From:	Devin T Shay <dshay@gesonline.com></dshay@gesonline.com>
Sent:	Tuesday, July 31, 2018 10:20 AM
То:	Spellman, John (DEC)
Cc:	Stucker, Steven P. (Steven.Stucker@nationalgrid.com)
Subject:	National Grid - Hudson (#4-11-005)
Attachments:	NGrid_Hudson_2018 Groundwater Monitoring 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 Report for the National Grid site in Hudson (#4-11-005).

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.

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

nationalgrid

July 31, 2018

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

<u>Re:</u> National Grid Hudson Water Street Site Hudson, New York 2018 Groundwater Monitoring Report

Dear Mr. Spellman:

Attached for your information is the 2018 Groundwater Monitoring Report detailing the annual groundwater monitoring event and OM&M activities conducted from July 1, 2017, to June 30, 2018, 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 2018, MW-11 had detections of BTEX [totaling 36.6 ug/L] and Napthalene [3.3 ug/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

2018 Groundwater Monitoring Report



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

July 2018

Version 1





2018 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. 5 Technology Place, Suite 4 East Syracuse, NY 13057 TEL: 800-220-3069 www.gesonline.com

GES Project: 0603000.125340.221

Date: July 31, 2018

Devin T. Shay, PG Program Manager / Principal Hydrogeologist



Table of Contents

1	Int	troduction1
	1.1	Overview 1
	1.2	Site Description1
2	Qı	uarterly Site Inspections and Groundwater Monitoring Activities
	2.1	Quarterly Site Inspections
	2.2	Groundwater Well Gauging 2
	2.3	Annual DNAPL Monitoring and Collection2
	2.4	Groundwater Well Sampling and Analysis 2
	2.5	Site Maintenance2
3	Сс	onclusions and Recommendations
	3.1	Conclusions
	3.2	Recommendations



Figures Figure 1 – Site Location Map Figure 2 – Site 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
020	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 Agency
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 2018 Groundwater Monitoring Report (covering July 1, 2017 – June 30, 2018) 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), 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 National Grid (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.

Attachment A includes the Quarterly Site Inspections 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 14, 2018. 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

As a result of the site inspections, it was noted that the standpipe cap on well MW-09A needed to be replaced. This cap was replaced by GES personnel during the site inspection conducted on September 20, 2017. 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:

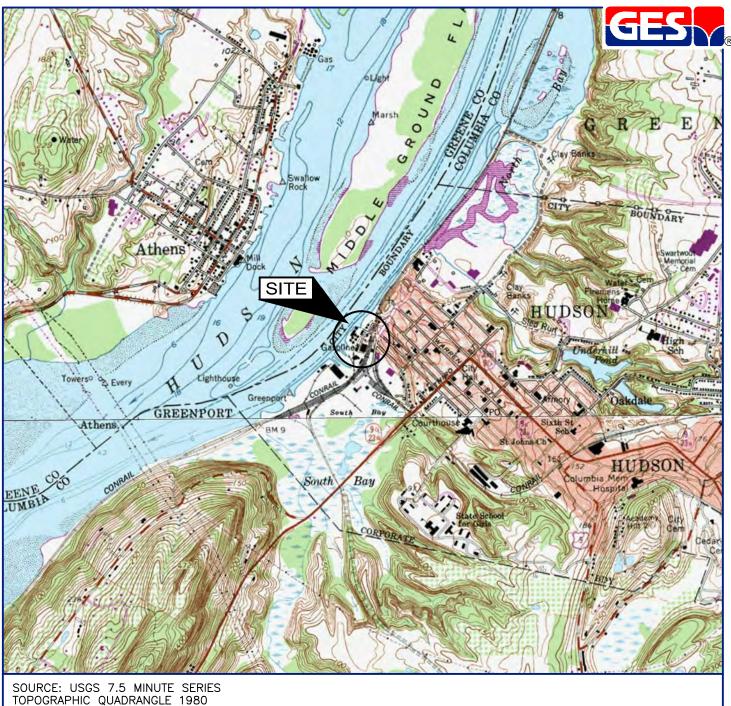
- Quarterly site inspections demonstrate that the site is in good condition.
- Annual static water level measurements show that the groundwater direction is radially outward from the former gas holder area.
- Annual DNAPL monitoring indicated no collectable product.
- MW-11 had a total BTEX concentration of 36.6 micrograms per liter (μg/L) and a naphthalene concentration of 3.3 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 2019.





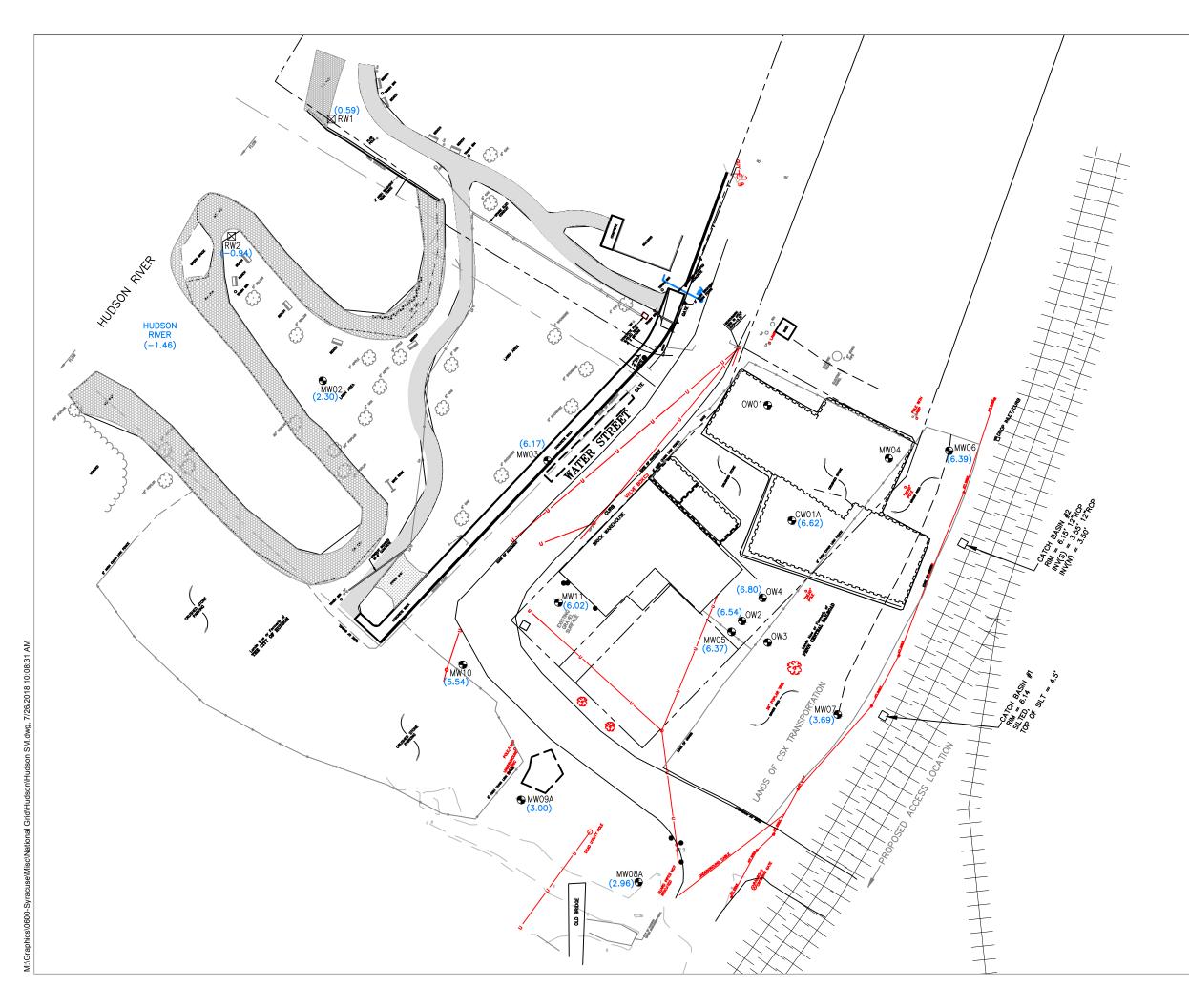


SOURCE: USGS 7.5 MINUTE SERIES TOPOGRAPHIC QUADRANGLE 1980 HUDSON NORTH, NEW YORK CONTOUR INTERVAL = 10'

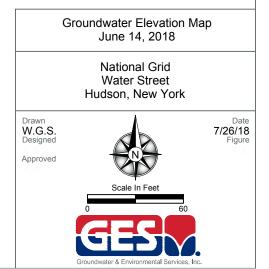


QUADRANGLE LOCATION

DRAFTED BY: W.G.S.	SITE LOCA	ATION MAP	
CHECKED BY: REVIEWED BY:	NATION WATER	AL GRID STREET NEW YORK	
NORTH	Groundwater & Enviro 5 TECHNOLOGY PLACE, SUITE		
()	SCALE IN FEET	DATE	FIGURE
	0 2000	1-3-17	1



<u>LEGEND</u>	
	PROPERTY BOUNDARY
•	MONITORING WELL
\boxtimes	RECOVERY WELL
(7.10)	GROUNDWATER ELEVATION (ft. amsl)
ft. amsl	FEET ABOVE MEAN SEA LEVEL



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
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)	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 (<2.0)

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



Groundwater Analytical Data MW-05

Parameter	EPA - Maximum Allowable (µq/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
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)	ND (<3.0)							
Naphthalene	N/A	10	1	ND (<1.0)	ND (<2.0)	ND (<2.0)							

All values reported in µg/L.

NYSDEC AWQS ND (<#)

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

= Not Reported

Bolded

NR



Groundwater Analytical Data MW-06

Parameter	EPA - Maximum Allowable (µq/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
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)	ND (<3.0)							
Naphthalene	N/A	10	1	ND (<1.0)	ND (<2.0)	ND (<2.0)							

All values reported in µg/L.

NYSDEC AWQS ND (<#)

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

= Not Reported

Bolded

NR



Groundwater Analytical Data MW-11

Parameter	EPA - Maximum Allowable (µq/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
Benzene	5	1	1	4.6	12	3	2.9	ND (<1.0)	1.9	ND (<4.0)	5.8	2.6	21.7
Toluene	1000	5	1	ND (<1.0)	ND (<4.0)	ND (<4.0)	ND (<1.0)	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
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
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

All values reported in µg/L. NYSDEC

AWQS ND (<#)

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

= Not Reported

Bolded

NR



Table 2

Water Level Elevations

Wall ID				Wat	er Level Elev	vation (feet a	msl)			
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

Notes:

amsl

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



Table 2

Water Level Elevations

Well ID.				Wat	er Level Elev	vation (feet a	msl)			
wen ib.	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

Notes:

amsl

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



Table 2

Water Level Elevations

Wall ID				Wat	er Level Elev	vation (feet a	msl)			
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

Notes:

amsl

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



Table 2

Water Level Elevations

Wall ID				Wat	er Level Elev	vation (feet a	msl)			
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
MW-02	1.77	2.05	n/a	2.17	1.70	1.17	1.61	2.03	2.33	2.30
MW-03	7.05	6.57	6.24	7.04	6.95	6.90	6.67	7.77	7.44	6.17
MW-05	6.92	6.57	6.39	6.67	6.75	6.92	6.37	6.62	6.99	6.37
MW-06	6.38	6.58	5.38	6.64	6.29	6.27	6.34	6.24	7.10	6.39
MW-07	3.70	4.07	3.65	3.96	3.73	4.61	3.97	4.02	4.44	3.69
MW-08A	2.65	2.86	2.90	2.84	2.58	3.06	2.86	2.96	3.04	2.96
MW-09A	2.97	2.83	2.28	2.82	2.92	2.95	2.60	3.05	2.98	3.00
MW-10*	5.67	5.29	4.75	6.47	6.79	6.27	6.18	6.49	5.71	5.54
MW-11	6.11	6.99	7.47	6.52	5.74	7.70	7.10	6.75	7.09	6.02
OW-2	7.07	6.56	6.41	6.82	6.82	7.02	6.52	6.72	7.04	6.54
OW-4	7.20	6.81	6.56	7.14	7.01	7.18	6.74	6.91	7.32	6.80
Hudson River	1.69	0.87	n/a	1.49	1.51	2.29	1.87	0.49	1.85	-1.46
CW-01A	6.89	8.09	n/a	7.27	5.99	8.54	8.15	8.23	8.02	6.62
RW-1	1.09	1.37	1.14	1.05	1.07	1.81	1.24	0.43	0.50	0.59
RW-2	1.56	0.96	0.11	1.38	1.66	2.21	1.76	0.36	0.64	-0.94

Notes:

amsl

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



Appendix A – Quarterly Inspection Forms

Date: 6/14/2018 Technician: PD

Site Inspection Hudson-Water Street Operable Unit 1 Hudson, New York

Time: _____ Weather: 12:00 Sunny 73

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		

General Comments:

 Date:
 3/15/2018

 Technician:
 K Leo

Site Inspection Hudson-Water Street Operable Unit 1 Hudson, New York

Time: 1 Weather: Partly

10:30 Partly Cloudy 35

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		

General Comments:

 Date:
 12/19/2017

 Technician:
 K Leo

Site Inspection Hudson-Water Street Operable Unit 1 Hudson, New York

Time:13:15Weather:Partly Cloudy 40

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			

General Comments:

Date: 9/20/2017 Technician: K Leo

Site Inspection Hudson-Water Street Operable Unit 1 Hudson, New York

Time: Weather:

15:30

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			

General Comments:

Replaced well cap



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	DTW	DTB	Sump ?	Comments
MW-02	No	2"	PVC	Flush	NP	3.80	20.50	No	
MW-03	Yes	2"	PVC	Flush	NP	2.80	25.50	No	
MW-05	Yes	2"	PVC	Stickup	NP	6.20	28.10	No	Duplicate Sample
MW-06	Yes	2"	PVC	Stickup	NP	5.45	26.10	Yes	MS/MSD
MW-07	No	2"	PVC	Stickup	NP	5.25	24.55	Yes	
MW-08A	No	2"	PVC	Flush	NP	3.40	25.85	No	
MW-09A	No	2"	PVC	Stickup	NP	5.40	25.07	Yes	
MW-10	No	2"	PVC	Flush	NP	3.15	28.70	Yes	
MW-11	Yes	2"	PVC	Flush	NP	3.55	8.10	Yes	
OW-2	No	2"	PVC	Stickup	NP	6.28	27.55	Yes	
OW-4	No	2"	PVC	Stickup	NP	5.86	28.05	Yes	
Hudson River	No				NP	6.75	N/C	No	Chiseled square adjacent to the 8th railing post on top of the sheetpile wall.
CW-01A	No	4"	Steel	Flush	NP	3.05	30.90	Yes	
RW-1	No	4"	PVC	Flush	NP	4.50	26.50	Yes	
RW-2	No	4"	PVC	Flush	NP	5.90	22.35	Yes	

Purged water stored onsite in a labeled drum.

Sampling Per	sonnol: (2)	0			Date:	6/14/19	3	
					Weather:	75-50	/	
Job Number:		125340-221			-			lain
Well Id.	MW-03				Time In:	0932	Time Out:	1010
		and the second						
Well Inf	formation					_		
			TOC	Other	Well Type:			Stick-Up
Depth to Wate		(feet)	2.30 NP		Well Locke	ea: Point Marked:	Yes	No No
Depth to Proc	And a state of the second s	(feet)	25.50		Well Mater		Yes X SS Ott	her:
Depth to Botto	A CONTRACTOR OF A CONTRACTOR A	(feet)	22.7		Well Diame		2" X Ott	
Volume of Wa		(feet) (gal)	3.6		Comments			
Three Well Vo	and the second se	(gal) (gal)	10.8		Commenta			
	olumes.	(gai)	0.0	I				
		S and a second s						
Purging I	nformation							
- r urging r	normation						Conversion F	actors
Purging Meth	od.	Bailer	Peristaltic	Grundf	os Pump	gal/ft.	1" ID 2" ID	4" ID 6" ID
Tubing/Bailer	and a second	Teflon			/ethylene	gaint.		
Sampling Met		Bailer			os Pump	water	0.04 0.16	0.66 1.47
Average Pum		(ml/min)	100		· · · · · · · · · · · · · · · · · · ·		on=3.785L=3785n	
Duration of Pu		(min)	30				1	
Total Volume	and the second	(gal)	2.50 D	id well go dry?	Yes No	1		
						1		
Horiba U-52 V	Vater Quality M	leter Used?	* Yes					
								T TDO 1
Time	DTW	Temp	pН	ORP	Conductivity	Turbidity	DO	TDS
	(feet)	(°C)		(mV)	(mS/cm)	(NTU)	(mg/L)	(g/L)
6935	(feet) 4.62	(°C) [5,24	7.60	(mV) -145	(mS/cm)	(NTU) 3.6	(mg/L) ().00	(g/L) 6.742
6935 0940	(feet) 4.62 6.90	(°C) [5,24 [5,9]	7.60 7.59	(mV) -145 -16:2	(mS/cm) 1.17 1.07	(NTU) 3.6 1.9	(mg/L) 0.00 0.00	(g/L) 6.742 0.684
6935 8940 0945	(feet) 4.62 6.90 9.14	(°C) [5,24 [5,91 [5,92	7.60 7.50 7.55	(mV) -145 -162 -(53	(mS/cm) 1.17 1.07 1.07	(NTU) 3.6 1.9 3.0	(mg/L) 0.00 0.00	(g/L) 6.742 0.684 0.680
6935 8940 0945 0950	(feet) 4.62 6.90 9.14 10.35	(°C) 15,24 15,91 15,92 15,93	7.60 7.53 7.55 7.55	(mV) -145 -162 -(53 -(53	(mS/cm) 1.17 1.07 1.07 1.07 1.06	(NTU) 3.6 1.9 3.0 3.0	(mg/L) 0.00 0.00 0.00	(g/L) 0.742 0.684 0.680 0.678
6935 0940 0945 0945 0955	(feet) 4.62 6.90 9.14 10.35 11.50	(°C) 15,24 15,91 15,92 15,93 16.10	7.60 7.50 7.55 7.55 7.53	(mV) -145 -162 -153 -153 -153	(mS/cm) 1.17 1.07 1.07 1.06 1.06	(NTU) 3.6 1.9 3.0 3.0 3.7	(mg/L) 0.00 0.00 0.00 0.00 0.00	(g/L) 0.742 0.684 0.680 0.678 0.677
6995 8940 0945 0945 0955 0955 1000	(feet) 4.62 6.90 9.14 10.35 11.50 12.85	(°C) 15,24 15,91 15,92 15,93 16,10 16,00	7.60 7.53 7.55 7.55 7.55 7.55 7.55	(mV) -145 -153 -153 -153 -153 -154	(mS/cm) 1.17 1.07 1.07 1.06 1.06 1.06	(NTU) 3.6 1.9 3.0 3.0 3.7	(mg/L) 0.00 0.00 0.00 0.00 0.00 0.00	(g/L) 0.742 0.680 0.680 0.678 0.677 0.676
6995 0940 0945 0945 0955	(feet) 4.62 6.90 9.14 10.35 11.50	(°C) 15,24 15,91 15,92 15,93 16.10	7.60 7.50 7.55 7.55 7.53	(mV) -145 -162 -153 -153 -153	(mS/cm) 1.17 1.07 1.07 1.06 1.06	(NTU) 3.6 1.9 3.0 3.0	(mg/L) 0.00 0.00 0.00 0.00 0.00	(g/L) 0.742 0.684 0.680 0.678 0.677
6975 8940 0945 0945 0955 0955 1000	(feet) 4.62 6.90 9.14 10.35 11.50 12.85	(°C) 15,24 15,91 15,92 15,93 16,10 16,00	7.60 7.53 7.55 7.55 7.55 7.55 7.55	(mV) -145 -153 -153 -153 -153 -154	(mS/cm) 1.17 1.07 1.07 1.06 1.06 1.06	(NTU) 3.6 1.9 3.0 3.0 3.7	(mg/L) 0.00 0.00 0.00 0.00 0.00 0.00	(g/L) 0.742 0.680 0.680 0.678 0.677 0.676
6975 8940 0945 0945 0955 0955 1000	(feet) 4.62 6.90 9.14 10.35 11.50 12.85	(°C) 15,24 15,91 15,92 15,93 16,10 16,00	7.60 7.53 7.55 7.55 7.55 7.55 7.55	(mV) -145 -153 -153 -153 -153 -154	(mS/cm) 1.17 1.07 1.07 1.06 1.06 1.06	(NTU) 3.6 1.9 3.0 3.0 3.7	(mg/L) 0.00 0.00 0.00 0.00 0.00 0.00	(g/L) 0.742 0.680 0.680 0.678 0.677 0.676
6975 8940 0945 0945 0955 0955 1000	(feet) 4.62 6.90 9.14 10.35 11.50 12.85	(°C) 15,24 15,91 15,92 15,93 16,10 16,00	7.60 7.53 7.55 7.55 7.55 7.55 7.55	(mV) -145 -153 -153 -153 -153 -154	(mS/cm) 1.17 1.07 1.07 1.06 1.06 1.06	(NTU) 3.6 1.9 3.0 3.0 3.7	(mg/L) 0.00 0.00 0.00 0.00 0.00 0.00	(g/L) 0.742 0.680 0.680 0.678 0.677 0.676
6975 8940 0945 0945 0955 0955 1000	(feet) 4.62 6.90 9.14 10.35 11.50 12.85	(°C) 15,24 15,91 15,92 15,93 16,10 16,00	7.60 7.53 7.55 7.55 7.55 7.55 7.55	(mV) -145 -153 -153 -153 -153 -154	(mS/cm) 1.17 1.07 1.07 1.06 1.06 1.06	(NTU) 3.6 1.9 3.0 3.0 3.7	(mg/L) 0.00 0.00 0.00 0.00 0.00 0.00	(g/L) 0.742 0.680 0.680 0.678 0.677 0.676
6975 8940 0945 0945 0955 0955 1000	(feet) 4.62 6.90 9.14 10.35 11.50 12.85	(°C) 15,24 15,91 15,92 15,93 16,10 16,00	7.60 7.53 7.55 7.55 7.55 7.55 7.55	(mV) -145 -153 -153 -153 -153 -154	(mS/cm) 1.17 1.07 1.07 1.06 1.06 1.06	(NTU) 3.6 1.9 3.0 3.0 3.7	(mg/L) 0.00 0.00 0.00 0.00 0.00 0.00	(g/L) 0.742 0.680 0.680 0.678 0.677 0.676
6995 0945 0945 0955 1000 1000	(feet) 4.62 6.90 9.14 10.35 11.50 12.85 14.10	(°C) 15,24 15,91 15,92 15,93 16,10 16,00	7.60 7.53 7.55 7.55 7.55 7.55 7.55	(mV) -145 -153 -153 -153 -153 -154	(mS/cm) 1.17 1.07 1.07 1.06 1.06 1.06	(NTU) 3.6 1.9 3.0 3.0 3.7	(mg/L) 0.00 0.00 0.00 0.00 0.00 0.00	(g/L) 0.742 0.680 0.680 0.678 0.677 0.676
6975 8940 0945 0945 0955 0955 1000	(feet) 4.62 6.90 9.14 10.35 11.50 12.85 14.10	(°C) 15,24 15,91 15,92 15,93 16,10 16,00	7.60 7.53 7.55 7.55 7.55 7.55 7.55	(mV) -145 -153 -153 -153 -153 -154	(mS/cm) 1.17 1.07 1.07 1.06 1.06 1.06	(NTU) 3.6 1.9 3.0 3.0 3.7	(mg/L) 0.00 0.00 0.00 0.00 0.00 0.00	(g/L) 0.742 0.680 0.680 0.678 0.677 0.676
6995 0945 0945 0955 1000 1000	(feet) 4.62 6.90 9.14 70.35 71.50 72.85 14.10 12.85 14.10	(°C) 15,24 15,91 15,92 15,93 16,10 16,00	7.60 7.53 7.55 7.55 7.55 7.55 7.56	(mV) -145 -153 -153 -153 -153 -154	(mS/cm) 1.17 1.07 1.07 1.06 1.06 1.06 1.06	(NTU) 3.6 1.9 3.0 3.0 3.7	(mg/L) 0.00 0.00 0.00 0.00 0.00	(g/L) 0.742 0.680 0.680 0.678 0.677 0.676
6975 0945 0945 0955 1000 1000 1000 1000 1005	(feet) <u>4</u> .62 <u>6.90</u> <u>9.14</u> <u>10.35</u> <u>11.50</u> <u>12.85</u> <u>14.10</u> ormation: 6 Method 8260	(°C) 15,24 15,91 15,92 15,93 16.10 16.00 16.00 16.00	7.60 7.53 7.55 7.55 7.55 7.56	(mV) 	(mS/cm) 1.17 1.07 1.07 1.06 1.06 1.06 1.06	(NTU) 3.6 1.9 3.0 3.0 3.7 3.0 3.8 3.0 3.9	(mg/L) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	(g/L) 0.742 0.680 0.678 0.677 0.677 0.674 0.674
6975 6975 0975 0975 0955 1000 100 1000 1	(feet) <u>4</u> .62 <u>6.90</u> <u>9.14</u> <u>70.35</u> <u>71.50</u> <u>72.35</u> <u>14.10</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>14.10</u> <u>14.10</u> <u>14.10</u> <u>14.10</u> <u>14.10</u> <u>14.10</u> <u>14.10</u> <u>14.14</u> <u>14.14</u> <u>14.14</u> <u>16.50</u> <u>14.14</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u>	(°C) 15,24 15,91 15,92 15,93 16.10 16.00 16.	7.60 7.55 7.55 7.55 7.55 7.56 7.56 8TEX Including	(mV) 	(mS/cm) 1.17 1.07 1.07 1.06 1.06 1.06 1.06	(NTU) 3.6 1.9 3.0 3.0 3.7 3.0 3.9 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(mg/L) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Ves	(g/L) 0.742 0.680 0.678 0.677 0.677 0.674 0.674 0.674 0.674
6975 0945 0945 0955 1000 1000 1000 1000 1005	(feet) <u>4</u> .62 <u>6.90</u> <u>9.14</u> <u>10.35</u> <u>11.50</u> <u>12.85</u> <u>14.10</u> ormation: 6 Method 8260	(°C) 15,24 15,91 15,92 15,93 16.10 16.00 16.	7.60 7.55 7.55 7.55 7.55 7.56 7.56	(mV) 	(mS/cm) 1.17 1.07 1.07 1.06 1.06 1.06 1.06	(NTU) 3.6 1.9 3.0 3.0 3.7 3.0 3.9 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(mg/L) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	(g/L) 0.742 0.680 0.678 0.677 0.677 0.674 0.674 0.674 0.674
69.95 09.45 09.45 09.55 10.05 10.05 10.05 Sampling Inf USEPA SW-844 Sample ID: Sample Time:	(feet) <u>4</u> .62 <u>6.90</u> <u>9.14</u> <u>10.35</u> <u>11.50</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u>	(°C) 15,24 15,91 15,92 15,93 16.10 16.00 16.	7.60 7.55 7.55 7.55 7.55 7.56 7.56 8TEX Including	(mV) 	(mS/cm) 1.17 1.07 1.06 1.06 1.06 1.06 1.05 Shi	(NTU) 3.6 1.9 3.0 3.0 3.7 3.0 3.2 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(mg/L) O.OO O.OO O.OO O.OO O.OO O.OO Ves ace Courier Pick ff Albany Service	(g/L) 0.742 0.680 0.678 0.677 0.677 0.674 0.674 0.674 0.674
69 <i>%</i> 5 69 <i>4</i> 5 09 <i>4</i> 5 09 <i>5</i> 5 1000 100	(feet) <u>4</u> .62 <u>6.90</u> <u>9.14</u> <u>10.35</u> <u>11.50</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>14.10</u> <u>12.35</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u> <u>16.50</u>	(°C) 15,24 15,91 15,92 15,93 16.10 16.00 16.	7.60 7.55 7.55 7.55 7.55 7.56 7.56 8TEX Including	(mV) 	(mS/cm) 1.17 1.07 1.06 1.06 1.06 1.06 1.05 Shi	(NTU) 3.6 1.9 3.0 3.0 3.7 3.0 3.9 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(mg/L) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Ves	(g/L) 0.742 0.680 0.678 0.677 0.677 0.674 0.

Sampling Per	rsonnel:	PA			Date:	10/12/18		
Job Number:	million (1) - F Contraction (1)	-125340-221			Weather:	75-8	Fin	
age of the second s	and the second sec	-120040-221			Manager and a state of the stat	INCO		. 1140
Well Id.	MW-05				Time In:	6201	Time Out	: 1140
	formation							
	Tormation	_	TOC	Other	Well Type	. Flu	shmount	Stick-Up
Depth to Wat	ter:	(feet)	1.20		Well Lock		Yes	No
Depth to Proc		(feet)	NP			Point Marked:	Yes	No
Depth to Bott		(feet)	28.10		Well Mate		ssot	her:
Length of Wa	ater Column:	(feet)	21.9		Well Diam	neter: 1'	' 2" 🛛 0t	her:
Volume of Wa	ater in Well:	(gal)	3.5		Commente	S:		
Three Well V	olumes:	(gal)	10.5		· · · · · · · · · · · · · · · · · · ·			
1923 a 100		an standard manager from		and the second				
Purging I	Information							
							Conversion	the second se
Purging Meth	NAME AND ADDRESS OF ADDRE	Baile		(and a second	fos Pump	gal/ft.	1" ID 2" ID	4" ID 6" ID
Tubing/Bailer		Teflor			yethylene	of	0.04 0.40	0.00 4.47
Sampling Met	the second s	Baile	Peristaltion	Grund	fos Pump	water	0.04 0.16	
Average Pum	and the second	(ml/min)				1 gall	on=3.785L=3785r	mL=1337cu. feet
Duration of P	and the second se	(min)	30	Dial well are also		1		
Total Volume	Removed:	(gal)	0	Did well go dry?	Yes No	V		
Horiba U-52 V	Nater Quality N	Meter Used?	Yes					
Time	DTW	Temp	pН	ORP	Conductivity	Turbidity	DO	TDS
1	DIV	1 Cimp	1	1 1 1 N N				
	(feet)	(°C)		(mV)	(mS/cm)	(NTU)	(mg/L)	(g/L)
11:00	(feet) 8-00	· · · · · ·	7.61	(mV) -142	(mS/cm) ©. 865	17	1,34	1 11
11:00	(feet) 8-00 9.80	(°C) 17.55 16.76	7.61 7.82	and a second sec	(mS/cm) 0.865 0.837	17 24	1,34 0-00	(g/L) 0.553 0.534
11:00	(feet) 8-00 9.80 11-10	(°C) 17:55 16:76 16:90	7.61 7.82 7.82	-142 -157 -161	(mS/cm) 0.865 0.837 0.828	17 24 20	1,34 0-00 0.00	(g/L) 0.553 0.534 0.430
11:00 /105 _110 _1115	(feet) <i>8-00</i> <i>9.80</i> <i>11.10</i> <i>12.40</i>	(°C) 17:55 16:76 16:76 16:90 17:17	7.61 7.82 7.82 7.82 7.81	-142 -157 -161 -163	(mS/cm) 0.865 0.837 0.828 0.818	17 24 20 15.8	1,34 0-00	(g/L) 0.553 0.534 0.930 0.523
11:00 1105 1110 1115 1120	(feet) <i>8-00</i> <i>9.80</i> <i>11.10</i> <i>12.40</i> <i>13.40</i>	(°C) 17:55 16:76 16:76 16:90 14:17 17:30	7.61 7.82 7.82 7.82 7.81 7.80	-142 -157 -161 -163 -163	(mS/cm) 0.865 0.837 0.828 0.818 0.813	17 24 20 15.8 6.5	1,34 0-00 0.00 0.00	(g/L) 0.553 0.534 0.534 0.523 0.523
11:00 1105 1110 1115 1120 1120	(feet) <i>8-00</i> <i>9.80</i> <i>11.10</i> <i>12.40</i> <i>13.40</i> <i>14.60</i>	(°C) 17.55 16.76 16.90 14.17 17.30 17.35	7.61 7.82 7.82 7.82 7.81 7.80 7.78	-142 -157 -161 -163 -163 -163	(mS/cm) 0.865 0.837 0.828 0.818 0.813 0.813 0.810	17 24 20 15.8 6.5	1,34 0.00 0.00 0.00 0.00	(g/L) 0.553 0.534 0.534 0.530 0.523 0.521 0.518
11:00 /105 110 1115 1120	(feet) <i>8-00</i> <i>9.80</i> <i>11.10</i> <i>12.40</i> <i>13.40</i>	(°C) 17:55 16:76 16:76 16:90 14:17 17:30	7.61 7.82 7.82 7.82 7.81 7.80	-142 -157 -161 -163 -163	(mS/cm) 0.865 0.837 0.828 0.818 0.813	17 24 20 15.8 6.5	1,34 0-00 0.00 0.00	(g/L) 0.553 0.534 0.534 0.523 0.523
11:00 1105 1110 1115 1120 1125	(feet) <i>8-00</i> <i>9.80</i> <i>11.10</i> <i>12.40</i> <i>13.40</i> <i>14.60</i>	(°C) 17.55 16.76 16.90 14.17 17.30 17.35	7.61 7.82 7.82 7.82 7.81 7.80 7.78	-142 -157 -161 -163 -163 -163	(mS/cm) 0.865 0.837 0.828 0.818 0.813 0.813 0.810	17 24 20 15.8 6.5	1,34 0.00 0.00 0.00 0.00	(g/L) 0.553 0.534 0.534 0.530 0.523 0.521 0.518
11:00 1105 1110 1115 1120 1125	(feet) <i>8-00</i> <i>9.80</i> <i>11.10</i> <i>12.40</i> <i>13.40</i> <i>14.60</i>	(°C) 17.55 16.76 16.90 14.17 17.30 17.35	7.61 7.82 7.82 7.82 7.81 7.80 7.78	-142 -157 -161 -163 -163 -163	(mS/cm) 0.865 0.837 0.828 0.818 0.813 0.813 0.810	17 24 20 15.8 6.5	1,34 0.00 0.00 0.00 0.00	(g/L) 0.553 0.534 0.534 0.530 0.523 0.521 0.518
11:00 1105 1110 1115 1120 1125	(feet) <i>8-00</i> <i>9.80</i> <i>11.10</i> <i>12.40</i> <i>13.40</i> <i>14.60</i>	(°C) 17.55 16.76 16.90 14.17 17.30 17.35	7.61 7.82 7.82 7.82 7.81 7.80 7.78	-142 -157 -161 -163 -163 -163	(mS/cm) 0.865 0.837 0.828 0.818 0.813 0.813 0.810	17 24 20 15.8 6.5	1,34 0.00 0.00 0.00 0.00	(g/L) 0.553 0.534 0.534 0.530 0.523 0.521 0.518
11:00 1105 1110 1115 1120 1125	(feet) <i>8-00</i> <i>9.80</i> <i>11.10</i> <i>12.40</i> <i>13.40</i> <i>14.60</i>	(°C) 17.55 16.76 16.90 14.17 17.30 17.35	7.61 7.82 7.82 7.82 7.81 7.80 7.78	-142 -157 -161 -163 -163 -163	(mS/cm) 0.865 0.837 0.828 0.818 0.813 0.813 0.810	17 24 20 15.8 6.5	1,34 0.00 0.00 0.00 0.00	(g/L) 0.553 0.534 0.534 0.530 0.523 0.521 0.518
11:00 1105 1110 1115 1120 1125	(feet) <i>8-00</i> <i>9.80</i> <i>11.10</i> <i>12.40</i> <i>13.40</i> <i>14.60</i>	(°C) 17.55 16.76 16.90 14.17 17.30 17.35	7.61 7.82 7.82 7.82 7.81 7.80 7.78	-142 -157 -161 -163 -163 -163	(mS/cm) 0.865 0.837 0.828 0.818 0.813 0.813 0.810	17 24 20 15.8 6.5	1,34 0.00 0.00 0.00 0.00	(g/L) 0.553 0.534 0.534 0.530 0.523 0.521 0.518
11:00 1105 1110 1115 1120 1120 1120	(feet) 8-00 9.80 11.10 12.40 13.40 14.60 15.60	(°C) 17.55 16.76 16.90 14.17 17.30 17.35	7.61 7.82 7.82 7.82 7.81 7.80 7.78	-142 -157 -161 -163 -163 -163	(mS/cm) 0.865 0.837 0.828 0.818 0.813 0.813 0.810	17 24 20 15.8 6.5	1,34 0.00 0.00 0.00 0.00	(g/L) 0.553 0.534 0.534 0.530 0.523 0.521 0.518
11:00 1105 1110 1115 1120 1120	(feet) 8-00 9.80 11.10 12.40 13.40 14.60 15.60	(°C) 17.55 16.76 16.90 14.17 17.30 17.35	7.61 7.82 7.82 7.82 7.81 7.80 7.78	-142 -157 -161 -163 -163 -163	(mS/cm) 0.865 0.837 0.828 0.818 0.813 0.813 0.810	17 24 20 15.8 6.5	1,34 0.00 0.00 0.00 0.00	(g/L) 0.553 0.534 0.534 0.530 0.523 0.521 0.518
11:00 1105 110 1115 1126 1126 1126 1120 1130 Sampling Inf	(feet) 8-00 9.80 11.10 12.40 13.40 14.60 15.60 formation:	(°C) 17.55 16.76 16.90 14.17 17.30 17.35 17.40	7.61 7.82 7.82 7.81 7.80 7.78 7.78 7.77	-142 -157 -161 -163 -163 -163 -162	(mS/cm) 0.865 0.837 0.828 0.818 0.813 0.813 0.810 0.808	17 24 25 65 6.5 6.9	1,34 0.00 0.00 0.00 0.00	(g/L) 0.553 0.534 0.534 0.523 0.523 0.523 0.518 0.516
11:00 1105 1110 1115 1120 1125 1120	(feet) 8-00 9.80 11.10 12.40 13.40 14.60 15.60 formation:	(°C) 17.55 16.76 16.90 14.17 17.30 17.35	7.61 7.82 7.82 7.81 7.80 7.78 7.78 7.77	-142 -157 -161 -163 -163 -163	(mS/cm) 0.865 0.837 0.828 0.818 0.813 0.813 0.810 0.808	17 24 20 15.8 6.5	1,34 0.00 0.00 0.00 0.00	(g/L) 0.553 0.534 0.534 0.530 0.523 0.521 0.518
:00 105 110 1115 (120 1125 125 130 Sampling Inf	(feet) <u>8-00</u> <u>9.80</u> <u>11.10</u> <u>12.40</u> <u>13.40</u> <u>14.60</u> <u>15.60</u> formation: 6 Method 8260	(°C) 17.55 16.76 16.76 16.90 17.17 17.35 17.35 17.40	7.61 7.82 7.82 7.81 7.80 7.78 7.78 7.77	-142 -157 -161 -163 -163 -163 -162	(mS/cm) 0.865 0.837 0.828 0.818 0.818 0.813 0.810 0.808	17 24 25 6.5 6.9 6-40 mL vials	1, 34 0-00 0-00 0-00 0-00	(g/L) 0.553 0.534 0.534 0.523 0.523 0.518 0.516
:00 /105 10 115 1120 1125 1120 1125 1130 Sampling Inf USEPA SW-84 Sample ID:	(feet) <u>8-00</u> <u>9.80</u> <u>11.10</u> <u>12.40</u> <u>13.40</u> <u>14.60</u> <u>15.60</u> formation: 6 Method 8260 <u>MW-05-06</u>	(°C) 17.55 16.76 16.90 14.17 17.35 17.35 17.35 17.40 VOC's B 518 Du	7.61 7.82 7.82 7.81 7.80 7.78 7.78 7.77 7.77	-142 -157 -161 -163 -163 -163 -162 -162 -162 Yes No	(mS/cm) 0.865 0.837 0.828 0.818 0.818 0.813 0.810 0.808	17 26 15.8 6.5 6.9 6-40 mL vials	1, 34 0-00 0-00 0-00 0-00 Yes	(g/L) 0.553 0.534 0.523 0.523 0.523 0.518 0.516 0.516
11:00 1105 110 115 1125 1120 1125 1130 Sampling Inf	(feet) <u>8-00</u> <u>9.80</u> <u>11.10</u> <u>12.40</u> <u>13.40</u> <u>14.60</u> <u>15.60</u> formation: 6 Method 8260	(°C) 17.55 16.76 16.90 14.17 17.35 17.35 17.35 17.40 VOC's B 518 Du	7.61 7.82 7.82 7.81 7.80 7.78 7.78 7.77 7.77	-142 -157 -161 -163 -163 -163 -162	(mS/cm) 0.865 0.837 0.828 0.818 0.818 0.813 0.810 0.808	17 26 15.8 6.5 6.9 6-40 mL vials	1, 34 0-00 0-00 0-00 0-00	(g/L) 0.553 0.534 0.523 0.523 0.523 0.518 0.516 0.516
11:00 1105 110 115 110 115 1120 125 1/20 Sampling Inf USEPA SW-84 Sample ID:	(feet) 8-00 9.80 11.10 12.40 13.40 14.60 15.60 formation: 6 Method 8260 MW-05-06 13.0	(°C) 17.55 16.76 16.90 14.17 17.35 17.35 17.35 17.40 VOC's B 518 Du	7.61 7.82 7.82 7.81 7.80 7.78 7.78 7.77 7.77	-142 -157 -161 -163 -163 -163 -162 -162 -162 Yes No	(mS/cm) 0.965 0.837 0.828 0.818 0.813 0.813 0.810 0.808 FD-0618 Sh	17 26 15.8 6.5 6.9 6-40 mL vials	1, 34 0-00 0-00 0-00 0-00 Yes	(g/L) 0.553 0.534 0.523 0.523 0.523 0.518 0.516 0.516 No

Sampling Per	rsonnel: PC)			Date:	6/14/18	1		
Job Number:	06-03000-	125340-221	Weather:	Veather: 75-SUN					
	MW-06		Time In:	Inte					
Well Id.	14144-00				Time in.	1012	Time Out		
Well In	formation								
	Iomation	-	тос	Other	Well Type	. Elu	shmount	Stick-Up	
Depth to Wat	er:	(feet)	5.45	Other	Well Lock		Yes	No	
Depth to Proc	and the second of the second second	(feet)	NA			Point Marked:	Yes	No	
Depth to Bott	Constant and the state of the s	(feet)	26.10		Well Mate			her:	
Length of Wa	and the state of t	(feet)	20.65		Well Diam			her:	
Volume of Wa		(gal)	3.3		Comments				
Three Well V	olumes:	(gal)	99						
Purging I	nformation								
							Conversion I	Factors	
Purging Meth	od:	Bailer	Peristaltic	Grund	fos Pump	gal/ft.	1" ID 2" ID	4" ID 6" ID	
Tubing/Bailer	Material:	Teflor	Stainless St.	Pol	yethylene	of			
Sampling Met	thod:	Bailer	r Peristaltic	Grund	fos Pump	water	0.04 0.16	0.66 1.47	
Average Pum	ping Rate:	(ml/min)	180			1 gall	lon=3.785L=3785r	mL=1337cu. feet	
Duration of P	The second s	(min)	30			/			
Total Volume	Removed:	(gal)	~2.5g [oid well go dry?	Yes No				
Horiba U-52 V	Vater Quality M	leter Used?	Ø Yes						
									
Time	DTW	Temp	D nH	ORP	Conductivity	Turbidity			
Time	DTW (feet)	Temp (°C)	рН	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)	
	(feet)	(°C)		(mV)	(mS/cm)	(NTU)	(mg/L)	(g/L)	
1015	(feet) 6.90	(°C) 17.54	7.22	(mV) -108	(mS/cm)	(NTU) 7.6		(g/L) 0,7(]	
1012	(feet) 6.90 8.70	(°C) 17.54 17.25	7.22 7.19	(mV) -108 -(07	(mS/cm) [1][(NTU) 7.6 6.4	(mg/L) 0.86	(g/L) 0,7(] 0.723	
1015	(feet) 6.90 8.70 10.50	(°C) 17.54 17.25 17.08	7.22 7.19 7.18	(mV) -108	(mS/cm) [.[] [.]3].[4	(NTU) 7.6 6.4 5.7	(mg/L) 0.86 0.00	(g/L) 0,7(1 0,723 0.730	
1017 1020 1025 1036	(feet) 6.90 870 10.50 11.30	(°C) 17.54 17.25	7.22 7.19 7.18 7.18	(mV) -108 -(67 -109 -110	(mS/cm) [1][(NTU) 7.6 6.4 5.7 5.6	(mg/L) 0.86 0.00 0.00	(g/L) 0,7(1 0,723 0.730 0,730	
1015 1025 1025	(feet) 6.90 870 10.50 11.30	(°C) 17.54 17.25 17.08 17.31	7.22 7.19 7.18 7.18 7.18 7.18 7.18	(mV) -108 -(67 -109	(mS/cm) [1] [1]3 1]4 [1]4	(NTU) 7.6 6.4 5.7 5.6 6.3 6.3	(mg/L) 0.86 0.00	(g/L) 0,7(1 0,723 0.730 0,730 0,729	
1015 1025 1025 1036 1035	(feet) 6.90 870 10.50 11.80 13.35	(°C) 17.54 17.25 17.08 17.31 17.26	7.22 7.19 7.18 7.18	(mV) -108 -(07 -109 -110 -110	(mS/cm) 1.11 1.13 1.14 1.14 1.14	(NTU) 7.6 6.4 5.7 5.6 6.3 6.3	(mg/L) 0.86 0.00 0.00 0.00	(g/L) 0,7(1 0,723 0.730 0,730 0,729 0.730	
1017 1025 1025 1036 1035 1035	(feet) 6.20 870 10.50 11.30 13.35 14.10	(°C) 17.54 17.25 17.08 17.31 17.26 17.26 17.30	7.22 7.19 7.18 7.18 7.18 7.18 7.18	(mV) -108 -(07 -109 -110 -110 -110 -111	(mS/cm) 1.11 1.13 1.14 1.14 1.14 1.14	(NTU) 7.6 6.4 5.7 5.6 6.3	(mg/L) 0.86 0.00 0.00 0.00 0.00 0.00	(g/L) 0,7(1 0,723 0.730 0,730 0,729	
1017 1025 1025 1036 1035 1035	(feet) 6.20 870 10.50 11.30 13.35 14.10	(°C) 17.54 17.25 17.08 17.31 17.26 17.26 17.30	7.22 7.19 7.18 7.18 7.18 7.18 7.18	(mV) -108 -(07 -109 -110 -110 -110 -111	(mS/cm) 1.11 1.13 1.14 1.14 1.14 1.14	(NTU) 7.6 6.4 5.7 5.6 6.3 6.3	(mg/L) 0.86 0.00 0.00 0.00 0.00 0.00	(g/L) 0,7(1 0,723 0.730 0,730 0,729 0.730	
1017 1025 1025 1036 1035 1035	(feet) 6.20 870 10.50 11.30 13.35 14.10	(°C) 17.54 17.25 17.08 17.31 17.26 17.26 17.30	7.22 7.19 7.18 7.18 7.18 7.18 7.18	(mV) -108 -(07 -109 -110 -110 -110 -111	(mS/cm) 1.11 1.13 1.14 1.14 1.14 1.14	(NTU) 7.6 6.4 5.7 5.6 6.3 6.3	(mg/L) 0.86 0.00 0.00 0.00 0.00 0.00	(g/L) 0,7(1 0,723 0.730 0,730 0,729 0.730	
1017 1025 1025 1036 1035 1035	(feet) 6.20 870 10.50 11.30 13.35 14.10	(°C) 17.54 17.25 17.08 17.31 17.26 17.26 17.30	7.22 7.19 7.18 7.18 7.18 7.18 7.18	(mV) -108 -(07 -109 -110 -110 -110 -111	(mS/cm) 1.11 1.13 1.14 1.14 1.14 1.14	(NTU) 7.6 6.4 5.7 5.6 6.3 6.3	(mg/L) 0.86 0.00 0.00 0.00 0.00 0.00	(g/L) 0,7(1 0,723 0.730 0,730 0,729 0.730	
1017 1020 1025 1030 1035 1035	(feet) 6.20 870 10.50 11.30 13.35 14.10	(°C) 17.54 17.25 17.08 17.31 17.26 17.26 17.30	7.22 7.19 7.18 7.18 7.18 7.18 7.18	(mV) -108 -(07 -109 -110 -110 -110 -111	(mS/cm) 1.11 1.13 1.14 1.14 1.14 1.14	(NTU) 7.6 6.4 5.7 5.6 6.3 6.3	(mg/L) 0.86 0.00 0.00 0.00 0.00 0.00	(g/L) 0,7(1 0,723 0.730 0,730 0,729 0.730	
1017 1020 1025 1030 1035 1035	(feet) 6.20 870 10.50 11.30 13.35 14.10	(°C) 17.54 17.25 17.08 17.31 17.26 17.26 17.30	7.22 7.19 7.18 7.18 7.18 7.18 7.18	(mV) -108 -(07 -109 -110 -110 -110 -111	(mS/cm) 1.11 1.13 1.14 1.14 1.14 1.14	(NTU) 7.6 6.4 5.7 5.6 6.3 6.3	(mg/L) 0.86 0.00 0.00 0.00 0.00 0.00	(g/L) 0,7(1 0,723 0.730 0,730 0,729 0.730	
1017 1025 1025 1036 1035 1035	(feet) 6.90 870 10.50 11.80 13.35 14.10 15.65	(°C) 17.54 17.25 17.08 17.31 17.26 17.26 17.30	7.22 7.19 7.18 7.18 7.18 7.18 7.18	(mV) -108 -(07 -109 -110 -110 -110 -111	(mS/cm) 1.11 1.13 1.14 1.14 1.14 1.14	(NTU) 7.6 6.4 5.7 5.6 6.3 6.3	(mg/L) 0.86 0.00 0.00 0.00 0.00 0.00	(g/L) 0,7(1 0,723 0.730 0,730 0,729 0.730	
1015 1026 1025 1030 1035 1040 1045	(feet) 6.90 870 10.50 11.80 13.35 14.10 15.65	(°C) 17.54 17.25 17.08 17.31 17.26 17.26 17.30	7.22 7.19 7.18 7.18 7.18 7.18 7.18	(mV) -108 -(07 -109 -110 -110 -110 -111	(mS/cm) 1.11 1.13 1.14 1.14 1.14 1.14	(NTU) 7.6 6.4 5.7 5.6 6.3 6.3	(mg/L) 0.86 0.00 0.00 0.00 0.00 0.00	(g/L) 0,7(1 0,723 0.730 0,730 0,729 0.730	
1015 1026 1025 1030 1035 1040 1045	(feet) 6.90 870 10.50 11.80 13.35 14.10 15.65	(°C) 17.54 17.25 17.08 17.31 17.26 17.26 17.30	7.22 7.19 7.18 7.18 7.18 7.18 7.18 7.19 7.18	(mV) -108 -(07 -109 -110 -110 -110 -111	(mS/cm) 1.11 1.13 1.14 1.14 1.14 1.14 1.14	(NTU) 7.6 6.4 5.7 5.6 6.3 6.3	(mg/L) 0.86 0.00 0.00 0.00 0.00 0.00	(g/L) 0,7(1 0,723 0.730 0,730 0,729 0.730	
1015 1025 1025 1030 1035 1040 1045	(feet) 6.90 8.70 10.55 11.80 13.35 14.10 15.65 ormation: 6 Method 8260	(°C) 17.54 17.25 17.08 17.31 17.26 17.30 17.35	7.22 7.19 7.18 7.18 7.18 7.18 7.18 7.19 7.19	(mV) -108 -(67 -109 -110 -110 -111	(mS/cm) 1.11 1.13 1.14 1.14 1.14 1.14 1.14	(NTU) 7.6 6.4 5.7 5.6 6.3 6.7 6.9	(mg/L) 0.86 0.00 0.00 0.00 0.00 0.00	(g/L) 0,7(] 0,730 0,730 0,730 0,730 0.730	
1015 1025 1025 1030 1035 1040 1045	(feet) 6.90 8.70 10.55 11.86 13.35 14.10 15.65 0 f5.65 0 mation: 6 Method 8260 5-0618 MW-06-06	(°C) 17.254 17.25 17.31 17.30 17.30 17.35 17.35 17.35 17.35 WOC'S E	7.22 7.19 7.18 7.18 7.18 7.18 7.18 7.18 7.14	(mV) -108 -(67 -109 -110 -110 -111	(mS/cm) [1] [1] [1] 1] 1] 1] 1] 1] 1] 1] 1] 1]	(NTU) 7.6 6.4 5.7 5.6 6.3 6.7 6.9 9 - 40 mL vials	(mg/L) 0.86 0.00 0.00 0.00 0.00 0.00	(g/L) 0,7(] 0,723 0.730 0,730 0.730 0.730 0.730	
1017 1076 1076 1076 1076 1075 1040 1045	(feet) 6.20 8.70 10.50 11.30 13.35 14.10 15.65 ormation: 6 Method 8260 5-0618	(°C) 17-54 17-25 17-31 17-31 17-36 17-36 17-35 17-35 17-35 VOC's E WW-06-MSD-0 18 Dup	7.22 7.19 7.18 7.18 7.18 7.18 7.18 7.18 7.19 7.18 7.14	(mV) -108 -(07 -109 -110 -110 -111 -111 g Naphthalene	(mS/cm) [1] [1] [1] 1] 1] 1] 1] 1] 1] 1] 1] 1]	(NTU) 7.6 6.4 5.7 5.6 6.3 6.7 6.9 9 - 40 mL vials ipped: Pa	(mg/L) 0.86 0.00 0.00 0.00 0.00 0.00	(g/L) 0,7(1 0,730 0,730 0,730 0,730 0.730 0.730	
1015 1076 1076 1076 1076 1075 1040 1045 1045 Sampling Inf USEPA SW-840 MW-06-MS Sample ID: Sample Time:	(feet) 6.90 8.70 10.55 11.80 13.35 14.10 15.65 0 0 0 0 0 0 0 0 0 0 0 0 0	(°C) 7.54 7.25 17.25 17.31 17.26 17.35 17.35 17.35 0 0 17.35 0 0 0 0 0 0 0 0 0 0 0 0 0	7.22 7.19 7.18 7.18 7.18 7.18 7.18 7.18 7.19 7.18 7.14	(mV) -108 -(67 -109 -110 -110 -111 -111 g Naphthalene Yes No X	(mS/cm) 1.11 1.13 1.14 1.14 1.14 1.14 1.14 1.14 Shi	(NTU) 7.6 6.4 5.7 5.6 6.3 6.7 6.9 9 - 40 mL vials ipped: Pa Drop-of	(mg/L) 0.86 0.00 0.00 0.00 0.00 0.00 0.00 Ves ace Courier Pick f Albany Service	(g/L) 0,7(] 0,730 0,730 0,730 0,730 0,730 0.730 0.730 0.730 0.730	
1013 1075 1075 1076 1076 1075 1040 1045 1045 Sampling Inf USEPA SW-840 MW-06-MS Sample ID:	(feet) 6.90 8.70 10.55 11.80 13.35 14.10 15.65 0 0 0 0 0 0 0 0 0 0 0 0 0	(°C) 17-54 17-25 17-31 17-31 17-36 17-36 17-35 17-35 17-35 VOC's E WW-06-MSD-0 18 Dup	7.22 7.19 7.18 7.18 7.18 7.18 7.18 7.18 7.19 7.18 7.14	(mV) -108 -(67 -109 -110 -110 -111 -111 g Naphthalene Yes No X	(mS/cm) 1.11 1.13 1.14 1.14 1.14 1.14 1.14 1.14 Shi	(NTU) 7.6 6.4 5.7 5.6 6.3 6.7 6.9 9 - 40 mL vials ipped: Pa	(mg/L) 0.86 0.00 0.00 0.00 0.00 0.00 0.00 Ves	(g/L) 0,7(1 0,730 0,730 0,730 0,730 0.730 0.730 0.730 0.730 0.730 0.730	

	PO			Date:	6/14/18	, 		
Job Number: 06-030	00-125340-221		Weather: 75°- SUN					
Well Id. MW-11			Time In: 0850 Time Out: 0930					
Well Information								
Depth to Mator	(61)	TOC	Other	Well Type Well Lock			Stick-Up	
Depth to Water: Depth to Product:	(feet)	3:55 NP			ed: Point Marked:	Yes Yes	No No	
Depth to Bottom:	(feet)	8.10		Well Mate			ner:	
Length of Water Column:		4.55		Well Diam		2" X Oth	Advances of the local distances of the	
Volume of Water in Well:	(gal)	Ortar		Commente	s:			
Three Well Volumes:	(gal)	2.18						
y 19 19 19 19 19 19 19 19 19 19 19 19 19		0					T	
Purging Information					and the second secon			
						Conversion F	actors	
Purging Method:	Baile	r Peristaltic	Grund	fos Pump	gal/ft.	1" ID 2" ID	4" ID 6" ID	
Tubing/Bailer Material:	Teflor	Stainless St.	Poly	yethylene	of			
Sampling Method:	Baile		Grundi	fos Pump	water	0.04 0.16	0.66 1.47	
Average Pumping Rate:	(ml/min)	130			1 gall	on=3.785L=3785m	nL=1337cu. feet	
Duration of Pumping:	(min)	30		¥				
Total Volume Removed:	(gal)	1)id well go dry?	Yes No	V			
Horiba U-52 Water Qualit	y Meter Used?	Yes						
Time DTW	Temp	Hq	ORP	Conductivity	Turbidity	DO	TDS	
(feet)	(°C)	pri	(mV)	(mS/cm)	(NTU)	(mg/L)	(g/L)	
0855 3.60	de de la constante de la contra de la constante	7.48	-95	2.98	39.4	0.00	1,20	
1000	14.00				Saver 1			
0900 3.00	17.05	7.46	-98	312	7 3.12	0.00	1.99	
0900 3.00 0905 3.60	17.05	7.46 7.43	-98 -101	312	73.12		1.99 1.87	
0900 3.00 0905 3.60 0910 3.60	16.30	7.46 7.43 7.44	-101 -108	312 2,93 2.97	73.12	0.00 0.00	1.87	
0900 3.00 0905 3.60 0910 3.65 0915 3.65	14.30	7.46 7.43 7.44 7.44	-101 -/08 -113	312 2,93 2.97 3.00	9.9	0.00 0.00 0.00 0.00	1.87 1.90 1.97	
0900 3.00 0905 3.60 0910 3.65 0910 3.65 0920 3.65	14.30	7.46 7.43 7.44 7.44 7.44 7.44	-101 -108 -113 -118	312 2,93 2.97 3.09 3:10	9.9	0.00 00.00 00.00 00.00	1.87 1.90 1.97 1.00	
0900 3.00 0905 3.60 0910 3.65 0915 3.65	14.30	7.46 7.43 7.44 7.44	-101 -/08 -113	312 2,93 2.97 3.00	9.9	0.00 0.00 0.00 0.00	1.87 1.90 1.97	
0900 3.00 0905 3.60 0910 3.65 0910 3.65 0920 3.65	14.30	7.46 7.43 7.44 7.44 7.44 7.44	-101 -108 -113 -118	312 2,93 2.97 3.09 310	9.9	0.00 00.00 00.00 00.00	1.87 1.90 1.97 1.00	
0900 3.00 0905 3.60 0910 3.65 0910 3.65 0920 3.65	14.30	7.46 7.43 7.44 7.44 7.44 7.44	-101 -108 -113 -118	312 2,93 2.97 3.09 310	9.9	0.00 00.00 00.00 00.00	1.87 1.90 1.97 1.00	
0900 3.00 0905 3.60 0910 3.65 0910 3.65 0920 3.65	14.30	7.46 7.43 7.44 7.44 7.44 7.44	-101 -108 -113 -118	312 2,93 2.97 3.09 310	9.9	0.00 00.00 00.00 00.00	1.87 1.90 1.97 1.00	
0900 3.00 0905 3.60 0910 3.65 0910 3.65 0920 3.65	14.30	7.46 7.43 7.44 7.44 7.44 7.44	-101 -108 -113 -118	312 2,93 2.97 3.09 310	9.9	0.00 00.00 00.00 00.00	1.87 1.90 1.97 1.00	
0900 3.00 0905 3.60 0910 3.66 0910 3.65 0920 3.65 0925 3.65	14.30	7.46 7.43 7.44 7.44 7.44 7.44	-101 -108 -113 -118	312 2,93 2.97 3.09 310	9.9	0.00 00.00 00.00 00.00	1.87 1.90 1.97 1.00	
0900 3.00 0905 3.60 0910 3.65 0910 3.65 0920 3.65	14.30	7.46 7.43 7.44 7.44 7.44 7.44	-101 -108 -113 -118	312 2,93 2.97 3.09 310	9.9	0.00 00.00 00.00 00.00	1.87 1.90 1.97 1.00	
0900 3.00 0905 3.60 0905 3.60 0910 3.65 0920 3.65 0925 3.65	12.05 16.30 11.40 16.39 16.44 16.40	7.46 7.43 7.44 7.44 7.44 7.44 7.42	-101 -108 -113 -118 -119	312 2,93 2.97 3.00 3:10 3.12	9.9	0.00	1187 1190 197 197 197 197	
0900 3.00 0905 3.60 0910 3.66 0910 3.65 0920 3.65 0925 3.65	12.05 16.30 16.30 16.40 16.44	7.46 7.43 7.44 7.44 7.44 7.44 7.42	-101 -108 -113 -118	312 2,93 2.97 3.00 3:10 3.12	9.9	0.00	1.87 1.90 1.97 1.00	
0900 3.00 0905 3.60 0915 3.65 0920 3.65 0925 3.65 0926 3.65 0927 3.65 0928 3.65 0928 3.65 0928 3.65 0928 3.65 0928 3.65 09298 3.65 0928 <td>i 7.05 16.30 16.39 16.49 16.49 16.40 16.40 00 00 00 00 00 00 00 00 00</td> <td>7.46 7.43 7.44 7.44 7.44 7.44 7.47 7.48 3TEX Includin plicate?</td> <td>- 10 1 - 108 - 113 - 118 - 119 g Naphthalene Yes No X</td> <td>312 2.93 2.97 3.09 3.10 3.12</td> <td>9.9 6.5 6.5 6.5 8 3 - 40 mL vials</td> <td>0.00</td> <td>1.87 1.90 1.97 1.00 2.02</td>	i 7.05 16.30 16.39 16.49 16.49 16.40 16.40 00 00 00 00 00 00 00 00 00	7.46 7.43 7.44 7.44 7.44 7.44 7.47 7.48 3TEX Includin plicate?	- 10 1 - 108 - 113 - 118 - 119 g Naphthalene Yes No X	312 2.93 2.97 3.09 3.10 3.12	9.9 6.5 6.5 6.5 8 3 - 40 mL vials	0.00	1.87 1.90 1.97 1.00 2.02	
0900 3.00 0905 3.60 0905 3.60 0915 3.65 0920 3.65 0925 3.65 0925 3.65 0925 3.65 USEPA SW-846 Method 826	i 7.05 16.30 16.39 16.49 16.49 16.40 16.40 00 00 00 00 00 00 00 00 00	7.46 7.43 7.44 7.44 7.44 7.44 7.47 7.48	- 10 1 -/08 - 113 - 118 - 119 g Naphthalene	312 2.93 2.97 3.09 3.10 3.12	9.9 6.0 6.5 6.5 6.5 3 - 40 mL vials	0.00 0.00 0.00 0.00 0.00	1187 1190 197 12,00 2.02	
0900 3.00 0905 3.60 0915 3.65 0920 3.65 0925 3.65 0926 3.65 0927 3.65 0928 3.65 0928 3.65 0928 3.65 0928 3.65 0928 3.65 09298 3.65 0928 <td>i 7.05 16.30 16.39 16.49 16.49 16.40 16.40 00 00 00 00 00 00 00 00 00</td> <td>7.46 7.43 7.44 7.44 7.44 7.44 7.47 7.48</td> <td>- 10 1 -/08 - 113 118 119 g Naphthalene</td> <td>312 2,93 2.97 3.09 3.10 3.12 Sh</td> <td>9.9 6.0 6.5 6.5 6.5 3 - 40 mL vials</td> <td>0.00 0.00 0.00 0.00 0.00 0.00 0.00 Yes</td> <td>1187 1190 1.90 2.02 No 2.02 </td>	i 7.05 16.30 16.39 16.49 16.49 16.40 16.40 00 00 00 00 00 00 00 00 00	7.46 7.43 7.44 7.44 7.44 7.44 7.47 7.48	- 10 1 -/08 - 113 118 119 g Naphthalene	312 2,93 2.97 3.09 3.10 3.12 Sh	9.9 6.0 6.5 6.5 6.5 3 - 40 mL vials	0.00 0.00 0.00 0.00 0.00 0.00 0.00 Yes	1187 1190 1.90 2.02 No 2.02 	
U900 3.00 U905 3.60 U915 3.65 U916 3.65 U917 3.65 U918 3.65 U919 3.65 U915 3.65 U916 3.65 U917 3.65 U918	i 7.05 16.30 16.39 16.49 16.49 16.40 16.40 00 00 00 00 00 00 00 00 00	7.46 7.43 7.44 7.44 7.44 7.44 7.47 7.48	- 10 1 -/08 - 113 118 119 g Naphthalene	312 2,93 2.97 3.09 3.10 3.12 Sh	9.9 6.5 6.5 6.5 6.5 6.5 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	0.00 0.00 0.00 0.00 0.00 0.00 0.00 Ves	I 1 8 7 I 1 9 7 I 9	



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

1																			
Section A	Section B		Section	n C													Page	: 1 of 1	
Required Client Information:	Required Project Information:			nformation:									1		A COLORINA DE LA COLORIZA DE LA COLORIZÃO DE LA COLORIZ	No. of Concession, Name	Contraction of the	COLUMN STATE	CONTRACTOR OF
Company: GES - Syracuse	Report To: Devin Shay (GES) dshay@gesonline.com					ail at ges-invoi			m 						And Street Street	ATORY AG			
Address: 5 Technology Place, Suite 4 Report To: Tim Beaumont (GES) tbeaumont@gesonline.com			Company Name: Groundwater & Environmental Services, Inc.								NPDES		GROUND W	/ATER	DRINKI	NG WATER			
East Syracuse, New York 13057				Address: 5 Technology Place, Suite 4, East Syracuse, NY 13057							UST		RCRA		OTHER				
Email To: dshay@gesonline.com Purchase Order No.:			Pace Qu	ote Reference									5	SITE	GA	IL	IN	MI NC	
Phone: 800.220.3069 Fax: None Project Name: National Grid - Wa x4051 Hudson NY			Pace Pro	ject Manager:	Rachel Chris	tner							LOCATION		он	SC	WI	OTHER_	
Requested Due Date/TAT: Standard	Project Number: 06-03000-125340-221-1106		Pace Pro	file #:									Flitered (Y/N)			///	11		
	Valid Karra Codes MATRIX CUDE Brevelow NTAL DW Matrix TAL DW MICOLT P MICOLT P MICOLT P MICOLT P MICOLT P MICOLT P MICOLT C MICOLT C MICOL	MATRIX CODE SAMBLE TYDE	COMPOSITE		GRAG	TIME	SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	Unpreserved H-SO.	Pres	HOS	Na ₂ S ₂ O ₂ 8 NaOH and Zn Acetate	Requested Analysis:	The second secon				Pace Pr	oject Number Lab I.D.
MW-3-0618	3	WT G	1000		6/4	1005		3	TT	1			3						
MW-5-0618		WTG	and the second second		1	1130		3	$\uparrow \uparrow$	1			3						
MW-6-0618		WT G	ALC: UNKNEW			1045		з	11	3			3						
4 MW-6-MS-06		WT G	al or he was to		1	1045		з	11	13	11	11	3				1		
MW-6-MSD-06		WT G				1045		3	\mathbf{T}	3	11		3				1		
MW-11-0618		WT G	CONSTRUCTION OF			0925		3	\square	3	11		3						
Field Duplicate -		WT G	A CONTRACTOR					3	TT	3	T		3						
e Trip Blank		WT G	1000000		V	-		2	11	2	TT	11	2				1		
- The Domini	<u></u>	WTG	2446						\mathbf{H}	\square	TT	11					1		
10		WT G	a constant									++							
11		WT G	1000								\mathbf{T}	11							
		WT G							11	\square	\mathbf{T}	11							
1/.		WT Lat	10121-007								\square	11							
Additional Comments:		Statistics of the local division of the loca		ARILATON		DATE	TINE	ACCE	TRUEY	177 -	ATEN			SATE .	TIME	SAMPLE	CONDI	TIONS	
SAMPLES WILL ARRIVE IN	COOLERS.	10	+-1	hace	U	10/14	1130	>									X	NIA	N.
SAMPLES WILL ARRIVE IN #	COOLERS.		y ro	nag		qui											NA	NX	N.X.
Please send reports to: dshay@gesonline.com, tbeau																	VIN	YIN	NX
NERegion@gesontine.com, ges@equisontine.co																	YIN	YN	N/X
nan regioneste sonninge com, geste equiser innere				5411° JER	NAME AND	S GIATURE			- 4 50			3		10000		o	n loe	aled	
SPECIFIC EDD NAME: NGHudsonWater-Jabnumber:28351.EQEDI	D.zip			PRINT Name of		F De	r og	U	-		DATE S		114/18			Temp In *C	Received on	Custody Sealed Cooler	Samples Intact
					0							,							



Appendix C – Data Usability Summary Report and Analytical Data



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

July 23, 2018

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

RE: Data Usability Summary Report for National Grid: Water Street, Hudson, NY Site Data Package Pace Analytical Job No. 30256180

Groundwater & Environmental Services, Inc. (GES) reviewed one data package (Laboratory Project Number 30256180) from Pace Analytical Services, Inc., for the analysis of groundwater samples collected on June 14, 2018 from monitoring wells located at the National Grid: Water Street, Hudson, NY Site. Four aqueous samples, a matrix spike and duplicate set, 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.



Lab ID	Sample ID	Matrix	Date Collected	Date Received	Comments
30256180001	MW-3-0618	Water	06/14/18 10:05	06/15/18 10:00	
30256180002	MW-5-0618	Water	06/14/18 11:30	06/15/18 10:00	
30256180003	MW-6-0618	Water	06/14/18 10:45	06/15/18 10:00	MS/MSD
30256180004	MW-6-MS-0618	Water	06/14/18 10:45	06/15/18 10:00	
30256180005	MW-6-MSD-0618	Water	06/14/18 10:45	06/15/18 10:00	
30256180006	MW-11-0618	Water	06/14/18 09:25	06/15/18 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-5-0618 and the duplicate sample, as neither sample reported above detection level concentrations. The MS/MSD recoveries and relative percent differences were hand calculated and 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.

Janowick >

Bonnie Janowiak, Ph.D. Project 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



30256180006

30256180007

30256180008

SAMPLE SUMMARY

06/14/18 09:25

06/14/18 00:00

06/14/18 00:01

Water

Water

Water

Date Received

06/15/18 10:00

06/15/18 10:00 06/15/18 10:00

06/15/18 10:00

06/15/18 10:00

06/15/18 10:00

06/15/18 10:00

06/15/18 10:00

Project: National Grid-Water Street, Hu Pace Project No.: 30256180

MW-11-0618

Trip Blank

Field Duplicate-0618

	0 30230100					
Lab ID	Sample ID	Matrix	Date Collected			
30256180001	MW-3-0618	Water	06/14/18 10:05			
30256180002	MW-5-0618	Water	06/14/18 11:30			
30256180003	MW-6-0618	Water	06/14/18 10:45			
30256180004	MW-6-MS-0618	Water	06/14/18 10:45			
30256180005	MW-6-MSD-0618	Water	06/14/18 10:45			

REPORT OF LABORATORY ANALYSIS



PROJECT NARRATIVE

Project: National Grid-Water Street, Hu

Pace Project No.: 30256180

Method: EPA 8260C

Description:8260C MSVClient:Groundwater & Environmental Services, Inc. (Syracuse)Date:June 22, 2018

General Information:

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

Hold Time:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Internal Standards:

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

Surrogates:

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

Method Blank:

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

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

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

QC Batch: 303140

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

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

REPORT OF LABORATORY ANALYSIS



Appendix D – Photograph Log





Site Photo – September 2017

Site Photo – September 2017



Site Photo – December 2017

Site Photo – December 2017





Site Photo – March 2018

Site Photo – March 2018



Site Photo – June 2018

Site Photo – June 2018