other

BTEX (82400)
SVOCs (82400)
Gravimetric Total (82124)

Pace Project Number
Lab I.D.

Additional Comments:

SAMPLES WILL ARRIVE IN

1

COOLERS.

Please send reports to: dshay@gesonline.com, tbeaumont@gesonline.com
NERegion@gesonline.com, ges@gesonline.com

SPECIFIC EDD NAME:

NGWatertown-labnumber.28351.EQEDD.zip

RELINQUISHED BY / AFFILIATION

DATE

TIME

ACCEPTED BY / AFFILIATION

DATE

TIME

SAMPLE CONDITIONS

SAMPLER NAME AND SIGNATURE

PRINT NAME of SAMPLER

SIGNATURE of SAMPLER

DATE Signed MM/DD/YY

Temp in °C

Received on

Ice

Custody

Sealed Cooler

Samples Intact



Appendix C – Data Usability Summary Report



September 9, 2021

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

RE: Data Usability Summary Report for National Grid: Little Falls, NY Site Data Package
Pace Analytical Job No. 30427664

Groundwater & Environmental Services, Inc. (GES) reviewed one data package (Laboratory Project Number 30427664) from Pace Analytical Services, LLC in Greensburg, PA., for the analysis of groundwater samples collected on June 23, 2021 from monitoring wells located at the National Grid: Watertown, NY Site. Five aqueous samples and a field duplicate were analyzed for volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and Cyanide. Methodologies utilized were those of the USEPA SW846 methods 8260C/8270D/9012B, with additional QC requirements of the NYSDEC ASP.

The data were reported as part of a complete full deliverable type B data validation. This usability report is generated from review of the following:

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

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

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

In addition, method and QC criteria specified in the NYSDEC ASP were implemented. All data are considered valid and acceptable except those analytes that have been qualified as unusable “R” (unreliable).

Table 1. Validation Qualifiers

Sample ID	Qualifier	Analyte	Reason for qualification
MW-4R	J-	Cyanide	Low MS Recovery
	J	Naphthalene 2-Methylnaphthalene	MS/MSD recoveries inconsistent RPD exceeds maximum
MW-6R	J+	Naphthalene 2-Methylnaphthalene	Surrogate recovered high
MW-7R	J+	Naphthalene	

In summary, sample results were usable as reported, with qualifications and exceptions listed in Table 1.

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

BTEX Volatiles by EPA 8260C/NYSDEC ASP

Sample holding times were met and instrumental tune fragmentations were within acceptance ranges. There were no positive detections in the blanks. Surrogate and internal standard recoveries were within required limits.

Calibrations standards show acceptable responses within analytical protocol and validation action limits.

MS/MSD recoveries and relative percent differences (RPD) were within laboratory and EPA criteria.

The blind field duplicate correlations MW-5R, where applicable, fall below the EPA recommended 30% for aqueous duplicate samples.

PAHs by EPA8270D/NYSDEC ASP

Holding times were met. Instrumental tune fragmentations were within acceptance ranges. Surrogate recoveries were within analytical and validation criteria with the exception of high recoveries of Terphenyl-d14 in the following samples:

- MW-6R
- MW-7R

Detections in these samples are qualified as estimated with a possible high bias.

Blanks show no contamination. Calibrations standards show acceptable responses within analytical protocol and validation action limits.



LCS recoveries and RPDs were reported within acceptable ranges, with the exception of a high recovery of Dibenzo(a,h)anthracene. There were no associated detection in the field samples, and the data is not affected.

Multiple MS/MSD RPDs associated with MW-4R were outside laboratory specifications. Only the naphthalene (high MS, low MSD) and 2-methylnaphthalene (RPD exceeds limits) were reported above RL in the sample. These compounds are qualified as estimated with an indeterminate bias.

The blind field duplicate correlations MW-5R, where applicable, fall below the EPA recommended 30% for aqueous duplicate samples.

Total Cyanide by 9012B/ NYSDEC ASP

Review was conducted for method compliance, holding times, transcription, calculations, standard and blank acceptability, accuracy and precision, etc., as applicable to each procedure. All were found acceptable for the validated samples, with the following exceptions:

- Low recovery of cyanide in the MS and MSD prepared from the sample MW-4R. Low recoveries indicate a possible low bias. Cyanide is qualified as estimated with a possible low bias in MW-4R.

Calibration standard responses were compliant. Blanks show no detections above the reporting limits. The laboratory spikes and duplicates of total cyanide show acceptable recoveries and/or correlations.

The blind field duplicate correlations MW-5R, where applicable, fall below the EPA recommended 30% for aqueous duplicate samples.

Data Package Completeness

Complete NYSDEC Category B deliverables were 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.

A handwritten signature in blue ink, reading 'B Janowiak', with a stylized flourish at the end.

Bonnie Janowiak, Ph.D.
Senior Project Chemist
701 N Main St
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

SAMPLE SUMMARY

Project: National Grid - Watertown, NY

Pace Project No.: 30427664

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30427664001	MW-2-0621	Water	06/23/21 13:25	06/24/21 09:25
30427664002	MW-4R-0621	Water	06/23/21 11:10	06/24/21 09:25
30427664003	MW-4R-MS-0621	Water	06/23/21 11:10	06/24/21 09:25
30427664004	MW-4R-MSD-0621	Water	06/23/21 11:10	06/24/21 09:25
30427664005	MW-5R-0621	Water	06/23/21 12:35	06/24/21 09:25
30427664006	MW-6R-0621	Water	06/23/21 09:20	06/24/21 09:25
30427664007	MW-7R-0621	Water	06/23/21 10:25	06/24/21 09:25
30427664008	FD-0621	Water	06/23/21 00:00	06/24/21 09:25
30427664009	Trip Blanks	Water	06/23/21 00:00	06/24/21 09:25

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: National Grid - Watertown, NY

Pace Project No.: 30427664

Method: EPA 8270D by SIM

Description: 8270D PAH SIM Reduced Volume

Client: Groundwater & Environmental Services, Inc. (Syracuse)

Date: July 01, 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.

QC Batch: 454348

ST: Surrogate recovery was above laboratory control limits. Results may be biased high.

- MW-6R-0621 (Lab ID: 30427664006)
 - Terphenyl-d14 (S)
- MW-7R-0621 (Lab ID: 30427664007)
 - Terphenyl-d14 (S)

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.

QC Batch: 454348

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

- LCS (Lab ID: 2194017)
 - Dibenzo(a,h)anthracene

Matrix Spikes:

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

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: National Grid - Watertown, NY

Pace Project No.: 30427664

Method: EPA 8270D by SIM

Description: 8270D PAH SIM Reduced Volume

Client: Groundwater & Environmental Services, Inc. (Syracuse)

Date: July 01, 2021

QC Batch: 454348

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30427664002

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

- MS (Lab ID: 2194018)
 - Dibenzo(a,h)anthracene
 - Indeno(1,2,3-cd)pyrene
- MSD (Lab ID: 2194019)
 - Dibenzo(a,h)anthracene
 - Indeno(1,2,3-cd)pyrene
 - Naphthalene

ML: Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

- MS (Lab ID: 2194018)
 - Naphthalene

R1: RPD value was outside control limits.

- MSD (Lab ID: 2194019)
 - 2-Methylnaphthalene
 - Naphthalene

Additional Comments:

Analyte Comments:

QC Batch: 454348

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- FD-0621 (Lab ID: 30427664008)
 - Naphthalene

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: National Grid - Watertown, NY

Pace Project No.: 30427664

Method: EPA 8260C

Description: 8260C MSV

Client: Groundwater & Environmental Services, Inc. (Syracuse)

Date: July 01, 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:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: National Grid - Watertown, NY

Pace Project No.: 30427664

Method: EPA 9012B

Description: 9012B Cyanide, Total

Client: Groundwater & Environmental Services, Inc. (Syracuse)

Date: July 01, 2021

General Information:

8 samples were analyzed for EPA 9012B 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 9012B 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: 454742

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30427664002

ML: Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

- MS (Lab ID: 2196055)
 - Cyanide
- MSD (Lab ID: 2196056)
 - Cyanide

Additional Comments:

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

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.