From: Devin T Shay

To: Spellman, John (DEC)

Cc: "Stucker, Steven P."; Beam, Steve A

**Subject:** National Grid - Hudson - annual report submittal

Date:Monday, August 7, 2023 1:30:57 PMAttachments:NGrid Hudson 2023 Annual Report.pdf

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails

John -

Attached please find the annual monitoring report for the National Grid site in Hudson.

Kindly respond to confirm receipt.

Thanks, Devin

Devin T. Shay, PG

Program Manager / Principal Hydrogeologist

Office: 800.220.3069 ext. 4051

Mobile: 315.374.7648 dshay@GESonline.com

Groundwater & Environmental Services, Inc.

5 Technology Place, Suite #4 East Syracuse, NY 13057

Follow Us: Website | LinkedIn | Twitter



Safety. From start to finish.

Confidentiality Notice: This transmission (including any attachments) may contain confidential information belonging to Groundwater & Environmental Services, Inc. and is intended only for the use of the party or entity to which it is addressed. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution, retention or the taking of action in reliance on the contents of this transmission is strictly prohibited; provided, however, the prohibition against disclosure shall not apply if the transmission is required by law to be disclosed by a governmental intended party as a public record. If you have received this transmission in error, please immediately notify the sender and erase all information and attachments. Thank You.



August 7, 2023

Mr. John Spellman, PE New York State Department of Environmental Conservation Division of Environmental Remediation Remedial Bureau C 625 Broadway Albany, NY 12233-7013

Re: National Grid Hudson Water Street Site Hudson, New York
2023 Groundwater Monitoring Report

Dear Mr. Spellman:

Attached for your information is the 2023 Groundwater Monitoring Report detailing the annual groundwater monitoring event and OM&M activities conducted from July 1, 2022, to June 30, 2023, at the National Grid Hudson (Water Street) Site. Site activities were conducted in accordance with the NYSDEC-approved OM&M Plan (BBL/ARCADIS; January 2007) and the *Static Water Level Evaluation and Ground Water Monitoring Program Recommendation Memorandum* letter (dated August 15, 2007).

The groundwater quality has been steadily improving over the years based on the number and extent of chemical detections in the monitoring wells. Based on the annual groundwater sampling analysis report in 2023, MW-11 had detections of BTEX [totaling 5.2  $\mu$ g/L]. No other detections of any compounds analyzed were noted in the remaining wells.

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 National Grid

# 2023 Groundwater Monitoring Report



National Grid Hudson Water Street Site Water Street between Ferry Street and Broad Street Hudson, NY 12534

August 2023

Version 1





# 2023 Groundwater Monitoring Report

National Grid Hudson Water Street Site Water Street between Ferry Street & Broad Street Hudson, NY 12534

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: 0603324.125340.221

Date:

August 7, 2023

Devin T. Shay, PG Program Manager / Principal Hydrogeologist



# **Table of Contents**

1	ln <sup>-</sup>	troduction	1
	1.1	Overview	1
	1.2	Site Description	1
2	Qı	uarterly Site Inspections and Groundwater Monitoring Activities	2
	2.1	Quarterly Site Inspections	2
	2.2	Groundwater Well Gauging	2
	2.3	Annual DNAPL Monitoring and Collection	2
	2.4	Groundwater Well Sampling and Analysis	2
	2.5	Site Maintenance	2
3	Co	onclusions and Recommendations	3
	3.1	Conclusions	3
	3 2	Recommendations	3



# **Figures**

Figure 1 – Site Location Map

Figure 2 – Groundwater Elevation Map

# **Tables**

Table 1 – Groundwater Analytical Data

Table 2 – Water Level Elevations

# **Appendices**

Appendix A – Quarterly Inspection Forms

Appendix B - Well Sampling Field Data

Appendix C – Data Usability Summary Report and Analytical Data

Appendix D – Photograph Log



# Acronyms

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



## 1 Introduction

#### 1.1 Overview

Groundwater & Environmental Services, Inc. (GES) has prepared this 2023 Groundwater Monitoring Report (covering July 1, 2022 – June 30, 2023) for the Hudson (Water Street) Site, Hudson, New York. This annual report includes the requirements associated with the operation, maintenance, and monitoring of the Remedial Action Plan (RAP) at Operable Unit (OU) 1 of the Hudson (Water Street) Former Manufactured Gas Plant (MGP) Site located in Hudson, New York. Please refer to the *Operation, Maintenance, and Monitoring Plan* (OM&M Plan), dated January 2007, and the CDM Smith memorandum dated July 30, 2007, for well monitoring, groundwater sampling, site inspection requirements, and associated detailed site conditions and groundwater flow pattern documentation.

Groundwater monitoring has been conducted at the Site in order to evaluate the effectiveness of remedial activities previously completed at the Site and to monitor long-term groundwater quality trends. Currently, groundwater sampling at the Former MGP Site is performed on an annual basis.

The following Operation, Maintenance, and Monitoring (OM&M) activities conducted during this reporting period are summarized below:

- Quarterly site inspections, including checks on the surface cap, riverbank protection, security fencing, steel sheeting retaining wall, and the groundwater monitoring wells.
- Annual groundwater level measurements.
- Annual dense non-aqueous phase liquid (DNAPL) monitoring and collection, if necessary.
- 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) and naphthalene for comparison to New York State Department of Environmental Conservation (NYSDEC) Ambient Water Quality Standards (AWQS).
- Any site maintenance that comes about as a result of the quarterly inspections.

## 1.2 Site Description

The Hudson (Water Street) Former Manufactured Gas Plant Site located in Hudson, New York is comprised of approximately two acres of land and is owned by the City of Hudson (refer to **Figure 1 – Site Location Map** and **Figure 2 – Post Remediation Site Conditions** with current groundwater table elevations). The remedial action plan in place at the site was substantially completed in December 2006 and the OM&M Plan was finalized in January 2007 to provide a method for monitoring its effectiveness.

The objective of the post-construction groundwater monitoring task within the OM&M plan is to characterize post-remedy groundwater flow patterns and assess the quality of shallow groundwater as it leaves the site. Groundwater samples are analyzed for BTEX and naphthalene.



# 2 Quarterly Site Inspections and Groundwater Monitoring Activities

# 2.1 Quarterly Site Inspections

GES conducted quarterly site inspections during this reporting period. These quarterly inspections include checking the surface cap, riverbank protection, security fencing, steel sheeting retaining wall, and the groundwater monitoring wells.

In general, the Site is in good condition and in compliance.

**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 2**. In general, site groundwater flows radially outward from the former gas holder area toward the Hudson River, consistent with past groundwater elevation data.

# 2.3 Annual DNAPL Monitoring and Collection

Annual DNAPL monitoring was conducted at RW-1, RW-2, and CW-01A. No DNAPL product was recovered in any of the wells. No odors were noted. Annual DNAPL monitoring and recovery tables are included as part of **Attachment B**. To date, no DNAPL has been recovered from these passive wells.

# 2.4 Groundwater Well Sampling and Analysis

Groundwater samples were collected from monitoring wells MW-03, MW-05, MW-06 and MW-11 on June 22, 2023. 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 **Attachment B**.

Four aqueous field samples, a field duplicate, and trip blank were analyzed for BTEX (USEPA Method 8260C) and naphthalene. The samples were analyzed by Pace in accordance with the NYSDEC Analytical Services Protocol. Analytical results are summarized in **Table 1**. The Analytical Lab Report and Data Usability Summary Report are presented in **Appendix C**.

#### 2.5 Site Maintenance

Site inspections during this reporting period indicated no maintenance was required on site. Photographs from quarterly site visits are included in **Attachment D**.



# 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.
- Annual static water level measurements show that the groundwater direction is radially outward from the former gas holder area.
- Annual DNAPL monitoring indicated no collectable product.
- MW-11 had a total BTEX concentration of 5.2 micrograms per liter (μg/L). This is the only well with a detected concentration of any parameter analyzed. Reference **Table 1** for historical data.

## 3.2 Recommendations

It is recommended that all OM&M activities continue, with the next report due in July 2024.



# **Figures**

M:\Graphics\0600-Syracuse\Misc\National Grid\Hudson\Hudson\SLM.dwg, 7/6/2018 10:05:21 AM

Quadrangle Location

/اكا (Shaphics) (10600-Syracuse\Misc\National Grid\Hudson\Hudson SM.dwg, B6

2023 Groundwater Monitoring Report National Grid Hudson Water Street Site Hudson, NY 12534



# **Tables**



#### **Groundwater Analytical Data** MW-03

Parameter	EPA - Maximum Allowable (µg/L)	NYSDEC AWQS (µg/L)	Reporting Level (μg/L)	06/01/09	06/02/10	06/07/11	06/12/12	06/11/13	06/09/14	06/02/15	06/06/16	06/22/17	06/14/18	06/13/19	06/24/20	06/17/21	06/16/22	06/22/23
Benzene	5	1	1	ND (<1.0)														
Toluene	1000	5	1	ND (<1.0)														
Ethylbenzene	700	5	1	ND (<1.0)														
Xylene (total)	10000	5	3	ND (<2.0)	ND (<3.0)													
Naphthalene	N/A	10	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<2.0)	ND (<4.0)	ND (<1.0)				

All values reported in µg/L. NYSDEC AWQS ND (<#) NR **Bolded** = New York State Department of Environmental Conservation = Ambient Water Quality Standards = Not detected above laboratory reporting limits (indicated by #)

= Not Reported

= values indicate exceedance of the NYSDEC AWQS



#### **Groundwater Analytical Data** MW-05

Parameter	EPA - Maximum Allowable (µg/L)	NYSDEC AWQS (µg/L)	Reporting Level (µg/L)	06/01/09	06/02/10	06/07/11	06/12/12	06/11/13	06/09/14	06/02/15	06/06/16	06/22/17	06/14/18	06/13/19	06/24/20	06/17/21	06/16/22	06/22/23
Benzene	5	1	1	ND (<1.0)														
Toluene	1000	5	1	ND (<1.0)														
Ethylbenzene	700	5	1	ND (<1.0)														
Xylene (total)	10000	5	3	ND (<2.0)	ND (<3.0)													
Naphthalene	N/A	10	1	ND (<1.0)	ND (<2.0)	ND (<4.0)	ND (<1.0)											

All values reported in µg/L. NYSDEC AWQS ND (<#) NR = New York State Department of Environmental Conservation = Ambient Water Quality Standards = Not detected above laboratory reporting limits (indicated by #) = Not Reported

Bolded = values indicate exceedance of the NYSDEC AWQS



#### **Groundwater Analytical Data** MW-06

Parameter	EPA - Maximum Allowable (µg/L)	NYSDEC AWQS (µg/L)	Reporting Level (µg/L)	06/01/09	06/02/10	06/07/11	06/12/12	06/11/13	06/09/14	06/02/15	06/06/16	06/22/17	06/14/18	06/13/19	06/24/20	06/17/21	06/16/22	06/22/23
Benzene	5	1	1	ND (<1.0)														
Toluene	1000	5	1	ND (<1.0)														
Ethylbenzene	700	5	1	ND (<1.0)														
Xylene (total)	10000	5	3	ND (<2.0)	ND (<3.0)													
Naphthalene	N/A	10	1	ND (<1.0)	ND (<2.0)	ND (<4.0)	ND (<1.0)											

All values reported in µg/L. NYSDEC AWQS ND (<#) NR = New York State Department of Environmental Conservation = Ambient Water Quality Standards = Not detected above laboratory reporting limits (indicated by #) = Not Reported

Bolded = values indicate exceedance of the NYSDEC AWQS



#### **Groundwater Analytical Data** MW-11

Parameter	EPA - Maximum Allowable (µg/L)	NYSDEC AWQS (µg/L)	Reporting Level (μg/L)	06/01/09	06/02/10	06/07/11	06/12/12	06/11/13	06/09/14	06/02/15	06/06/16	06/22/17	06/14/18	06/13/19	06/24/20	06/17/21	06/16/22	06/22/23
Benzene	5	1	1	4.6	12	3	2.9	ND (<1.0)	1.9	ND (<4.0)	5.8	2.6	21.7	4.3	15.6	2.1	8.5	2.9
Toluene	1000	5	1	ND (<1.0)	ND (<4.0)	ND (<4.0)	ND (<1.0)											
Ethylbenzene	700	5	1	4.9	12	7	1.8	ND (<1.0)	1.1	ND (<4.0)	ND (<4.0)	ND (<1.0)	10.4	2.5	6.6	ND (<1.0)	3.1	2.3
Xylene (total)	10000	5	3	ND (<2.0)	4.6	3.3	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<8.0)	ND (<8.0)	ND (<3.0)	4.5	ND (<3.0)	4.1	ND (<3.0)	5.9	ND (<3.0)
Naphthalene	N/A	10	1	ND (<1.0)	2.6	2.5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<4.0)	ND (<4.0)	ND (<2.0)	3.3	ND (<2.0)	4.7	ND (<2.0)	ND (<4.0)	ND (<1.0)

All values reported in µg/L. NYSDEC AWQS ND (<#) NR

= New York State Department of Environmental Conservation = Ambient Water Quality Standards = Not detected above laboratory reporting limits (indicated by #) = Not Reported

Bolded = values indicate exceedance of the NYSDEC AWQS



Table 2
Water Level Elevations

				Water	Level Elev	ration (fee	t amsl)			
Well ID.	06/11/07	06/20/07	06/26/07	07/24/07	08/14/07	08/19/07	09/13/07	12/01/07	03/10/08	06/10/08
MW-02	1.73	1.95	0.95	1.79	1.96	1.77	1.72	1.23	1.32	1.77
MW-03	6.66	6.72	5.28	6.87	7.10	6.96	6.60	6.59	6.91	6.71
MW-05	6.67	6.97	5.70	6.82	7.02	6.87	6.90	7.12	6.99	6.88
MW-06	6.29	6.64	6.32	6.35	6.47	6.30	6.24	6.16	5.81	6.29
MW-07	3.84	4.09	3.86	3.54	3.56	3.39	3.65	4.76	6.09	3.84
MW-08A	2.89	3.46	2.51	2.62	2.74	2.52	2.61	2.88	3.52	2.80
MW-09A	2.92	3.15	2.84	3.11	3.25	3.25	3.13	2.85	2.86	2.95
MW-10*	6.99	7.08	6.52	7.57	6.49	6.31	7.17	6.59	7.94	6.42
MW-11	6.77	6.76	6.45	6.63	6.21	6.04	6.80	7.15	8.71	6.82
OW-2	6.93	7.10	5.88	6.97	7.12	6.99	7.25	7.22	7.10	7.00
OW-4	7.14	7.33	6.66	7.18	7.32	7.16	7.24	7.38	7.31	7.21
Hudson River	0.84	2.19	0.54	0.49	-0.86	1.29	-0.21	-0.74	-0.51	2.39
CW-01A	7.55	n/a	n/a	n/a	n/a	n/a	8.02	7.67	8.89	7.97
RW-1	1.49	n/a	n/a	n/a	n/a	n/a	1.05	0.17	0.99	2.27
RW-2	0.96	n/a	n/a	n/a	n/a	n/a	0.85	-0.54	-0.14	2.40

\* = Estimated elevation; well paved over during surveying but uncovered presently and can be monitored



Table 2
Water Level Elevations

W-II ID				Water	Level Elev	ration (fee	t amsl)			
Well ID.	09/16/08	12/03/08	03/04/09	06/01/09	09/09/09	12/14/09	03/08/10	06/02/10	09/14/10	12/01/10
MW-02	1.70	1.36	0.54	1.90	1.92	1.75	1.17	1.98	1.97	1.59
MW-03	7.01	6.83	6.07	6.77	7.49	7.02	6.67	6.97	7.05	6.91
MW-05	7.48	7.39	6.47	6.65	7.63	7.40	6.92	6.81	7.37	7.18
MW-06	6.57	6.24	5.39	6.36	6.79	6.36	5.78	6.22	6.00	6.20
MW-07	4.41	4.92	4.27	4.05	4.67	4.94	5.19	3.83	3.64	4.29
MW-08A	2.94	2.91	2.36	2.75	2.76	2.91	3.31	2.61	1.54	1.96
MW-09A	3.17	2.80	2.22	2.90	3.17	3.02	2.75	2.88	3.20	2.98
MW-10*	6.94	6.31	5.36	5.72	6.79	7.89	5.77	5.75	6.91	5.92
MW-11	7.22	7.75	7.17	6.80	6.71	7.65	8.09	6.27	5.85	6.87
OW-2	7.62	7.45	6.57	6.78	7.82	7.47	7.02	6.90	7.00	7.25
OW-4	7.70	7.52	6.76	7.06	7.89	7.60	7.19	7.11	7.16	7.43
Hudson River	1.57	-0.87	1.79	1.03	0.61	-0.23	-0.81	1.49	2.54	3.53
CW-01A	8.02	8.26	7.87	7.67	7.40	8.27	8.67	6.65	7.92	n/a
RW-1	0.77	0.24	1.11	1.51	0.14	-0.05	0.44	1.87	2.23	3.92
RW-2	0.78	-0.66	1.77	1.19	0.48	-0.39	-0.80	1.61	2.54	3.46

\* = Estimated elevation; well paved over during surveying but uncovered presently and can be monitored



Table 2
Water Level Elevations

				Water	Level Elev	ration (fee	t amsl)			
Well ID.	03/09/11	06/07/11	09/13/11	11/15/11	03/19/12	06/12/12	09/17/12	12/03/12	03/06/13	06/11/13
MW-02	0.67	2.50	3.43	1.75	1.08	2.03	1.68	1.34	1.00	2.30
MW-03	6.05	7.27	8.44	7.69	6.65	6.97	7.35	6.70	6.65	7.15
MW-05	6.35	6.92	7.82	7.85	6.74	6.77	7.12	7.07	6.62	6.89
MW-06	5.42	6.64	7.45	6.54	5.64	6.39	6.56	6.04	5.65	6.84
MW-07	5.86	4.02	5.71	4.51	4.17	3.84	4.28	4.12	4.64	5.22
MW-08A	3.66	2.83	4.10	2.86	2.51	2.71	2.84	2.66	2.76	4.01
MW-09A	2.40	3.05	4.10	3.17	2.52	3.00	3.00	2.68	2.50	3.25
MW-10*	5.91	5.81	6.58	6.47	5.27	5.79	6.23	5.38	5.07	5.56
MW-11	8.75	6.57	7.84	6.87	6.84	6.50	6.69	6.65	6.87	8.89
OW-2	6.44	7.17	8.02	8.03	6.82	6.87	7.32	7.28	6.72	7.06
OW-4	6.71	7.46	8.26	7.94	7.00	7.12	7.51	7.26	6.91	7.38
Hudson River	0.57	0.87	3.25	-1.21	2.48	1.99	-1.39	0.00	2.89	1.69
CW-01A	n/a	n/a	8.60	7.49	7.61	7.45	7.62	7.07	8.15	9.25
RW-1	1.33	1.67	3.06	-0.39	2.09	1.50	-0.61	0.92	2.27	2.31
RW-2	0.78	1.06	2.38	-1.00	2.46	1.93	-1.11	0.06	2.84	1.76

\* = Estimated elevation; well paved over during surveying but uncovered presently and can be monitored



Table 2
Water Level Elevations

						w	ater Leve	Elevation	ı (feet am	sl)					
Well ID.	09/16/13	12/10/13	03/09/14	06/09/14	09/08/14	12/01/14	06/02/15	06/06/16	06/22/17	06/14/18	06/13/19	06/24/20	06/17/21	06/16/22	06/22/23
MW-02	1.77	2.05	n/a	2.17	1.70	1.17	1.61	2.03	2.33	2.30	2.40	2.49	2.15	2.09	2.07
MW-03	7.05	6.57	6.24	7.04	6.95	6.90	6.67	7.77	7.44	6.17	6.72	6.89	7.29	7.02	6.76
MW-05	6.92	6.57	6.39	6.67	6.75	6.92	6.37	6.62	6.99	6.37	6.62	6.47	6.71	6.63	6.39
MW-06	6.38	6.58	5.38	6.64	6.29	6.27	6.34	6.24	7.10	6.39	6.29	6.17	6.81	6.60	6.00
MW-07	3.70	4.07	3.65	3.96	3.73	4.61	3.97	4.02	4.44	3.69	4.20	3.61	4.04	3.89	3.61
MW-08A	2.65	2.86	2.90	2.84	2.58	3.06	2.86	2.96	3.04	2.96	2.92	2.63	2.76	2.84	2.63
MW-09A	2.97	2.83	2.28	2.82	2.92	2.95	2.60	3.05	2.98	3.00	2.60	2.56	2.45	3.02	2.88
MW-10*	5.67	5.29	4.75	6.47	6.79	6.27	6.18	6.49	5.71	5.54	5.79	6.81	6.66	7.88	6.69
MW-11	6.11	6.99	7.47	6.52	5.74	7.70	7.10	6.75	7.09	6.02	6.63	5.85	6.43	6.20	5.41
OW-2	7.07	6.56	6.41	6.82	6.82	7.02	6.52	6.72	7.04	6.54	6.87	6.49	6.93	6.80	6.45
OW-4	7.20	6.81	6.56	7.14	7.01	7.18	6.74	6.91	7.32	6.80	7.04	8.69	7.20	7.02	6.53
Hudson River	1.69	0.87	n/a	1.49	1.51	2.29	1.87	0.49	1.85	-1.46	2.67	-4.46	0.39	-0.96	0.26
CW-01A	6.89	8.09	n/a	7.27	5.99	8.54	8.15	8.23	8.02	6.62	7.17	5.77	7.31	7.24	5.59
RW-1	1.09	1.37	1.14	1.05	1.07	1.81	1.24	0.43	0.50	0.59	2.16	0.74	1.85	2.10	1.04
RW-2	1.56	0.96	0.11	1.38	1.66	2.21	1.76	0.36	0.64	-0.94	2.52	-0.64	0.91	-0.54	0.83

= Estimated elevation; well paved over during surveying but uncovered presently and can be monitored.



# **Appendix A – Quarterly Inspection Forms**

Date:	9/22/2022
Technician <sup>-</sup>	KI

Time: 11:30
Weather: Rain 60's

	Surface Cover Area	as	
Excessive Settlement Observed	YES	NO	COMMENTS:
Cracks or Potholes Observed	YES	NO	
Depressions and/or Rutting Observed	YES	NO	
Exposed Subbase Materials Observed	YES	NO	

Erosion Controls (Rip-Rap or Sod)						
Exposed or Damaged Geotextile layer(s) Observed YES NO COMMENTS:						
Excessive Settlement Observed	YES	NO				
Stressed Vegetation Observed	YES	NO				

Steel Sheetpile Retaining Wall					
Settlement of Wall	YES	NO	COMMENTS:		
Subsidence or Cracking of Soils Behind the Wall	YES	NO			
Cracking or Separation of Wall Joints	YES	NO			

Trees, Shrubs and other Planting Materials				
Strong Growth Observed YES NO COMMENTS:				

Surface Water Quality					
Sheens Observed On:	Rip-Rap	NONE	MINOR	SIGNIFICANT	COMMENTS:
	Sheetpile Wall	NONE	MINOR	SIGNIFICANT	
	Other Water Surfaces	NONE	MINOR	SIGNIFICANT	

Site Monitoring Wells			
Well ID.	Location Secure		
MW-02	YES NO		
MW-03	YES	NO	
MW-05	YES	NO	
MW-06	YES	NO	
MW-07	YES	NO	
MW-08A	YES	NO	
MW-09A	YES	NO	
MW-10	YES	NO	
MW-11	YES	NO	
OW-2	YES	NO	
OW-4	YES	NO	
CW-01A	YES	NO	
RW-1	YES NO		
RW-2	YES	NO	

Date:	12/7/2022
Technician <sup>.</sup>	KL

Time: 11:30
Weather: Cloudy 60

Surface Cover Areas					
Excessive Settlement Observed	YES	NO	COMMENTS:		
Cracks or Potholes Observed	YES	NO			
Depressions and/or Rutting Observed	YES	NO			
Exposed Subbase Materials Observed	YES	NO			

Erosion Controls (Rip-Rap or Sod)					
Exposed or Damaged Geotextile layer(s) Observed	YES	NO	COMMENTS:		
Excessive Settlement Observed	YES	NO			
Stressed Vegetation Observed	YES	NO			

Steel Sheetpile Retaining Wall					
Settlement of Wall	YES	NO	COMMENTS:		
Subsidence or Cracking of Soils Behind the Wall	YES	NO			
Cracking or Separation of Wall Joints	YES	NO			

Trees, Shrubs and other Planting Materials				
Strong Growth Observed YES NO COMMENTS:				

Surface Water Quality					
Sheens Observed On:	Rip-Rap	NONE	MINOR	SIGNIFICANT	COMMENTS:
	Sheetpile Wall	NONE	MINOR	SIGNIFICANT	
	Other Water Surfaces	NONE	MINOR	SIGNIFICANT	

Site Monitoring Wells			
Well ID.	Location Secure		
MW-02	YES NO		
MW-03	YES	NO	
MW-05	YES	NO	
MW-06	YES	NO	
MW-07	YES	NO	
MW-08A	YES	NO	
MW-09A	YES	NO	
MW-10	YES	NO	
MW-11	YES	NO	
OW-2	YES	NO	
OW-4	YES	NO	
CW-01A	YES NO		
RW-1	YES NO		
RW-2	YES	NO	

Date:	3/23/2023
Technician -	KI

Time: 10:15
Weather: Cloudy 52

Surface Cover Areas				
Excessive Settlement Observed	YES	NO	COMMENTS:	
Cracks or Potholes Observed	YES	NO		
Depressions and/or Rutting Observed	YES	NO		
Exposed Subbase Materials Observed	YES	NO		

Erosion Controls (Rip-Rap or Sod)			
Exposed or Damaged Geotextile layer(s) Observed	YES	NO	COMMENTS:
Excessive Settlement Observed	YES	NO	
Stressed Vegetation Observed	YES	NO	

Steel Sheetpile Retaining Wall			
Settlement of Wall	YES	NO	COMMENTS:
Subsidence or Cracking of Soils Behind the Wall	YES	NO	
Cracking or Separation of Wall Joints	YES	NO	

Trees, Shrubs and other Planting Materials			
Strong Growth Observed	YES	NO	COMMENTS:

Surface Water Quality					
Sheens Observed On:	Rip-Rap	NONE	MINOR	SIGNIFICANT	COMMENTS:
	Sheetpile Wall	NONE	MINOR	SIGNIFICANT	
	Other Water Surfaces	NONE	MINOR	SIGNIFICANT	

Site Monitoring Wells			
Well ID.	Location	n Secure	
MW-02	YES	NO	
MW-03	YES	NO	
MW-05	YES	NO	
MW-06	YES	NO	
MW-07	YES	NO	
MW-08A	YES	NO	
MW-09A	YES	NO	
MW-10	YES	NO	
MW-11	YES	NO	
OW-2	YES	NO	
OW-4	YES	NO	
CW-01A	YES	NO	
RW-1	YES	NO	
RW-2	YES	NO	

Date:	6/22/2023
Technician <sup>-</sup>	KI

Time: 9:00
Weather: Sunny 68

Surface Cover Areas				
Excessive Settlement Observed	YES	NO	COMMENTS:	
Cracks or Potholes Observed	YES	NO		
Depressions and/or Rutting Observed	YES	NO		
Exposed Subbase Materials Observed	YES	NO		

Erosion Controls (Rip-Rap or Sod)			
Exposed or Damaged Geotextile layer(s) Observed	YES	NO	COMMENTS:
Excessive Settlement Observed	YES	NO	
Stressed Vegetation Observed	YES	NO	

Steel Sheetpile Retaining Wall			
Settlement of Wall	YES	NO	COMMENTS:
Subsidence or Cracking of Soils Behind the Wall	YES	NO	
Cracking or Separation of Wall Joints	YES	NO	

Trees, Shrubs and other Planting Materials			
Strong Growth Observed	YES	NO	COMMENTS:

Surface Water Quality										
Sheens Observed On:	Rip-Rap	NONE	MINOR	SIGNIFICANT	COMMENTS:					
	Sheetpile Wall	NONE	MINOR	SIGNIFICANT						
	Other Water Surfaces	NONE	MINOR	SIGNIFICANT						

Site Monitoring Wells									
Well ID.	Location	n Secure							
MW-02	YES NO								
MW-03	YES	NO							
MW-05	YES	NO							
MW-06	YES	NO							
MW-07	YES	NO							
MW-08A	YES	NO							
MW-09A	YES	NO							
MW-10	YES	NO							
MW-11	YES	NO							
OW-2	YES	NO							
OW-4	YES	NO							
CW-01A	YES	NO							
RW-1	YES	NO							
RW-2	YES	NO							



# **Appendix B – Well Sampling Field Data**

National Grid Water Street-Operable Unit 1 Hudson, New York

Well ID.	Sample?	Well Size	Well Material	Stickup- Flush	DTP	рт₩	ĐŦB	Sump ?	Comments
MW-02	No	2"	PVC	Flush	100H 4	,03	20.50	No	
-MW-03	Yes	2"	PVC	Flush	2.21		25.50	No	
MW-05	Yes	2"	PVC	Stickup	6.19		28.10	No	Duplicate Sample
MW-06	Yes	2"	PVC	Stickup	5.84		26.10	Yes	MS/MSD
MW-07	No	2"	PVC	Stickup	5.33		24.55	Yes	
MW-08A	No	2 <sup>n</sup>	PVC	Flush	3.73		25.85	No	
MW-09A	No	2"	PVC	Stickup	5.50		25.07	Yes	
MW-10	No	2"	PVC	Flush	2-00		28.70	Yes	
MW-11	Yes	2"	PVC	Flush	4.16		8.10	Yes	
OW-2	No	2"	PVC	Stickup	6.37		27.55	Yes	
OW-4	No	2"	PVC	Stickup	6.13		28.05	Yes	
Hudson River	No				5.03		N/C	No	Chiseled square adjacent to the 8th railing post on top of the sheetpile wall.
CW-01A	No	4"	Steel	Flush	4.08		30.90	Yes	
RW-1	No	4"	PVC	Flush	4.05		26.50	Yes	
RW-2	No	4"	PVC	Flush	4.13		22.35	Yes	



National Grid Water Street, Hudson, New York

Protect Office, Francois, Francois	
Sampling Personnel:	Date: 6/23/23
Job Number: 0603324-125340-221	Weather: Sun 65
Welf id: MW-03	Time In: 10115 Time Out: 1/20
Well Information	
TOC Other	Well Type: Flushmount Stick-Up
Depth to Water: (feet) 2.2	Well Locked: Yes No
Depth to Product: (feet)	Measuring Point Marked: Yes No
Depth to Bottom: (feet) 25.50	Well Material: PVC SS Other: Well Diameter: 1" 2" Other:
Length of Water Column: (feet) 3.74  Volume of Water in Well: (gal) 3.77	Comments:
Three Well Volumes: (gal) 16-17	Gaillione.
Purging Information	
1 diging information	Conversion Factors
Purging Method: Bailer Peristallic Grundfos	
Tubing/Bailer Material: Teflon Stainless St. Polyet	hylene of
Sampling Method: Bailer Peristaltic Grundfos	
Average Pumping Rate: (ml/min)	1 gallon=3.785L=3785mL=1337cu. feet
Duration of Pumping: (min) 30	
Total Volume Removed: (gal) 2 Did well go dry?	Yes No
Horiba U-52 Water Quality Meter Used?	
Time DTW Temp pH ORP	Conductivity Turbidity DO TDS
(feet) (°C) (mV)	(mS/cm) (NTU) (mg/L) (g/L)
10:15 273 19:46 7.18 -118	1.36 3.4 3.30 10.873
10,20 3.78 1864 6.95 -124	1.13 1.9 1.20 0.719
10:25 4.44 18.56 6.91 125	1.03 0.0 0.76 0.660
N:30 5.85 18.36 6.91 -126	1.02 0.0 0.68 0.651
10:35 6.72 18.59 6.92 -126	1.01 0.0 6.39 0-495
10:40 7.43 18.54 6.91 -125	1.01 0.0 0.58 0.647
10:45 8-52 18.20 6-92 -124	1.00 00 0.55 0.643
Sampling Information:	
USEPA SW-846 Method 8260 VOC's BTEX Including Naphthalene	3 - 40 mL vials Yes No
Sample ID: MW-03-0623 Duplicate? Yes No	Shipped: Pace Courier Pickup
Sample Time: 10:45 MS/MSD? Yes No	Drop-off Albany Service Center
Comments/Notes:	Laboratory: Pace Analytical
	Greensburg, PA
\\svrrmt88-vm3\syracuse-01\Dashboard\Planning\949173.xism	Page 7 of 13

Sampling Per	sonnel: Ri	ke hon			Date: 6/	121/23		
Job Number:					Weather:	Sung		
Well ld.	MW-05				Time In: Ø	926	Time Out:	1005
Well Inf	formation		- <u>-</u>				·	K 2
			TOC	Other	Well Type:			Stick-Up
Depth to Wate			6.18		Well Locke		Yes	No
Depth to Prod		(feet)	20.40			Point Marked:	Yes	No.
Depth to Botto		(feet)	28.10		Well Materi Well Diame		F	her:
Length of War			2/92 3.50		Comments		2"\Otr	ier.
Three Well Vo			10.52		Commenta			
THEC VACH A	Junes.	(gal)	70.5a	<u></u>				
	-							
Purging tr	nformation						Conversion F	Factors
Purging Metho	od.	Bailer	Peristaltic	Grund	fos Pump	gal/ft.	1" ID 2" ID	4" ID 6" ID
Tubing/Bailer		Teflon		الاسسنكار	yethylene X	gai/π. of		<del>                                     </del>
Sampling Met		Bailer		<del>k - /</del>	fos Pump	water	0.04 0.16	0.66 1.47
Average Pum			200	<del>Z_3</del>	· <del>L</del>	<del></del>	lon=3.785L=3785n	<del></del>
Duration of Pt			30					
Total Volume		(gal)		Did well go dry?	Yes No	Z]		I
Horiba U-52 V	Water Quality M		·	No 🗌		<del></del>		
Time	DTW	Temp	рΗ	ORP	Conductivity	Turbidity	DO	TDS
	(feet)	(°C)		(mV)	(mS/cm)	(NTU)	(mg/L)	(g/L)
0930	7.76	18.44	2024	-164	0.816	1,2	0,95	0.522
0935	9.45	16.82	2.31	-156	0.823	0.4	0.75	0.527
0940	10.52	16.32	2,76	-158	0.832	0.6	0.71	0.533
0975	11.72	16.14	7.32	-154	0.836	0.8	0.73	0.535
0950	13.00	16.07	<b>2.3</b> 3	-152	0.835	1.0	0.67	0.533
0955	13.93	16.50	2.32	-15/	0.827	1.3	0.64	0.53/
1000	14.84	16.64	7.32	-150	0.823	1.5	0.62	0.526
		1		<u> </u>	<del> </del>			1
			<u> </u>		4			1
		-		+	<u> </u>	*	<u> </u>	+
		<del> </del>	<u>!</u>	1	1		<u> </u>	<del> </del>
		<u> </u>	<u></u>		<u> </u>		<u> </u>	<u> </u>
Sampling Inf	formation:					<del></del>	40	
Запіріпів	Оппаноп.							
USEPA SW-84	16 Method 8260	VOC's B	STEX Includin	ng Naphthalene		6 - 40 mL vials	Yes	No No
Sample ID:	MW-05-06	egg Dur	nlinata?	Yes No	<b>FD-0622</b> Shi	ipped: P	ace Courier Pick	
Sample ID:	10 50				PD-0022 OH			· 🖂
Sample Time:	1000	10:0	/NOD?	Yes No X		Diop-o	ff Albany Service	3 Center
Comments/No	otes:					Laboratory:	Pace Ana Greensbu	-

	,							
Sampling Per	sonnel: P	he hon			Date: 6/	122/23		
Job Number:	0603324-1	l l			Weather:	Suny 70°		<u> </u>
Well ld.	MW-06				Time In:	010	Time Out:	1050
Well Inf	ormation							
VICE III	Official		TOC	Other	Well Type:	Flus	hmount :	Stick-Up
Depth to Wate	er <sup>,</sup>	(feet)	5.84	- Cuitor	Well Locke		Yes	No
Depth to Prod		(feet)	7		Measuring F		Yes	No
Depth to Botto		(feet)	26.10		Well Mater		X ss Oth	ier:
Length of Wa		(feet)	20.25		Well Diame		2" 🗙 🔾 🔾	
Volume of Wa		(gal)	3.24		Comments			
Three Well Vo		(gal)	9.72					
THICC VVCIK, V	Citatics.	(944)	6.76		·		··········	· · · · · · · · · · · · · · · · · · ·
<u> </u>								
	*					·		
Purging i	nformation	,				<u> </u>	Conversion F	actors
	<u> </u>			<b>—</b>	fos Pump		1" ID 2" ID	4" ID 6" ID
Purging Meth		Baile	<del></del>		yethylene	gal/ft.	1 10 2 10	7 10 0 10
Tubing/Bailer		Teflor	<del></del>	K7	fos Pump	of water	0.04 0.16	0.66 1.47
Sampling Me		Baile		Grund	ios Pump[]		on=3.785L=3785n	
Average Pum		(ml/min)	200			T gain	JII-3.763E-3763II	1L-1307 Cd. 1661
Duration of P		(min)	30	الملم ممالمين	Yea No	<del></del> .		
Total Volume	Removed:	(gal)		oid well go dry?	Yes No	X		
Horiba U-52 \	Water Quality N	/leter Used?	Yes	No ☐		\		
<u> </u>	······································							
Time	DTW	Temp	pH	ORP	Conductivity	Turbidity	DO	TDS
	(feet)	(°C)	·	(mV)	(mS/cm)	(NTU)	(mg/L)	(g/L)
1515	6.33	22.83	6.98	-98	1.11	31,4	3.41	0.705
1020	6.86	22.45	6.87	-88	1,07	32.1	1.48	6.683
1525	7.02	22.03	6.86	-90	1.07	32.5	1.02	0.686
1030	8.54	20.64	6.87	-/03	1.09	32.1	0.52	0.697
1035	9.63	20.55	6.88	-106	1.09	34.6	0.48	0.699
1040	10.88	20.46	6.86	-108	1.09	40.4	0.45	0.697
1045	12.06	20.51	6.89	-///	1,09	37.2	0.45	0.695
		<i>31.</i> .						
Sampling In	formation:		., ···					
g camping m	normation.							
-						0 40 1 1	Vac	No No
LIGERA OWA O	40 Marthard 0000	VOC's	DTEV Includia	na Nanhthalana		4 - All mi viais		
<del>1</del> 1	46 Method 8260	VOC's		ng Naphthalene		9 - 40 mL vials	1 63	
MW-06-	-MS-0623	MW-06-MSD-	0623	r - 1	7) cr			
MW-06 Sample ID:	MS-0623 MW-06-0	MW-06-MSD- 623 Do	<b>0623</b> uplicate?	Yes No	Sr	nipped: P	ace Courier Picl	кир 🔀
MW-06-	-MS-0623	MW-06-MSD- 623 Do	0623	r - 1	Sr	nipped: P	ace Courler Picl ff Albany Servic	cup e Center
MW-06 Sample ID:	-MS-0623 <u>MW-06-0</u> <u>/0 4</u> 7	MW-06-MSD- 623 Do	<b>0623</b> uplicate?	Yes No	Sr	nipped: P	ace Courier Picl	kup e Center

	<u> </u>
Sampling Personnel:	Date: 6/22/
Job Number: 0603324-125340-221	Weather: Smy 69
Welfid. MW-11	Time In: 09-103 Time Out: 10=0
AAL-II II-E	
Well Information TOC Other	Well Type: Flushmount Stick-Up
Depth to Water: (feet) 1-110	Well Locked: Yes No
Depth to Product: (feet)	Measuring Point Marked: Yes No No
Depth to Bottom: (feet) 8.10	Well Material: PVC SS Other:
Length of Water Column: (feet) 3.94	Well Diarneter: 1 <sup>™</sup> 2 <sup>™</sup> Other:
Volume of Water in Well: (gal) U-63  Three Well Volumes: (gal) 1-99	Comments:
Finee vven volumes. (gas) [-7]	
Purging Information	C
Purging Method: Bailer Peristaltic Grundfos	Conversion Factors s Pump
<u> </u>	thylene gal/ft. 1" ID 2" ID 4" ID 6" ID
Sampling Method: Bailer Peristaltic Grundfos	
Average Pumping Rate: (ml/min)	1 gallon=3.785L=3785mL=1337cu. feet
Duration of Pumping: (min) 30	
Total Volume Removed: (gal) 2 Did well go dry?	Yes No
Horiba U-52 Water Quality Meter Used?	0
Time DTW Temp pH ORP	Conductivity Turbidity DO TDS
n t l t l	
(feet) (°C) (mV)	(mS/cm) (NTU) (mg/L) (g/L)
09:20 4.21 19.00 7.30 -127	1-80 3.0 1.82 6.16
09:20 4.21 19.00 7.30 -127	1-80 3.0 1.82 6.16 1-80 1-2 1.06 1.15
09:20 4.21 19.00 7.30 -127 09:25 4.22 18:45 7.06 -130 09:30 4.23 19:16 7.00 -127	1-80 3.0 1.82 1.16 1-80 1.2 1.06 1.15 1.78 2.0 0.71 1.14
09:20 4.21 19.00 7.30 -127 09:25 4.22 18:48 7.06 ~130 09:30 4.28 18:16 7.00 -127 09:35 4.24 18:00 6.99 ~127	1-80 3.0 1.82 1.16 1-80 1-2 1.06 1.15 1.78 2-0 12.71 1.14
09:20 4.21 19.00 7.30 -127 09:25 4.22 18:45 7.06 ~130 09:30 4.22 18:16 7.00 -127 09:35 4.24 18:00 6.99 ~127	1-80 3.0 1.82 6.16 1-80 1-2 1.06 1.15 1.78 2.0 0.71 1.14 1.77 0.6 0.89 1.14
09:20 4.21 19.00 7.30 -127 19:25 4.22 18.43 7.06 -130 09:30 4.23 19.16 7.00 -127 09:35 4.24 18.00 6.99 -127 09:40 4.24 18.05 6.99 .126	1-80 3.0 1.82 6.16 1-80 1.2 1.06 1.15 1.77 0.6 0.89 1.14 1.76 0.5 0.73 1.13
09:20 4.21 19.00 7.30 -127 09:25 4.22 18.45 7.06 -130 09:30 4.28 18.16 7.00 -127 09:35 4.24 18:00 6.99 -127 09:40 4.24 18:00 10.99 .126 69 45 4.24 18:60 6.98 -126	1-80 3.0 1.82 6.16 1-80 1.2 1.06 1.15 1.77 0.6 0.89 1.14 1.76 0.5 0.73 1.13
09:20 4.21 19.00 7.30 -127 09:25 4.22 18.45 7.06 -130 09:30 4.28 18.16 7.00 -127 09:35 4.24 18:00 6.99 -127 09:40 4.24 18:00 10.99 .126 69 45 4.24 18:60 6.98 -126	1-80 3.0 1.82 6.16 1-80 1.2 1.06 1.15 1.77 0.6 0.89 1.14 1.76 0.5 0.73 1.13
09:20 4.21 19.00 7.30 -127 09:25 4.22 18.45 7.06 -130 09:30 4.28 18.16 7.00 -127 09:35 4.24 18.00 6.99 -127 09:40 4.24 18.00 10.99 .126 69:45 4.24 18.60 6.98 -126 09:50 4.24 18.60 6.99 -126	1-80 3.0 1.82 6.16 1-80 1.2 1.06 1.15 1.77 0.6 0.89 1.14 1.76 0.5 0.73 1.13
09:20 4.21 19.00 7.30 -127 09:25 4.22 18.45 7.06 -130 09:30 4.28 18.16 7.00 -127 09:35 4.24 18.00 6.99 -127 09:40 4.24 18.00 10.99 .126 69:45 4.24 18.60 6.98 -126 09:50 4.24 18.60 6.99 -126	1-80 3.0 1.82 1.16 1-80 1.2 1.06 1.15 1.77 0.6 0.89 1.14 1.76 0.5 0.73 1.13
09:20 4.21 19.00 7.30 -127 09:25 4.22 18.45 7.06 -130 09:30 4.28 18.16 7.00 -127 09:35 4.24 18.00 6.99 -127 09:40 4.24 18.00 10.99 .126 69:45 4.24 18.60 6.98 -126 09:50 4.24 18.60 6.99 -126	1-80 3.0 1.82 1.16 1-80 1.2 1.06 1.15 1.77 0.6 0.89 1.14 1.76 0.5 0.73 1.13
09:20 4.21 19.00 7.30 -127 09:25 4.22 18.45 7.06 -130 09:30 4.28 18.16 7.00 -127 09:35 4.24 18.00 6.99 -127 09:40 4.24 18.00 10.99 .126 69:45 4.24 18.60 6.98 -126 09:50 4.24 18.60 6.99 -126	1-80 3.0 1.82 6.16 1-80 1.2 1.06 1.15 1.77 0.6 0.89 1.14 1.76 0.5 0.73 1.13
09:20 4.21 19.00 7.30 -127 19:25 4.22 18.48 7.06 ~130 19:30 4.28 18.16 7.00 -127 09:35 4.24 18.00 6.99 ~127 09:40 4.24 18.60 6.99 ~126 09:45 4.24 18.60 6.98 -126 09:50 4.24 18.60 6.99 ~120	1-80 3.0 1.82 1.16 1-80 1.2 1.06 1.15 1.78 2.0 0.71 1.14 1.77 0.6 0.89 1.14 1.76 0.5 0.73 1.13 1.76 0.9 0.70 1.13 1.76 0.9 0.70 1.13
09:20 4.21 19.00 7.30 -127 19:25 4.22 18.43 7.06 ~130 19:30 4.23 18.16 7.00 -127 09:35 4.24 18.00 6.99 ~127 09:40 4.24 18.60 6.99 ~126 09:45 4.24 18.60 6.98 -126 09:50 4.24 18.60 6.99 ~126	1-80 3.0 1.82 6.16 1-80 1.2 1.06 1.15 1.77 0.6 0.89 1.14 1.76 0.5 0.73 1.13
O9:25 4.21	1-80 3.0 1.82 1.16 1-80 1.2 1.06 1.15 1.78 2.0 0.71 1.14 1.77 0.6 0.89 1.14 1.76 0.5 0.73 1.13 1.76 0.9 0.70 1.13 1.76 0.9 0.70 1.13
O9:25 4.21	1-80 3.0 1.82 1.16 1-80 1-2 1.06 1.15 1.78 2.0 0.71 1.14 1.77 0.6 0.89 1.14 1.76 0.5 0.73 1.13 1.76 0.9 0.70 1.13 1.76 0.9 0.70 1.13
O9:25	1-80 3.0 1.82 6.16 1-80 1-2 1.06 1.15 1.78 2-0 0.71 1.14 1.77 0.6 0.5 0.73 1.13 1.76 0.5 0.71 1.13 1.76 0.4 0.70 1.13 1.76 0.4 0.70 1.13 Shipped: Pace Courier Pickup



# CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

i 	Section 8		Section C																		Pag	je:	1011	
Regulted Client Information:	Required Project Information:		Invoice Infor	mation:						_			٦ :							201/4	OFFICE OFFICE			
Company: GES - Syracuse	Report To: Devrn Shay (GES) dshay@gesonline.com		t .			at ges-mvoice			·				_							DRY A		_		
Address: 6780 Northern Blvd. Suite 100	Report To: Tim Beaumont (GES)					ronmental Se							↓,	NPO					TAW C	R		KING W	ATER	
East Syrecuse, New York 13057			Address 674	80 Northern I	3Nd, Saite 16	0. East Syrac	use, MY	13057					] 1	UST	Г		Ŕ	CRA			OTHE			
Email To: dshay@gesonline.com	Purchase Order No.:		Pace Quote	Reference:									<u>ַ</u>		SI	ITE			GA	₩.	IN	MI	NC	
x4051	Project Name: National Grid Wate Hudson NY	r Street	Pace Projec		_								-	LOCA					OH	sc	/ W	77	OTHER	- /
Requested Due Date/TAT: Standard	Project Number: 0603324-126340-221-1196	,	Pace Profile	# Ann	ual GWS	<u> </u>								Filtered (	Y/N)				/	//	-//	4	-/-/	_/
Sections D. Braulant Client Information	Valle Agent Codes  MATERY Codes  CACIO Commonto Assays De   Materia Codes  Materi	MATRIX CODE SAMPLE TYPE G+GRAB C=COMP	COMPOSITE ST		ECTED W		BAMPLE TEMP AT COLLECTION	#OF CONTAINERS	hea	Pres	servativ		and Zn Acolaic konium Chloride	Requeste Analysis:										/
######################################		SAI	DATE	TIME	DATE .	TIME			9	Š	E E	CrS,41%	NBOH ant Benzyikor			**/	<u> </u>		/	//			Pace Pi	oject Number Lab J.D.
	2	WT G			1/22/2	\$10:45	,	. 3			3	П			3				{		1			
454.5.000		WT G	**		1	10:00		3			3			Ĺ	3			Ц.			$\bot$			
MVV-5-0623		WT G				10.45		3			3			<u> </u>	3	11	$\perp$	<u> </u>		4				
MW-6-MS-06		WT G				10:45		3		Ш	3	$\perp \downarrow$			3	14	_	$\perp \downarrow$			$\perp$			
ADM C MCD O		WT G			П	10:15		3		Ш	3	Ш		<u> </u>	3	11	┷		$\dashv$					
5 MW-8-MSD-6		WT G				09:50					3	11	$\perp$		3	11	4	11	_4		4			
Field Duplicate		WT G						3		$\perp \downarrow$	3	$\perp \downarrow$		<u> </u>	3	14	_	11			_			
Trip Blank		WT G			V	11:00		2		$\downarrow \downarrow$	2	$\downarrow \downarrow$	4	<u> </u>	2	$\coprod$	-	$\sqcup$		_	_			
		WT G					<u> </u>	<u> </u>	11		$\perp$	$\sqcup$	_		_	$\Box$	4	$\sqcup$			4			
10		WT G				1	L	L.	4	1	$\perp$	4-4	4	ļ	_ -	-	<del> </del>	$\downarrow \downarrow$			-			
		WT G				ļ		<u> </u>	$\perp \downarrow$	44	$\perp$	11	$\perp$	<del>]</del> —		$\dashv$		++			-4-			
12		wī c				<u> </u>	ļ <u>.</u>	<u> </u>	11	44	Ц.	$\dashv$	+	<del> </del>		$\dashv$		H						
43		Wī Li	_			1		ļ		1.1			ı.							SAMP	<u>L</u>	MAN	LONS:	
Additional Comments:		REAF A	Q 5-8 2-5	ATTENDED			1,20		-3031	ev . Ap:	20, 164									<b>OF 1011</b>		×.	<u> </u>	¥.
SAMPLES WILL ARRIVE IN #	COOLERS.	11			<u>- 61</u>	2/23	113	<u> </u>														<u> </u>	ž	¥ ¥
Please send reports to: dshay@gesonine.com, theat								1_								┼~		1				<u> </u>		YIN.
NERegion@gesonline.com. ges@equisonline												_	_					_				۶	× F	
				SANTHES	MADE AND	3 6:00MATUS														Temp in *C	- }-	5 2	Cool	ss Intect
SPECIFIC EDD NAME:				SIGNATURE:	12	47/	tr	_			10/	ATE SO	vect (Mil	W Z	· > -	15	3			Ternp		Keceives on	Custody Sealed Cook	Samples
NGHudsonWater-labnumber.28351.EQEI	DD.zip			January Control		4//						_		40	-11	· ·	_			<u> </u>				1



# 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

July 26, 2023

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

RE: Data Usability Summary Report for National Grid: Water Street, Hudson, NY Site Data Package Pace Analytical Job No. **30599256** 

Groundwater & Environmental Services, Inc. (GES) reviewed one data package (Laboratory Project Number **30599256**) from Pace Analytical Services, Inc., for the analysis of groundwater samples collected on June 22, 2023 from monitoring wells located at the National Grid: Water Street, Hudson, NY Site. Four aqueous samples and a field duplicate were analyzed for select volatile organic compounds (VOCs). Methodologies utilized were USEPA SW846 methods 8260C, 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: (MS/MSD) Correlations
- Field Duplicate Correlations
- Laboratory Control Sample (LCS)
- Preparation/Calibration Blanks
- Calibration/Low Level Standard Responses
- Instrumental Tunes
- Instrument MDLs
- Sample Quantitation and Identification

All items are determined to be acceptable for the DUSR level review and sample results are usable as reported. No data was qualified.

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

**Table 1. Laboratory – Field Cross Reference** 

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Comments
30599256001	MW-3-0623	Water	06/22/23 10:45	06/24/23 10:00	
30599256002	MW-5-0623	Water	06/22/23 10:10	06/24/23 10:00	
30599256003	MW-6-0623	Water	06/22/23 10:45	06/24/23 10:00	MS/MSD
30599256004	MW-6MS-0623	Water	06/22/23 10:45	06/24/23 10:00	
30599256005	MW-6MSD-0623	Water	06/22/23 10:45	06/24/23 10:00	
30599256006	MW-11-0623	Water	06/22/23 09:50	06/24/23 10:00	
30599256007	Field Duplicate- 0623	Water	06/22/23 00:00	06/24/23 10:00	DUP MW-5
30599256008	Trip Blank	Water	06/22/23 00:00	06/24/23 10:00	

## BTEX and TCL 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 field blank, trip blank, or method blank.

Calibrations standards show acceptable responses within analytical protocol and validation action limits. The blind field duplicate correlations were not calculated for MW-5 and the duplicate sample, as neither sample reported above detection level concentrations.

The MS/MSD recoveries and relative percent differences are within laboratory specification. No qualification was necessary.

# **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.

Bonnie Janowiak, Ph.D.

Environmental Chemist, N.R.C.C.

Sjantwick

Principle Chemist

708 N Main St, Suite 201

Blacksburg, VA 24060

# VALIDATION DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.
- J The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
- J- The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.
- J+ The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
- UJ The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
- **NJ** The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.
- R The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.

# Sample Summaries and Laboratory Case Narratives



## **SAMPLE SUMMARY**

Project: National Grid - Water Street

Pace Project No.: 30599256

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30599256001	MW-3-0623	Water	06/22/23 10:45	06/24/23 10:00
30599256002	MW-5-0623	Water	06/22/23 10:10	06/24/23 10:00
30599256003	MW-6-0623	Water	06/22/23 10:45	06/24/23 10:00
30599256004	MW-6MS-0623	Water	06/22/23 10:45	06/24/23 10:00
30599256005	MW-6MSD-0623	Water	06/22/23 10:45	06/24/23 10:00
30599256006	MW-11-0623	Water	06/22/23 09:50	06/24/23 10:00
30599256007	Field Duplicate- 0623	Water	06/22/23 00:00	06/24/23 10:00
30599256008	Trip Blank	Water	06/22/23 00:00	06/24/23 10:00

## **REPORT OF LABORATORY ANALYSIS**



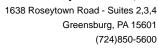
## **SAMPLE ANALYTE COUNT**

Project: National Grid - Water Street

Pace Project No.: 30599256

Sample ID	Method	Analysts	Analytes Reported	Laboratory
MW-3-0623	EPA 8260C/5030C	BBL	8	PASI-MV
MW-5-0623	EPA 8260C/5030C	BBL	8	PASI-MV
MW-6-0623	EPA 8260C/5030C	TJD	8	PASI-MV
MW-6MS-0623	EPA 8260C/5030C	TJD	8	PASI-MV
MW-6MSD-0623	EPA 8260C/5030C	TJD	8	PASI-MV
MW-11-0623	EPA 8260C/5030C	BBL	8	PASI-MV
Field Duplicate- 0623	EPA 8260C/5030C	BBL	8	PASI-MV
Trip Blank	EPA 8260C/5030C	BBL	8	PASI-MV
	MW-3-0623 MW-5-0623 MW-6MS-0623 MW-6MSD-0623 MW-11-0623 Field Duplicate- 0623	MW-3-0623 EPA 8260C/5030C MW-5-0623 EPA 8260C/5030C MW-60623 EPA 8260C/5030C MW-6MS-0623 EPA 8260C/5030C MW-6MSD-0623 EPA 8260C/5030C MW-11-0623 EPA 8260C/5030C Field Duplicate- 0623 EPA 8260C/5030C	MW-3-0623       EPA 8260C/5030C       BBL         MW-5-0623       EPA 8260C/5030C       BBL         MW-6-0623       EPA 8260C/5030C       TJD         MW-6MS-0623       EPA 8260C/5030C       TJD         MW-6MSD-0623       EPA 8260C/5030C       TJD         MW-11-0623       EPA 8260C/5030C       BBL         Field Duplicate- 0623       EPA 8260C/5030C       BBL	Sample ID         Method         Analysts         Reported           MW-3-0623         EPA 8260C/5030C         BBL         8           MW-5-0623         EPA 8260C/5030C         BBL         8           MW-6-0623         EPA 8260C/5030C         TJD         8           MW-6MS-0623         EPA 8260C/5030C         TJD         8           MW-6MSD-0623         EPA 8260C/5030C         TJD         8           MW-11-0623         EPA 8260C/5030C         BBL         8           Field Duplicate- 0623         EPA 8260C/5030C         BBL         8

PASI-MV = Pace Analytical Services - Long Island





#### **PROJECT NARRATIVE**

Project: National Grid - Water Street

Pace Project No.: 30599256

Method: EPA 8260C/5030C

Description: 8260C Volatile Organics

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

Date: July 10, 2023

#### **General Information:**

8 samples were analyzed for EPA 8260C/5030C by Pace Analytical Services Long Island. 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.

#### **Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

#### **Additional Comments:**

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



# Appendix D – Photograph Log







Site Photo – September 2022







Site Photo – December 2022







Site Photo - March 2023







Site Photo – June 2023