nationalgrid

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

May 13, 2024

Mr. Michael Squire
New York State Department of Environmental Conservation
Division of Environmental Remediation, BURC
625 Broadway
Albany, New York 12233-7014

Re: ***National Grid Johnstown Former MGP Site***
NYSDEC Site No. 518020
Johnstown, New York
2024 Periodic Review Report

Dear Mr. Squire:

Enclosed for your review is the 2024 Periodic Review Report (PRR) for the National Grid Johnstown MGP Site. The PRR pertains to the period from April 15, 2023 through April 15, 2024 and includes a brief report and Institutional Controls/Engineering Controls (IC/EC) Certification Form.

Please feel free to contact me at 315.428.5652.

Sincerely,

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

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

I. Introduction

A. **Brief Site Summary** –

An investigation of the Site began in 1997 with a Preliminary Site Assessment (PSA), which found that the Site was impacted with MGP wastes. The site was previously owned by a predecessor company to Niagara Mohawk Power Corporation. A Supplemental PSA was then conducted at the Site in 1998, which was followed by a RI (January 2000) and subsequent remedial measures. Remedial measures are discussed separately below in this section.

A 2009 Supplemental RI was initiated to collect data to address potential residual MGP-related contaminants remaining in groundwater at the Site and to assess hydrogeologic conditions and groundwater quality on the Site. The results of the Supplemental RI were used to formulate potential remedial alternatives for groundwater and residual soil contamination. The Supplemental RI results were evaluated and presented in the 2010 FS Report.

Several IRMs were performed to address the MGP impacts. In 2002 and 2003, the former holders and associated impacted soil were removed. During this IRM, former Holder #2 and the northern half of former Holder #3 were demolished and removed from the Site. Approximately 13,870 cubic yards of soil were excavated and disposed off-site at a NYSDEC-approved facility. Permanent steel sheeting was left in place along the northeastern perimeter of the Site to avoid disturbance of the roadway and to provide containment of residual material left at depth.

Between 2005 and 2006, National Grid provided support to the City of Johnstown for subsurface work associated with the replacement of the North Market Street Bridge across Cayadutta Creek. Approximately 1,413 cubic yards of impacted soil were excavated from within the cofferdam area and disposed off-site at a NYSDEC-approved facility.

In August 2009, the rip-rap area along the bank of Cayadutta Creek that had been restored during the previous IRMs was enhanced to allow for establishment of stream-side vegetation. Post-IRM inspections of the restored Cayadutta Creek bank were conducted in September 2009 and May 2010.

A Record of Decision (ROD) was issued by the NYSDEC, dated March 2010, in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, 6 NYCRR Part 375. Based upon the results of the remedial investigation/feasibility study (RI/FS) for the Site, the interim remedial measures (IRMs) previously completed, and the ROD, the draft Final Engineering Report and Site Management Plan (SMP) were developed and submitted to the NYSDEC in June 2010. The Final Engineering Report, the Final SMP, and the Final Environmental Easement were approval by the NYSDEC in their June 2016 Fact Sheet.

The Final SMP includes:

1) Semi-annual (April & October) site inspection and groundwater level measurements at monitoring wells MW-4, MW-7, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, RMW-1, and the creek surface gauging station (bridge);

2) Semi-annual groundwater sampling/analysis [Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Heavy Metals, and Natural Attenuation

Parameters] for monitoring wells MW-4, MW-7, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, and MW-16 (RMW-1 will not be sampled);

3) Semi-annual reporting (June & December) to NYSDEC.

B. **Remedial Program Effectiveness** – During the reporting period (April 15, 2023 to April 15, 2024), the long-term remedial objectives were met for the site.

C. **Remedial Program Compliance** - The major elements within the Institutional Control/Engineering Control(s) (IC/EC) Plan are in compliance.

D. **Remedial Program Recommendations** - It is recommended that no changes be made to the IC/EC Plan. It is recommended that an annual Project Review Report (PRR) be submitted. The next PRR submittal will cover the period April 15, 2024 to April 15, 2025.

II. Site Overview

A. Site Location and Boundaries –

The Site is located in the City of Johnstown, County of Fulton, New York (Figure 1 presents the site location map) and is identified as Block 14 and Lot 7 on the Johnstown City Tax Map. The Site is an approximate 0.7-acre area bounded by Cayadutta Creek to the north, the Colonial Cemetery to the south, Market Street to the east, and a wooded parcel of property to the west (Figure 2 presents the site plan). The Site is located in a mixed commercial, industrial, and residential area. Currently, National Grid operates a natural gas regulator station at the Site with equipment contained in fenced enclosures along the Site's southern boundary. The rest of the Site is grass covered, including the stream bank adjacent to Cayadutta Creek along the northern boundary of the Site. An embankment exists along the north end of the Site that slopes down to Cayadutta Creek. A chain-link fence exists along the north and west sides of the Site, and a retaining wall runs along the south side of the Site. Access to the Site is from North Market Street to the east.

B. Regulatory History and Remedy Features –

The site was remediated in accordance with Order on Consent Index Number A4-0473-0000, Site Number 518020, which was signed on November 7, 2003.

The "remaining contamination" was investigated during a 2009 Supplemental RI to collect data to address potential residual MGP-related contaminants remaining in groundwater at the Site and to assess hydrogeologic conditions and groundwater quality at the Site. The results of the SRI were used to formulate potential remedial alternatives for contaminated groundwater and residual soil contamination that were evaluated in a 2010 Feasibility Study (FS) report.

In March of 2010, the NYSDEC issued a Record of Decision (ROD) after evaluating the alternatives and selecting the future remedial actions at the Site that focus on MGP-related contamination in soil and groundwater. The overall site remedy selected by NYSDEC is Site Management, which is composed of several elements:

- Installation, maintenance, and monitoring of the Engineering Controls, including a sheet pile wall, a four-inch monitoring/extraction well, and a soil cover system.

- Imposition of an institutional control in the form of an Environmental Easement for the Controlled Property that restricts the use of the site to commercial and industrial use. In addition, the environmental easement will restrict the use of groundwater as a source of potable or process water, and prohibit agriculture or vegetable gardens on the Controlled Property.

- A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan will include monitoring of the groundwater through the existing monitoring well network to assess the performance and effectiveness of the remedy.

- Development and implementation of a Site Management Plan for long-term management of remaining contamination, as required by the Environmental Easement, which includes plans for: (1) institutional and engineering controls, (2) monitoring, (3) operation and maintenance, and (4) reporting.

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness

A. Evaluation of Remedy Performance – Quarterly inspections are conducted on the Site features including the groundwater monitoring wells, soil cap, and sheet pile wall. Semi-annual groundwater sampling is conducted at wells MW-4, MW-7, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, and MW-16. The remedy performance has been effective in protecting facility workers and the public.

IV. IC/EC Plan Compliance Report

A. IC/EC Requirements and Compliance

1. IC/EC Controls

The ICs/ECs:

- Sheet Pile Wall: Quarterly site inspection will include the condition of the sheet pile wall. The sheet pile wall is buried and cannot be observed; however, the wall appears to be functioning properly and influencing groundwater flow towards the Cayadutta Creek.

- Soil Cover System: Quarterly site inspection of the cover system will include identification of any damage to the cover.

- Groundwater Monitoring: Semi-Annual low flow groundwater sampling of the following monitoring wells: MW-4, MW-7, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, and MW-16. The condition of these wells is also inspected quarterly.

- Compliance with the property restrictions outlined in the Environmental Easement.

2. **IC/EC Goals -** Each goal is being met and/or working effectively.

3. **IC/EC Corrective Measures –** No deficiencies were noted during the quarterly inspections.

4. **IC/EC Conclusions/Recommendations –** The EC program is in compliance and there are no recommendations for the program at this time.

B. **IC/EC Certification** – Refer to PRR Form- Attachment 1 for the certification.

V. Monitoring Plan Compliance Report – The next Semi-Annual Groundwater Monitoring Report will be submitted by August 15, 2024. The Semi-Annual Groundwater Monitoring Reports for 2023 are included as Attachment 3.

VI. Operation & Maintenance (O&M) Plan Compliance Report – Not Applicable.

VII. Overall PRR Conclusions and Recommendations

A. **Compliance with Site Management Plan (SMP)**

1. **Requirements –** All IC/EC Plan requirements were met during this reporting period.

2. **Exposure Pathways –** There are no new completed exposure pathways resulting in unacceptable risk.

3. **Proposed Plans and Schedule to Meet Compliance –** No plan proposed.

B. **Performance and Effectiveness of the Remedy –** The remedy as described in the Site Management Plan and executed by National Grid has been effective in meeting the program goals.

C. **Future PRR Submittals** – The frequency of PRR Submittals should remain annual. Therefore, the next PRR reporting period will cover April 15, 2024 through April 15, 2025.

VIII. Additional Guidance – Not needed.

Attachment 1: PRR Certification Form

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 518020

Site Name NM - Johnstown MGP

Site Address: 103 N. Market St Zip Code: 12095
City/Town: Johnstown
County: Fulton
Site Acreage: 0.700

Reporting Period: April 15, 2023 to April 15, 2024

	YES	NO
1. Is the information above correct?	X	
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?		X
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		X
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?		X
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?		X

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	X	
7. Are all ICs in place and functioning as designed?	X	

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 518020 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
162.20-14-7	National Grid	Ground Water Use Restriction Landuse Restriction Site Management Plan IC/EC Plan

• Use must be for commercial or industrial
• Compliance with a site management plan
• Groundwater use prohibited
• The potential for vapor intrusion must be evaluated for any buildings developed, and any potential impacts identified must be monitored or mitigated
• Vegetable gardens and farming prohibited
• Periodic Certification of ICs and ECs

Box 4

Description of Engineering Controls

Parcel	Engineering Control
162.20-14-7	Cover System

• Soil Cover
• Sheet Pile Wall
• Monitoring/Extraction Well

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
X	☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

   (a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
X	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 518020

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Gerald Cresap, PE (print name) at 6780 Northern Blvd., Suite 100, East Syracuse, NY (print business address),

am certifying as agent for National Grid (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner, Remedial Party or Designated Representative Rendering Certification

5-10-2024
Date

STATE OF NEW YORK
GERALD H. CRESAP, JR.
087401
LICENSED PROFESSIONAL ENGINEER

EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Gerald Creasp, PE (print name) at 6780 Northern Blvd., Suite 100, East Syracuse, NY (print business address),

am certifying as a Qualified Environmental Professional for the agent for National Grid (Owner or Remedial Party)

STATE OF NEW YORK
GERALD H. CRESAP, JR.
087401
LICENSED PROFESSIONAL ENGINEER

Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

5-10-2024
Date

Attachment 2: Site Inspection Forms

Site Management Plan Inspection Form
109 North Market Street
Former MGP Site
Johnstown, New York

Date: 7/11/2023 Time: 9:00
Technician: KL Weather: Sunny 70

Vegetation Cap				
Condition of Grass	GOOD	FAIR	POOR	COMMENTS:
Condition of Site Trees	GOOD	FAIR	POOR	COMMENTS:
Surface Erosion	NONE	MINOR	SIGNIFICANT	COMMENTS:
Has the site been maintained/mowed?	YES		NO	COMMENTS:

Sheet Pile Wall			
Has any construction occurred that may have impacted the sheet pile wall?	YES	NO	COMMENTS:

Site Wide			
Does the property continue to be used for commercial and/or industrial uses?	YES	NO	COMMENTS:
Does the use of groundwater for potable or process water continue to be restricted?	YES	NO	COMMENTS:
Are agricultural or vegetable gardens present on the property?	YES	NO	COMMENTS:
Do the Engineering Controls continue to perform as designed?	YES	NO	COMMENTS:
Do the Engineering Controls continue to be protective of human health and environment?	YES	NO	COMMENTS:
Are the requirements of the Site Management Plan being met?	YES	NO	COMMENTS:
Are the requirements of the Environmental Easement being met?	YES	NO	COMMENTS:
Since the last inspection has the groundwater been sampled in accordance with the SMP?	YES	NO	COMMENTS:
Since the last inspection have there been any changes to the remedial system?	YES	NO	COMMENTS:
Are there any needed changes?	YES	NO	COMMENTS:
Are the site records complete and up to date?	YES	NO	COMMENTS:

Miscellaneous				
Evidence of Trespassing	YES		NO	COMMENTS:
Litter	NONE	MINOR	SIGNIFICANT	COMMENTS:

Site Monitoring Wells		
Well ID.	***Location Secure***	
RW-1	YES	NO
MW-4	YES	NO
MW-7	YES	NO
MW-10	YES	NO
MW-11	YES	NO
MW-12	YES	NO
MW-13	YES	NO
MW-14	YES	NO
MW-15	YES	NO
MW-16	YES	NO

General Comments:

Under debris

Site Management Plan Inspection Form
109 North Market Street
Former MGP Site
Johnstown, New York

Date: 10/11/2023 Time: 13:00
Technician: AJ Weather: Cloudy 55

Vegetation Cap				
Condition of Grass	GOOD	FAIR	POOR	COMMENTS:
Condition of Site Trees	GOOD	FAIR	POOR	COMMENTS:
Surface Erosion	NONE	MINOR	SIGNIFICANT	COMMENTS:
Has the site been maintained/mowed?	YES		NO	COMMENTS:

Sheet Pile Wall			
Has any construction occurred that may have impacted the sheet pile wall?	YES	NO	COMMENTS:

Site Wide			
Does the property continue to be used for commercial and/or industrial uses?	YES	NO	COMMENTS:
Does the use of groundwater for potable or process water continue to be restricted?	YES	NO	COMMENTS:
Are agricultural or vegetable gardens present on the property?	YES	NO	COMMENTS:
Do the Engineering Controls continue to perform as designed?	YES	NO	COMMENTS:
Do the Engineering Controls continue to be protective of human health and environment?	YES	NO	COMMENTS:
Are the requirements of the Site Management Plan being met?	YES	NO	COMMENTS:
Are the requirements of the Environmental Easement being met?	YES	NO	COMMENTS:
Since the last inspection has the groundwater been sampled in accordance with the SMP?	YES	NO	COMMENTS:
Since the last inspection have there been any changes to the remedial system?	YES	NO	COMMENTS:
Are there any needed changes?	YES	NO	COMMENTS:
Are the site records complete and up to date?	YES	NO	COMMENTS:

Miscellaneous				
Evidence of Trespassing	YES		NO	COMMENTS:
Litter	NONE	MINOR	SIGNIFICANT	COMMENTS:

Site Monitoring Wells		
Well ID.	***Location Secure***	
RW-1	YES	NO
MW-4	YES	NO
MW-7	YES	NO
MW-10	YES	NO
MW-11	YES	NO
MW-12	YES	NO
MW-13	YES	NO
MW-14	YES	NO
MW-15	YES	NO
MW-16	YES	NO

General Comments:

Under debris

Site Management Plan Inspection Form
109 North Market Street
Former MGP Site
Johnstown, New York

Date: 1/17/2024 Time: 10:00
Technician: Kevin Leo Weather: Sunny 17

Vegetation Cap		
Condition of Grass	Good	COMMENTS:
Condition of Site Trees	Good	COMMENTS:
Surface Erosion	None	COMMENTS:
Has the site been maintained/mowed?	No	COMMENTS:

Sheet Pile Wall		
Has any construction occurred that may have impacted the sheet pile wall?	No	COMMENTS:

Site Wide		
Does the property continue to be used for commercial and/or industrial uses?	Yes	COMMENTS:
Does the use of groundwater for potable or process water continue to be restricted?	Yes	COMMENTS:
Are agricultural or vegetable gardens present on the property?	No	COMMENTS:
Do the Engineering Controls continue to perform as designed?	Yes	COMMENTS:
Do the Engineering Controls continue to be protective of human health and environment?	Yes	COMMENTS:
Are the requirements of the Site Management Plan being met?	Yes	COMMENTS:
Are the requirements of the Environmental Easement being met?	Yes	COMMENTS:
Since the last inspection has the groundwater been sampled in accordance with the SMP?	No	COMMENTS:
Since the last inspection have there been any changes to the remedial system?	No	COMMENTS:
Are there any needed changes?	No	COMMENTS:
Are the site records complete and up to date?	Yes	COMMENTS:

Miscellaneous		
Evidence of Trespassing	No	COMMENTS:
Litter	None	COMMENTS:

Site Monitoring Wells	
Well ID.	***Location Secure?***
RW-1	Yes
MW-4	Yes
MW-7	Yes
MW-10	Yes
MW-11	Yes
MW-12	Yes
MW-13	Yes
MW-14	Yes
MW-15	Yes
MW-16	Yes

General Comments:
None

Site Management Plan Inspection Form
109 North Market Street
Former MGP Site
Johnstown, New York

Date: 4/16/2024 Time: 11:00
Technician: Peter Lyon Weather: 52 sunny

Vegetation Cap		
Condition of Grass	Good	COMMENTS: Repaired plow damages
Condition of Site Trees	Good	COMMENTS:
Surface Erosion	Minor	COMMENTS: Plow damage repaired and seeded
Has the site been maintained/mowed?	No	COMMENTS:

Sheet Pile Wall		
Has any construction occurred that may have impacted the sheet pile wall?	No	COMMENTS:

Site Wide		
Does the property continue to be used for commercial and/or industrial uses?	Yes	COMMENTS:
Does the use of groundwater for potable or process water continue to be restricted?	Yes	COMMENTS:
Are agricultural or vegetable gardens present on the property?	No	COMMENTS:
Do the Engineering Controls continue to perform as designed?	Yes	COMMENTS:
Do the Engineering Controls continue to be protective of human health and environment?	Yes	COMMENTS:
Are the requirements of the Site Management Plan being met?	Yes	COMMENTS:
Are the requirements of the Environmental Easement being met?	Yes	COMMENTS:
Since the last inspection has the groundwater been sampled in accordance with the SMP?	Yes	COMMENTS:
Since the last inspection have there been any changes to the remedial system?	No	COMMENTS:
Are there any needed changes?	No	COMMENTS:
Are the site records complete and up to date?	Yes	COMMENTS:

Miscellaneous		
Evidence of Trespassing	No	COMMENTS:
Litter	Minor	COMMENTS:Picked up

Site Monitoring Wells	
Well ID.	***Location Secure?***
RW-1	Yes
MW-4	Yes
MW-7	Yes
MW-10	Yes
MW-11	Yes
MW-12	Yes
MW-13	Yes
MW-14	Yes
MW-15	Yes
MW-16	Yes

General Comments:

Site Conditions – July 11, 2023

Site Conditions – January 17, 2024

Site Conditions – April 15, 2024

Attachment 3: Semi-Annual Monitoring Reports

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

July 18, 2023

Mr. Michael Squire
Remedial Bureau C, 11th Floor
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7014

Re: Johnstown (N. Market St.)
Former Manufactured Gas Plant Site (MGP)
Site # 518020
Semi-Annual Groundwater Monitoring Report (June 2023)

Dear Mr. Squire:

Enclosed is the Semi-Annual Groundwater Monitoring Report January through June 2023 for the Johnstown (N. Market St.) MGP Site located in Johnstown, New York. The report includes the groundwater monitoring results from April 19, 2023.

National Grid acknowledges the NYSDEC Fact sheet dated June 2016 approving the site's environmental remediation construction completion. Long-term OM&M activities are being conducted in accordance with the approved Site Management Plan (SMP) and the site's Environmental Easement.

Please contact me at (315) 428-5652 or Steven.Stucker@NationalGrid.com if you have any questions regarding the report.

Sincerely,

for

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

Cc: Joseph Giordano -National Grid
Nathan Freeman- NYSDOH

National Grid

Semi-Annual Groundwater Monitoring Report

National Grid
109 North Market Street
Johnstown, NY 12095

July 2023

Version 1

Semi-Annual Groundwater Monitoring Report

National Grid Johnstown Site
109 North Market Street
Johnstown, NY 12095

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:
0603324.120950.221

Date:
July 18, 2023

Devin T. Shay, PG
Program Manager / Principal Hydrogeologist

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Figures

Tables

Appendices

Acronyms

bgs	Below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, and Total Xylenes
COCs	Constituents of Concern
cu. ft.	Cubic feet
DO	Dissolved Oxygen
DTB	Depth to Bottom
DTP	Depth to Product
DTW	Depth to Water
DUSR	Data Usability Summary Report
FS	Feasibility Study
GES	Groundwater & Environmental Services, Inc.
IRMs	Interim Remedial Measures
mg/L	Milligrams per Liter
MGP	Manufactured Gas Plant
MNA	Monitored Natural Attenuation
NYSDEC	New York State Department of Environmental Conservation
ORP	Oxidation-Reduction Potential
PAHs	Polycyclic Aromatic Hydrocarbons
PSA	Preliminary Site Assessment
QA/QC	Quality Assurance / Quality Control
RI	Remedial Investigation
ROD	Record of Decision
SMP	Site Management Plan
SU	Standard Units
SVOCs	Semi-Volatile Organic Compounds
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds
µg/L	Micrograms per Liter
WQ	Water Quality

1 Introduction

1.1 Overview

This Semi-Annual Groundwater Monitoring Report (the Report) summarizes the results of the April 2023 groundwater sampling event at the Johnstown, New York (N. Market Street) Former Manufactured Gas Plant (MGP) Site (the Site). This Report was developed as part of the long-term groundwater monitoring program on behalf of National Grid.

National Grid has been addressing the Site environmental conditions under an Order on Consent (Index Number D0-0001-9210), dated April 1999, that was entered into by Niagara Mohawk and the New York State Department of Environmental Conservation (NYSDEC). That Order on Consent was for the investigation and remediation of 21 former MGP sites, including the Johnstown (N. Market Street) Site. It was superseded by a new Order on Consent (Index Number A4-0473-0000), dated November 7, 2003. A NYSDEC-approved Supplemental Remedial Investigation (RI) Work Plan was finalized during November 2007, and a Final Supplemental RI Report was submitted to the NYSDEC, dated December 2008. The RI results report and subsequent Feasibility Study were approved in February 2010.

A Record of Decision (ROD) was issued by the NYSDEC, dated March 2010, in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, 6 NYCRR Part 375. Based upon the results of the remedial investigation/feasibility study (RI/FS) for the Site, the interim remedial measures (IRMs) previously completed, and the ROD, the draft Final Engineering Report and Site Management Plan (SMP) were developed and submitted to the NYSDEC in June 2010. The Final Engineering Report, the Final SMP, and the Final Environmental Easement were approved by the NYSDEC in their June 2016 Fact Sheet.

The Final SMP includes:

1. Semi-annual (April & October) site inspection and groundwater level measurements at monitoring wells MW-4, MW-7, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, RMW-1, and the creek surface gauging station (bridge);
2. Semi-annual groundwater sampling/analysis [Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Heavy Metals, and Natural Attenuation Parameters] for monitoring wells MW-4, MW-7, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, and MW-16 (RMW-1 will not be sampled); and
3. Semi-annual reporting to NYSDEC.

1.2 Purpose and Objective

The purpose of this Report is to summarize the groundwater sampling activities and results of the latest event, and to compare the results to previous events. As described in the December 2008 Supplemental RI Report and the subsequent ROD, one of the primary goals is to evaluate whether

or not the groundwater constituents of concern (COCs) concentrations have decreased, in addition to continued assessment of the effectiveness of monitored natural attenuation.

2 Background

2.1 Site Description

The Site is located in the City of Johnstown, County of Fulton, New York (**Figure 1** presents the site location map) and is identified as Block 14 and Lot 7 on the Johnstown City Tax Map. The Site is an approximate 0.7-acre area bounded by the Cayadutta Creek to the north, the Colonial Cemetery to the south, Market Street to the east, and a wooded parcel of property to the west (**Figure 2** presents the site plan). The Site is located in a mixed commercial, industrial, and residential area.

Currently, National Grid operates a natural gas regulator station at the Site with equipment contained in fenced enclosures along the Site's southern boundary. The rest of the Site is grass-covered, including the stream bank adjacent to Cayadutta Creek along the northern boundary of the Site. An embankment exists along the north end of the Site that slopes down to the Cayadutta Creek. A chain-link fence exists along the north and west sides of the Site, and a retaining wall runs along the south side of the Site. Access to the Site is from North Market Street to the east.

The Johnstown Hospital is located south of the Site within one mile, and numerous residences exist to the west and east of the Site. The Johnstown Senior High School and Warren Street Elementary School are located within one mile of the Site to the west.

2.2 Site History

The Johnstown MGP Site was incorporated in March 1857 as the Johnstown Gas Light Company. The company operated a small coal gas plant with a 20,000 cubic foot (cu. ft.) holder (Holder #1), that was constructed in 1859 (see Figure 2 for all Holder locations at the former MGP Site). In 1861, the plant was improved with the addition of a coal shed and a covering for the tank holder. In 1886, the Johnstown and Gloversville Gas Light Corporation was formed, and the company purchased the rights to the Lowe water gas process. The United Gas Improvement Company planned the construction of a water gas plant for the Johnstown and Gloversville franchises.

In 1887, the Site consisted of a tool shop, an office, a coal gasometer, a lime house, a purifier room, a retort house, and a coal shed. Between 1887 and 1918, Holder #2 was located in the western-central part of the Site (exact size unknown). In 1892, a steam generator was constructed adjacent to the coal shed for the Lowe water gas process, and Holder #1 was decommissioned in 1896. In 1898, a 72,000 cu. ft. gas holder (Holder #3) was constructed on the Site. Between 1912 and 1918, the small gas holder (Holder #2) in the western-central area of the Site was removed. In 1929, a gas pipeline from an MGP in Troy, New York, reached Johnstown, and local gas production was only performed on a seasonal (winter) basis until local production of gas ceased in 1931. Niagara Hudson Power Company was the owner of the Site in 1930. By 1948, Holder #3 was decommissioned. In 1950, Niagara Hudson Power was consolidated under the

name Niagara Mohawk Power Company. By 1980, all Site buildings were removed. Currently, National Grid operates a natural gas regulator station at the Site.

2.2.1 Site Assessment and Investigations

An investigation of the Site began in 1997 with a Preliminary Site Assessment (PSA), which found that the Site was impacted with MGP wastes. A Supplemental PSA was conducted at the Site in 1998, followed by a RI in January 2000 and subsequent IRMs. The IRMs are discussed separately within this section.

A 2009 Supplemental RI was initiated to collect data to address potential residual MGP-related contaminants remaining in groundwater at the Site and to assess hydrogeologic conditions and groundwater quality on the Site. The results of the Supplemental RI were used to formulate potential remedial alternatives for groundwater and residual soil contamination. The Supplemental RI results were evaluated and presented in the 2010 Feasibility Study Report.

2.2.2 Interim Remedial Measures Completed

Several IRMs were performed to address the residual MGP impacts. In 2002 and 2003, the former holders and associated impacted soil were removed. During this IRM, former Holder #2 and the northern half of former Holder #3 were demolished and removed from the Site. Approximately 13,870 cubic yards of soil were excavated and disposed of off-site at a NYSDEC-approved facility. Permanent steel sheeting was left in place along the northeastern perimeter of the Site to avoid disturbance of the roadway and to provide containment of residual material left at depth.

Between 2005 and 2006, National Grid provided support to the City of Johnstown for subsurface work associated with the replacement of the North Market Street Bridge across Cayadutta Creek. Approximately 1,413 cubic yards of impacted soil were excavated from within the cofferdam area and disposed of off-site at a NYSDEC-approved facility.

In August 2009, the rip-rap area along the bank of Cayadutta Creek that had been restored during the previous IRMs was enhanced to allow for establishment of stream-side vegetation. Post-IRM inspections of the restored Cayadutta Creek bank were conducted in September 2009 and May 2010.

2.3 Environmental Setting

The Johnstown (N. Market Street) Site slopes northward toward Cayadutta Creek with elevations ranging from 652 to 672 feet (ft.) above sea level. Currently, the Site topography gradually slopes from south to north, becoming increasingly steeper adjacent to the Creek, and is generally covered with either vegetation or stone. Surface drainage is primarily to the north into the creek. Access to the Site is from North Market Street to the east, and the Site is currently used to support the natural gas regulator station operations.

2.3.1 Site Geology

The main units of unconsolidated deposits identified at the Site can be characterized in descending order as fill and native glacial deposits to bedrock. The glacial deposits are of lacustrine origin with glacial tills to the top of shale bedrock (Utica Shale). Bedrock was reached beneath the till in two soil borings explored during the 1998 Supplemental PSA. These stratigraphic units are more specifically described below, based on information obtained from the previous investigations and from the soil borings and monitoring well borings conducted during the 2007/ 2008 SRI.

Site geology includes a layer of disturbed soils (primarily fill) overlying glacial deposits. Based upon on-site soils and monitoring well borings, disturbed soils (including fills) varied in thickness up to 13 ft. and are typically composed of sand, gravel, silt, clay, wood, coal, and anthropogenic materials including ash, cinders, clinkers, brick fragments, wire, and wood chips. Wood chips were identified in three borings (SB-09, SB-12, and MW-8) and are often associated with purifier waste.

A thin layer of peat underlies the disturbed soils in the northern portion of the Site, ranging in thickness from 0.5 ft. to 3 ft., and appears to thicken and dip to the north. Except where it is locally covered by sedimentary deposits such as silts, sands, and clays, the peat, where present, appears to have been the historical ground cover prior to development of the Site.

Underlying the peat, where present, the soil consists of lacustrine deposits composed of silts, sands, and clays. The surface of the lacustrine deposits appears to dip and thin out toward the north. A sand and gravel unit (an outwash deposit of stratified drift) underlies the lacustrine deposits across the Site area. This unit contains varying amounts of silt and clay. These deposits overlie a dense, low-permeability glacial till to bedrock (Shale).

2.3.2 Site Hydrogeology

Groundwater depths on-site are typically in the 10- to 20-foot below ground surface (bgs) range, generally in the glacial deposits below the bottom of the fill material. Groundwater flow is consistently northward through the Site area toward Cayadutta Creek, with the steepest gradient from the center of the Site proximal to former gas holders #2 and #3 to the southern Creek bank (about 0.09 ft./ft.). In comparison, the average hydraulic gradient decreases to a value of approximately 0.05 ft./ft. on the east and west sides of the Site away from the former gas holders. The local groundwater flow is consistent with regional groundwater flow direction. The groundwater flow direction and hydraulic gradients calculated during this monitoring period are also generally consistent with historic data obtained prior to the issuance of the ROD.

3 Monitoring Activities

The long-term semi-annual groundwater monitoring program currently consists of the following elements:

- Semi-Annual Site Inspection including the creek bank protection, vegetative cover, monitoring wells, and security fence.
- Semi-Annual Groundwater Well Gauging of the following wells: RW-1, MW-4, MW-7, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15 and MW-16 (Figure 2 presents the well locations). The creek surface water level is also gauged at one location: SG-1.
- Semi-Annual Groundwater Sampling and Analysis of the following: MW-4, MW-7, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15 and MW-16. Note that recovery well RW-1 is not sampled as part of the program but is inspected for the presence of non-aqueous phase liquids (NAPL). Note: Monitoring well MW-11 was not gauged or sampled during the April 2023 sampling round due to concrete/metal and wood debris at this off-site well location.

3.1 Groundwater Gauging and Sampling Procedures

3.1.1 Gauging

Long-term groundwater monitoring includes water level gauging at eight groundwater monitoring wells and one groundwater recovery well using an electronic oil/water interface probe. Depth to bottom of well (DTB), depth to product (DTP), and depth to water (DTW) are to be recorded at each well. Refer to **Table 2** for a summary of the water level measurements from April 2023 as well as previous events. **Appendix A** also presents the field documentation from the April 2023 water gauging event.

No product was present in recovery well RW-1 or the other eight groundwater monitoring wells that were gauged.

A creek surface water level measurement was collected from the Cayadutta Creek Bridge using a water level probe (from the surveyed gauging point at the bridge).

3.1.2 Sampling

Groundwater sampling was performed following low-flow sampling techniques [equivalent to United States Environmental Protection Agency (USEPA) low-flow procedures] using a pressure-driven peristaltic pump. During purging, measurements were collected for the following field parameters: pH, specific conductivity, turbidity, dissolved oxygen (DO), temperature, and oxidation-reduction potential (ORP). A Horiba U-22 was used to collect the field parameter data in a flow-through cell. The monitored field parameters are observed and recorded during low-flow sampling to determine when they have stabilized, and thus when the well has been adequately purged. Field parameter measurements were recorded at approximately 5-minute intervals. The

monitoring wells were purged until stabilization of the field parameters (±0.1 Standard Unit (SU) for pH, ±3% for specific conductivity, ±10 millivolts (mV) for ORP, and ±10% for DO) and turbidity was less than 50 Nephalometric Turbidity Units (NTU). Refer to **Attachment A** for the field data.

After stabilization of the field parameters, eight groundwater samples were collected directly from the dedicated tubing into laboratory-supplied sample containers (pre-preserved as required per the analytical method). Quality Assurance/Quality Control (QA/QC) samples included the collection of one field duplicate sample, one matrix spike (MS) sample, one duplicate matrix spike (DMS) sample, and one trip blank sample (VOCs only). Samples were transported to the laboratory, accompanied by the appropriate chain-of-custody documentation. Analytical results were validated.

3.1.3 Natural Attenuation Parameters

The ORP of groundwater may be used as a general indicator of the dominant attenuation processes and the relative tendency of the biological processes to accept or transfer electrons. ORP is dependent on and influences rates of biodegradation. Lower ORP readings indicate reduced conditions and are indicative of anaerobic biologic degradation processes.

The pH of the groundwater affects the presence and activity of microorganisms in the groundwater. The microorganisms may produce either organic acids or carbon dioxide which, when dissolved in water, forms weak carbonic acid. Microorganisms capable of degrading petroleum hydrocarbons are most active with pH values ranging from 6 to 8 SU.

Groundwater temperature affects the solubility of dissolved gases such as oxygen and carbon dioxide as well as the metabolic activity of microorganisms. Oxygen is less soluble in warm water, and groundwater temperatures below approximately 5 degrees Celsius tend to inhibit biodegradation.

DO is the most thermodynamically favored electron acceptor used by microorganisms during the degradation of both natural and anthropogenic organic carbon. An inverse relationship of high hydrocarbon concentrations and low DO concentrations can be used as a key indicator of biodegradation.

Nitrate, if available, may be used as an electron acceptor for anaerobic biodegradation after the depletion of DO [typically considered less than 0.5 milligrams per liter (mg/L)] and is used to biodegrade petroleum hydrocarbons. Lower nitrate concentrations in groundwater within a plume, with respect to higher concentrations in areas upgradient and outside a plume, may be expected.

Ferrous iron is a metabolic byproduct of hydrocarbon degradation. Reducing conditions in nitrogen- and oxygen-depleted groundwater creates an anaerobic environment that causes the reduction of ferric iron (Fe^{3+}) to ferrous iron (Fe^{2+}). Relatively low ferrous iron concentrations may be present in areas where natural attenuation is occurring if free ferrous iron is re-precipitating as sulfides or carbonates.

Sulfate may be used as an electron acceptor after the depletion or use limitation of DO, nitrate, and ferric iron. Lower sulfate concentrations in groundwater within a plume, with respect to higher concentrations in areas upgradient and outside a plume, may be expected.

The production of methane, termed methanogenesis, occurs only in strongly reducing conditions and generally after oxygen, nitrate, and sulfate have been depleted. The presence of methane in groundwater suggests Benzene, Toluene, Ethylbenzene, Xylene (BTEX) degradation via methanogenesis. Methane is not present in fuels, and therefore its presence at high concentrations relative to areas upgradient and outside a plume is indicative of the biodegradation of petroleum hydrocarbons.

The buffering capacity of groundwater is a function of alkalinity. Typically, alkalinity is primarily due to carbonate alkalinity. The organic acids or carbon dioxide (which produces a weak carbonic acid when dissolved in water) produced by biodegradation solubilize carbonate from the soil. Alkalinity concentrations that are elevated with respect to areas upgradient and outside a plume may be an indication of microbial activity and thus natural attenuation.

Typically, the relationships between BTEX and electron acceptors/metabolic byproduct concentrations (geochemical indicators) indicate potential for biodegradation. The concentrations are dependent on the location (and groundwater conditions) within the plume or outside of the plume limits.

3.2 Groundwater Analytical Results

The groundwater samples were analyzed for BTEX, Polycyclic Aromatic Hydrocarbons (PAHs), lead, total cyanide, and monitored natural attenuation/water quality (MNA/WQ) parameters including alkalinity, chloride, ethane, ethene, ferrous iron, manganese, methane, nitrate, nitrogen, sulfate and sulfide. BTEX, PAHs, and cyanide are constituents commonly associated with former MGP sites. BTEX, PAHs, lead, and cyanide were the primary contaminants detected during previous investigation activities conducted at the Site. The MNA/WQ parameters, as well as field-measured ORP, pH, temperature, and DO, are relevant to establishing whether conditions are favorable for natural attenuation to occur at the Site.

- Refer to Table 3 for the analytical results summary.
- Refer to Appendix A for field data.
- Refer to Appendix B for the data usability summary report (DUSR).

Groundwater analytical results were compared with levels specified in the NYSDEC Division of Water Final Amendment to Water Quality Standards Regulations, effective February 16, 2008 [hereafter referred to as NYSDEC WQ Values]. For groundwater, Class GA values were applied. Class GA waters are defined as fresh groundwater, found in the saturated zone of unconsolidated deposits and consolidated rock or bedrock, which are used as a source of potable water supply.

3.2.1 Site Related Parameters

BTEX - Groundwater samples collected on April 19, 2023, from monitoring wells MW-10, MW-13, MW-15, and MW-16 contained concentrations of some or all individual BTEX constituents above their respective NYSDEC WQ Values [1 microgram per liter (µg/L) for benzene and 5 µg/L for other BTEX constituents]. The highest concentrations of BTEX were observed in the groundwater samples collected from monitoring well MW-15. Monitoring well MW-15 is located northeast of former gas holder #2.

PAHs – PAHs above NYSDEC WQ Values were detected in samples collected on April 19, 2023, from monitoring wells MW-10, MW-12, MW-13, MW-14, and MW-15. Naphthalene (MW-15) has typically been detected at the highest concentration of any PAH.

Cyanide - Concentrations of cyanide were below the NYSDEC WQ Value (0.2 mg/L) in all groundwater samples April 19, 2023, with the exception of MW-15 (0.29 mg/L).

3.2.2 Monitored Natural Attenuation Parameters

Site-specific levels of the MNA/WQ parameters (geochemical indicators) were compared to known screening values to identify whether the site-specific values are within the ranges known to be suitable for biodegradation. The April 2023 MNA/WQ analytical results for the individual monitoring wells are summarized in **Table 3**. **Figure 4** presents the groundwater data for the key MNA data parameters at their respective locations to assist with the MNA evaluation. Indications of biodegradation of petroleum-related MGP constituents within the plume include low levels of DO, nitrate and sulfate, with generally higher levels of manganese, ferrous iron and methane.

Indicator concentrations detected at monitoring wells identified within source and downgradient areas of the Site were compared to levels detected at upgradient and side gradient monitoring wells exhibiting little or no MGP-related contamination. Generally, indicator concentration levels at a distance from the center of the plume are expected to be significantly lower than levels within the plume. A summary of the MNA/WQ results and associated field indicator parameters are provided below:

- DO and ORP values demonstrate depleted levels of DO and a transformation to more anaerobic or reducing conditions at the former source and downgradient areas relative to side gradient and upgradient areas of the Site. These values suggest that biodegradation of MGP petroleum-related compounds at the source and at downgradient areas are occurring, consuming the available oxygen which produces decreased DO levels.
- The range of ORP levels observed at the source and downgradient area monitoring wells generally indicates reduced aquifer conditions which could be suitable for denitrification, ferric iron reduction, sulfate reduction, and methanogenesis.
- Nitrate concentrations are generally depleted at the former source and downgradient areas of the Site relative to upgradient (MW-4) and side gradient (MW-12) areas, indicating denitrification may be a noteworthy biodegradation process occurring at this time at the source and downgradient areas.

- Ferrous iron concentrations at the former source and downgradient area monitoring wells (MW-7, MW-10, MW-14, MW-15) exhibit higher levels relative to side gradient and upgradient monitoring wells (MW-4, MW-12). The presence of these metabolic by-products downgradient of the source area suggest biodegradation of MGP petroleum-related compounds may be occurring.
- Sulfate concentrations at the former source and downgradient areas are not depleted relative to upgradient and side gradient areas. This observation indicates sulfate reduction is not likely to be a significant biodegradation process at this time at the source and downgradient areas.
- Based on the presence of methane, low DO concentrations, and the reduced ORP levels, methanogenesis is likely an important factor for biodegradation capacity in the source and downgradient areas of the Site.

3.2.3 Natural Attenuation Trending

Previous groundwater sampling data collected since April 2013 (the dataset) were utilized to develop and evaluate the contaminant plume and concentration trends of specific constituents at the Site. Plume size and concentration data are indicative of biodegradation capacity (natural attenuation) at the Site and whether the capacity has reached a limit of effectiveness. In order to determine and evaluate natural attenuation effectiveness, statistical testing was utilized for groundwater data collected from monitoring wells at the Site. The Mann-Kendall test was performed on the dataset to identify potential trends in groundwater concentrations of site contaminants. The Mann-Kendall test is a nonparametric evaluation used to identify a trend in a series, even if there is a seasonal component in the series. The three possible hypotheses are that there is a negative, null, or positive trend. The resultant statistical trend analysis for individual monitoring wells suggests (with 80% and 90% confidence) that total BTEX compounds and the naphthalene plume lifecycle demonstrate either no trend or a decreasing trend throughout the monitoring period. It is worth noting that a failure to reject the null hypothesis (i.e. “no trend”) does not prove that there is no trend; it merely means that the available data is not sufficient to conclude there is a trend. In cases where no trend was determined, a comparison of the dataset to the historical highs and lows was performed to determine if the plume is stable; in every case, this evaluation concluded the plume is stable. The table below depicts general concentration trend analysis results (decreasing, no trend or increasing) at 80% confidence levels for each well and associated constituents during the monitoring period. No trend is indicative of plume stability at well locations with contaminant detections throughout the monitoring period.

Table 1 – Contaminant Trend Analysis

Well ID	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
MW-4	Stable	Stable	Stable	Stable	Decreasing
MW-7	Stable	Stable	Stable	Stable	Decreasing
MW-10	No Trend	Stable	Stable	Stable	Decreasing
MW-11	Not sampled	Not sampled	Not sampled	Not sampled	Not sampled
MW-12	Stable	Stable	Stable	Stable	Decreasing
MW-13	Decreasing	Decreasing	Decreasing	Decreasing	Decreasing
MW-14	Stable	No Trend	No Trend	No Trend	Decreasing
MW-15	Decreasing	Stable	Stable	No Trend	Probably Increasing
MW-16	Probably Decreasing	Probably Decreasing	Probably Decreasing	No Trend	Increasing

Isoconcentration contour maps were developed for total BTEX (**Figure 5**) and naphthalene (**Figure 6**) contamination. The figures present locations of the groundwater monitoring wells and plume contours for total BTEX (as compared to the benzene WQ value of 1 µg/L) and naphthalene exceeding the NYSDEC WQ values. Evaluation of the isoconcentration figures suggests that the contaminant plumes were relatively stable to decreasing (smaller footprint with time) within the Site boundary. BTEX constituent plume trends (concentrations above the benzene WQ value of 1 µg/L) have consistently included monitoring wells MW-13, MW-15, and MW-16. The naphthalene plume (concentrations above the WQ) includes monitoring wells MW-15, and MW-16.

4 Conclusions and Recommendations

4.1 Conclusions

4.1.1 Groundwater Levels

The groundwater elevation data indicates groundwater within the Site flows from the south to the north, toward Cayadutta Creek. The groundwater flow direction has been consistent during previous gauging events and with data obtained prior to the ROD. **Figure 3** is a groundwater monitoring map verifying groundwater flow direction.

4.1.2 Site-Related Constituents

The highest concentrations of BTEX constituents and PAH compounds are at wells MW-13, MW-15, and MW-16. Site institutional controls continue to be effective and will continue to be monitored semi-annually.

There are minimal concentrations of lead in groundwater samples; however, Total Cyanide has been detected consistently in most wells.

4.1.3 Natural Attenuation

Plume stability at the Site is an indication that biodegradation capacity likely has not reached its limit of effectiveness. The use of statistical testing has identified the plume trends based on the constituent concentrations were typically either stable or decreasing.

4.2 Recommendations

Based on the results of the April 2023 groundwater sampling and monitoring event and results from previous events, it is recommended to continue the long-term semi-annual site inspection and groundwater monitoring program. The next event will occur in October 2023.

5 References

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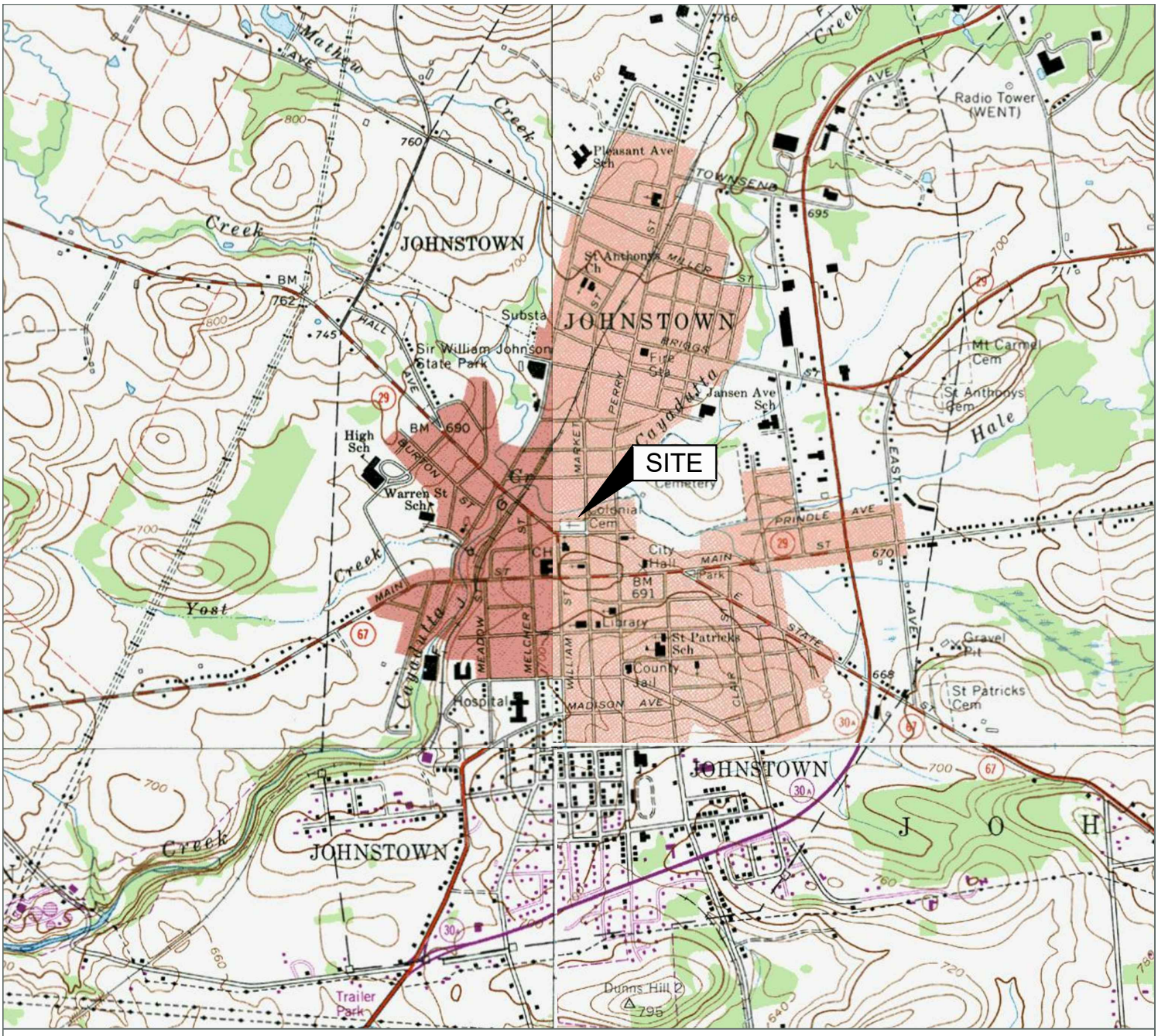
Figures



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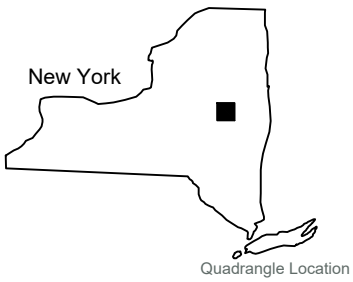

Site Location Map

National Grid
Former MGP Site
105 N Market Street
Johnstown, New York

Drawn
W.G.S.
Designed

Approved

Date
11/15/19
Figure
1

N

Scale In Feet
0 2000

Groundwater & Environmental Services, Inc.

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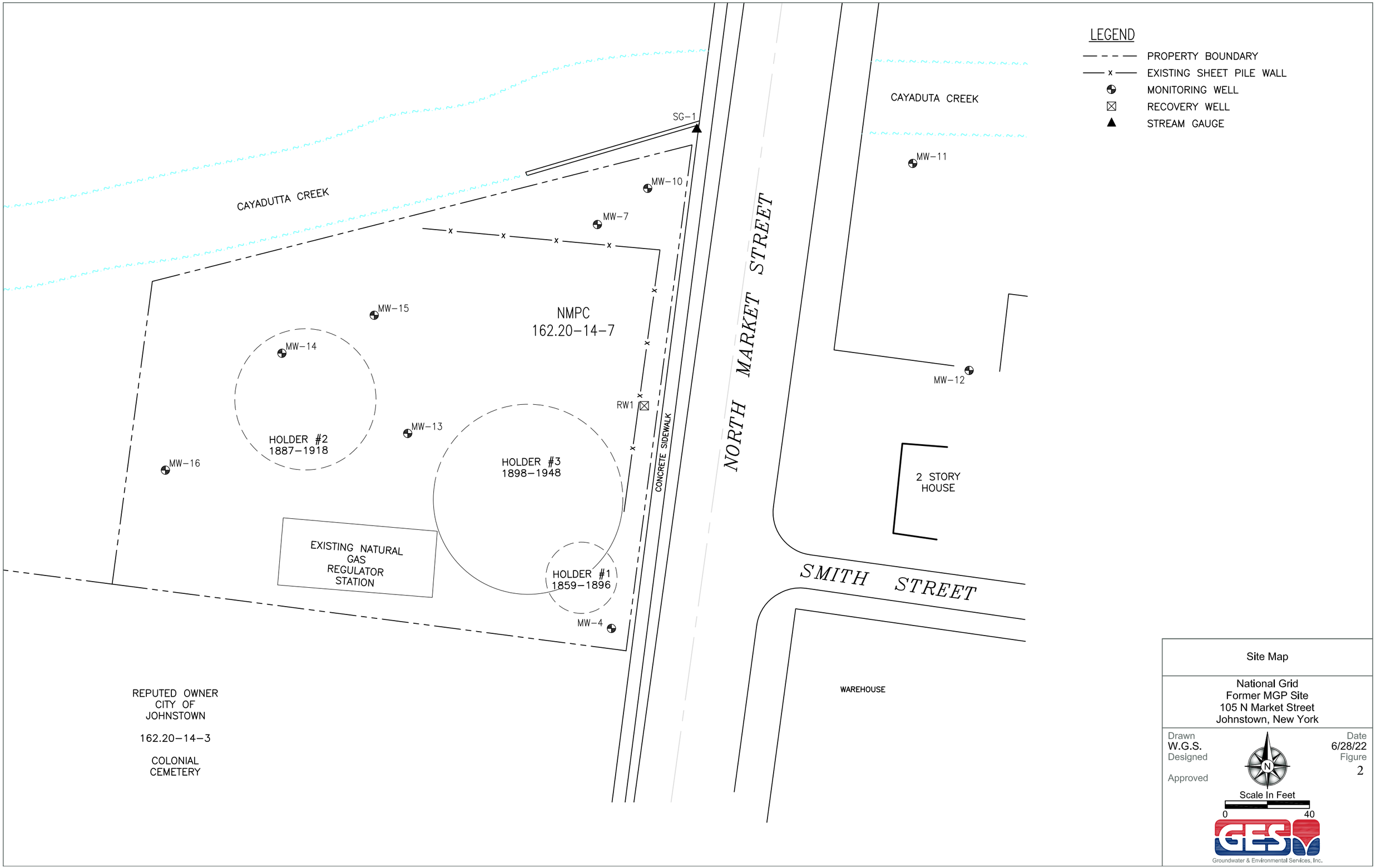

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Site Map

National Grid
Former MGP Site
105 N Market Street
Johnstown, New York

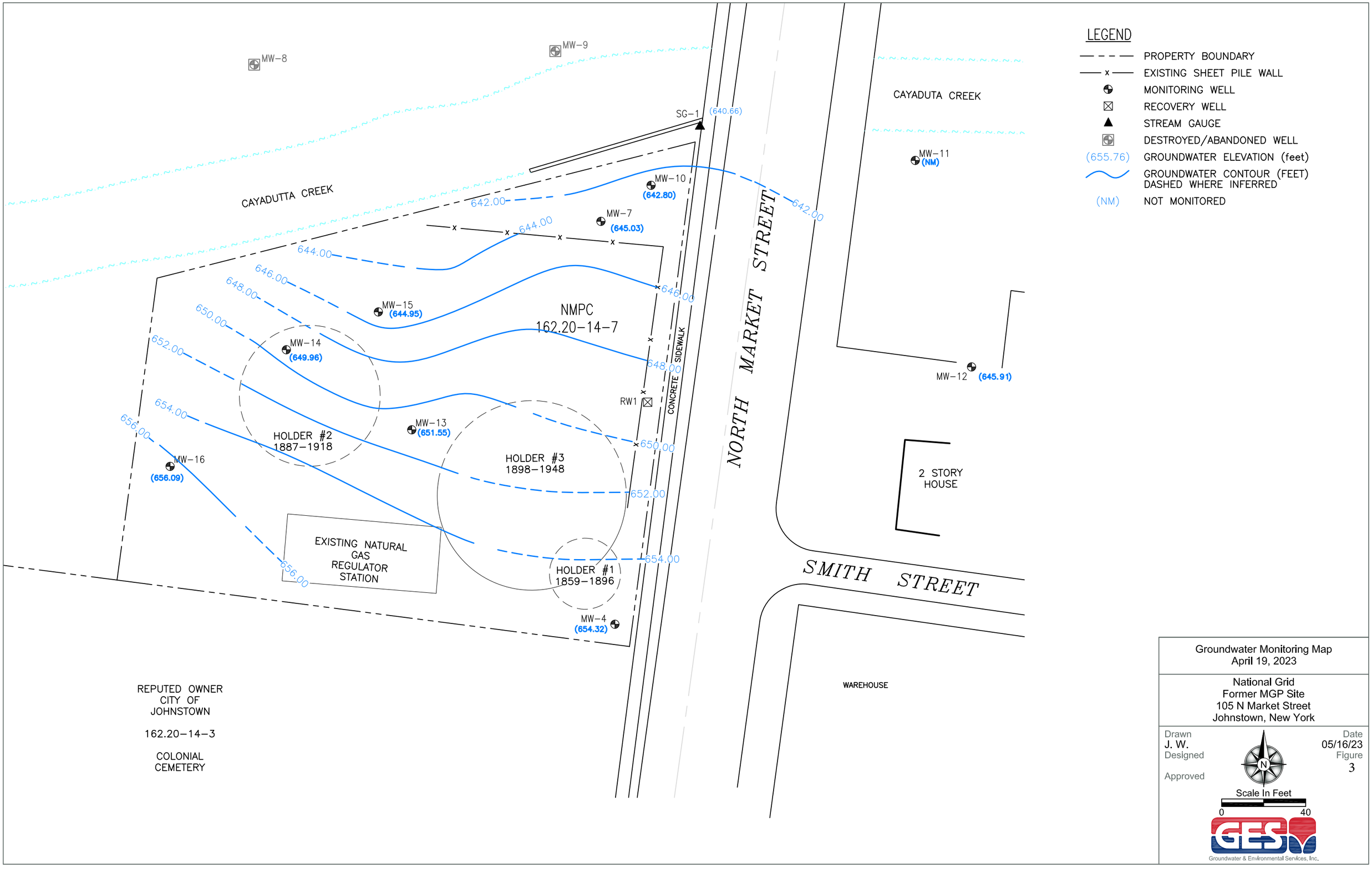
Drawn
W.G.S.
Designed

Approved

Date
6/28/22
Figure
2

Scale In Feet
0 40

Groundwater & Environmental Services, Inc.



Groundwater Monitoring Map
April 19, 2023

National Grid
Former MGP Site
105 N Market Street
Johnstown, New York

Drawn J. W.
Designed
Approved
Date 05/16/23
Figure 3

Scale In Feet
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Groundwater & Environmental Services, Inc.

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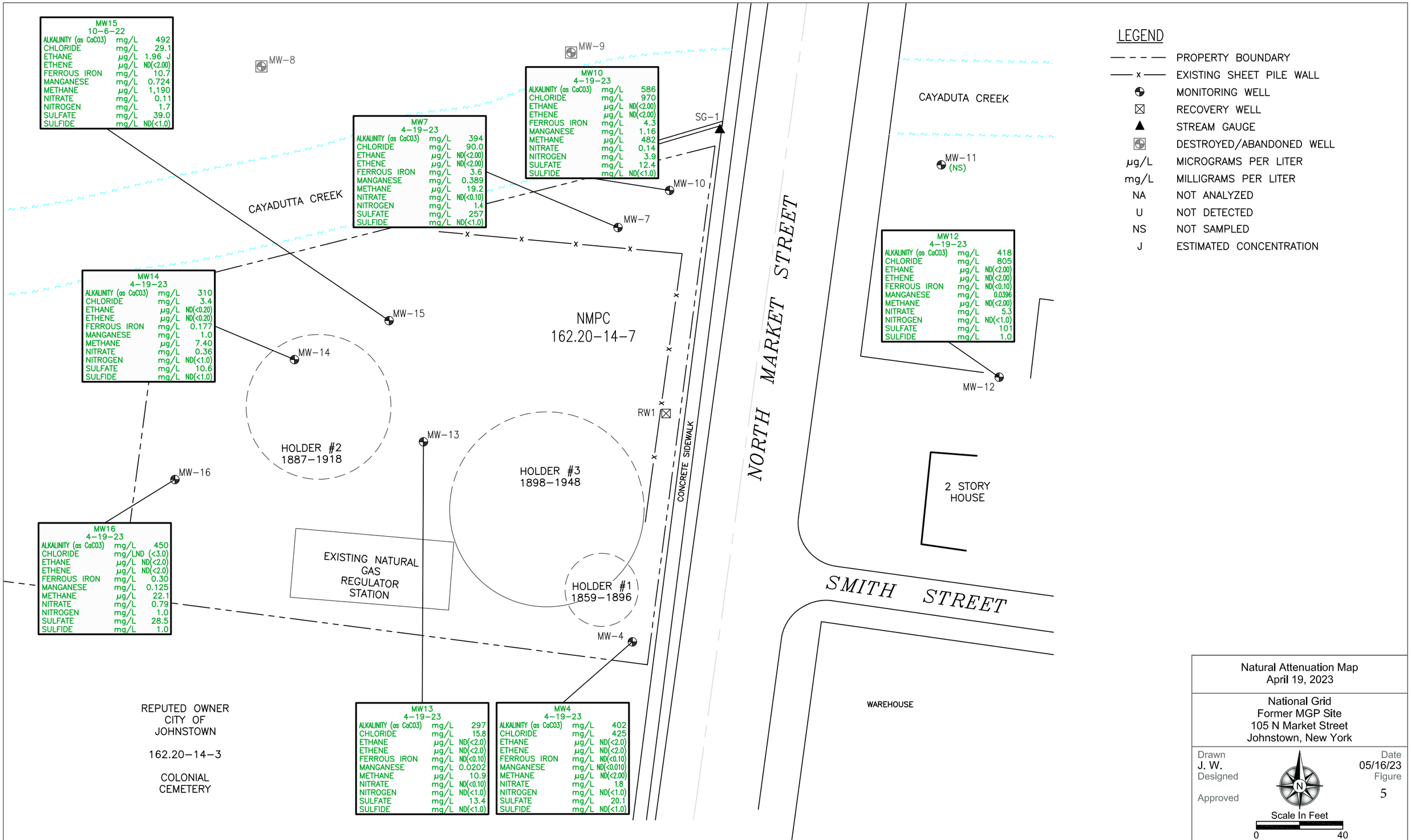

Natural Attenuation Map
April 19, 2023

National Grid
Former MGP Site
105 N Market Street
Johnstown, New York

Drawn J. W.
Designed
Approved
Date 05/16/23
Figure 5

Scale In Feet
0 40

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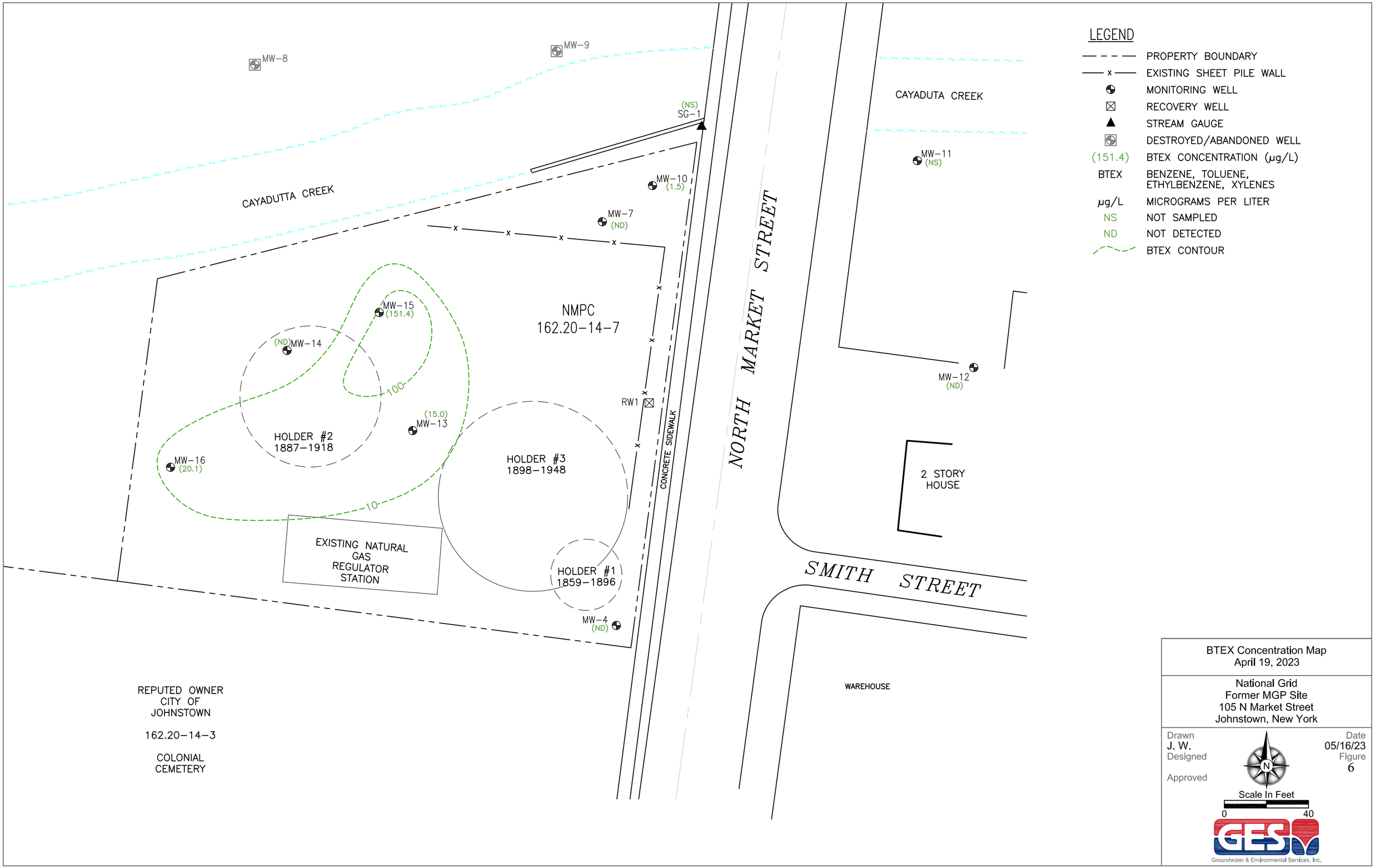

BTEX Concentration Map
April 19, 2023

National Grid
Former MGP Site
105 N Market Street
Johnstown, New York

Drawn J. W.
Designed
Approved
Date 05/16/23
Figure 6

Scale In Feet
0 40

GES
Groundwater & Environmental Services, Inc.

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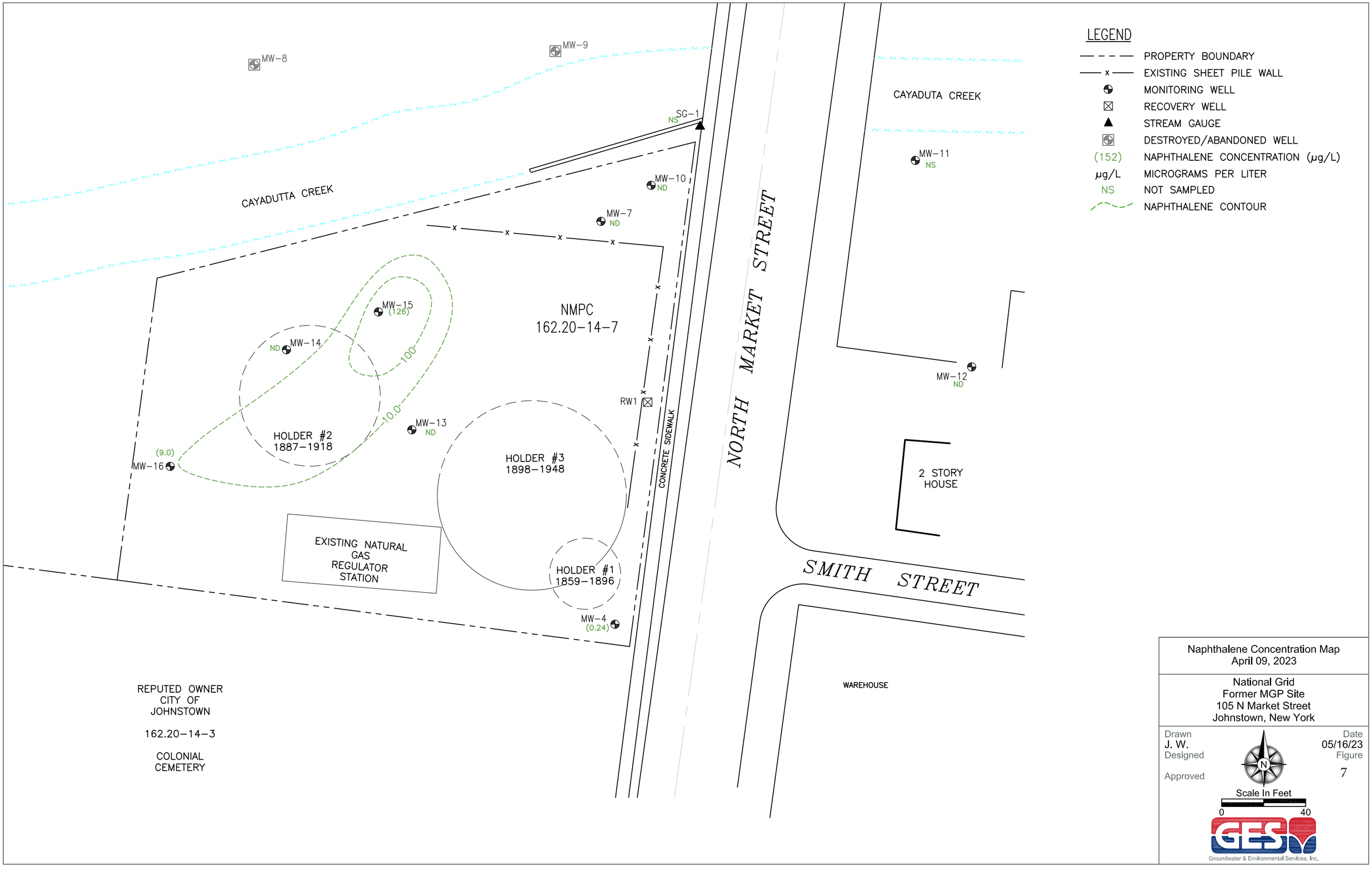

Naphthalene Concentration Map
April 09, 2023

National Grid
Former MGP Site
105 N Market Street
Johnstown, New York

Drawn J. W.
Designed
Approved

Date 05/16/23
Figure 7

Scale In Feet
0 40

GES
Groundwater & Environmental Services, Inc.

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Tables

Table 2

Groundwater Level Measurements

Well ID	ELEVATION REFERENCE POINT	6/30/2010		9/29/2010		1/5/2011		4/8/2011		6/16/2011		10/13/2011		12/15/2011	
		Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)
MW-4	676.54	23.10	653.44	23.41	653.13	22.95	653.59	22.50	654.04	22.04	654.50	21.41	655.13	22.78	653.76
MW-7	659.08	14.25	644.83	13.18	645.90	13.88	645.20	12.87	646.21	13.80	645.28	13.15	645.93	15.45	643.63
MW-10	657.59	14.80	642.79	14.60	642.99	14.75	642.84	14.09	643.50	14.77	642.82	14.11	643.48	14.22	643.37
MW-11	657.29	NM	NM	13.57	643.72	13.59	643.70	12.51	644.78	13.38	643.91	12.95	644.34	12.76	644.53
MW-12	660.08	NM	NM	NM	NM	15.06	645.02	NM	NM	NM	NM	13.61	646.47	14.54	645.54
MW-13	664.89	14.65	650.24	15.22	649.67	14.95	649.94	11.18	653.71	13.99	650.90	11.91	652.98	14.31	650.58
MW-14	663.91	13.50	650.41	14.46	649.45	14.28	649.63	12.86	651.05	13.65	650.26	13.26	650.65	13.65	650.26
MW-15	661.85	16.90	644.95	17.24	644.61	17.68	644.17	15.07	646.78	16.63	645.22	15.95	645.90	16.38	645.47
MW-16	665.57	9.70	655.87	10.19	655.38	12.33	653.24	11.00	654.57	10.50	655.07	9.79	655.78	9.91	655.66
RW-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GAUGE1	659.97	15.07	644.90	20.20	639.77	16.30	643.67	15.75	644.22	16.75	643.22	16.05	643.92	15.62	644.35

ft AMSL = Feet above mean sea level
ft TOC = Feet from top of inner casing
GW = Groundwater
NM = Not measured
NRP = No Reference Point

Table 2

Groundwater Level Measurements

Well ID	ELEVATION REFERENCE POINT	3/15/2012		10/9/2012		4/18/2013		10/7/2013		4/9/2014		10/13/2014		4/16/2015	
		Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)
MW-4	676.54	22.81	653.73	NM	NM	23.97	652.57	23.12	653.42	23.28	653.26	23.28	653.26	22.91	653.63
MW-7	659.08	13.55	645.53	14.17	644.91	13.53	645.55	14.36	644.72	13.71	645.37	14.61	644.47	13.23	645.85
MW-10	657.59	14.18	643.41	15.05	642.54	14.27	643.32	14.44	643.15	14.13	643.46	14.98	642.61	14.15	643.44
MW-11	657.29	12.73	644.56	13.95	643.34	13.01	644.28	13.16	644.13	12.68	644.61	13.71	643.58	12.62	644.67
MW-12	660.08	14.26	645.82	16.36	643.72	14.06	646.02	14.99	645.09	14.41	645.67	15.65	644.43	14.25	645.83
MW-13	664.89	14.98	649.91	16.12	648.77	14.18	650.71	15.08	649.81	14.84	650.05	15.53	649.36	11.34	653.55
MW-14	663.91	15.49	648.42	16.98	646.93	13.14	650.77	14.74	649.17	15.70	648.21	15.02	648.89	13.06	650.85
MW-15	661.85	16.41	645.44	17.85	644.00	16.26	645.59	17.21	644.64	16.67	645.18	17.55	644.30	15.31	646.54
MW-16	665.57	11.56	654.01	10.51	655.06	9.98	655.59	9.85	655.72	9.45	656.12	10.24	655.33	10.48	655.09
RW-1	-	-	-	17.98	-	16.21	-	15.95	-	12.32	-	17.31	-	16.84	-
GAUGE1	659.97	15.69	644.28	NM	NM	19.10	640.87	18.85	641.12	18.85	641.12	20.01	639.96	18.91	641.06

ft AMSL = Feet above mean sea level
ft TOC = Feet from top of inner casing
GW = Groundwater
NM = Not measured
NRP = No Reference Point

Table 2

Groundwater Level Measurements

Well ID	ELEVATION REFERENCE POINT	10/13/2015		4/6/2016		10/25/2016		4/26/2017		10/11/2017		4/26/2018		10/17/2018	
		Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)
MW-4	676.54	23.48	653.06	23.51	653.03	24.03	652.51	21.09	652.19	24.35	652.19	22.48	654.06	23.20	653.34
MW-7	659.08	14.61	644.47	14.19	644.89	15.00	644.08	13.62	645.46	14.83	644.25	12.85	646.23	14.40	644.68
MW-10	657.59	14.95	642.64	14.77	624.82	15.18	642.41	14.37	643.22	15.02	642.57	13.05	644.54	14.60	642.99
MW-11	657.29	-	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-12	660.08	15.62	644.46	14.95	645.13	15.82	644.26	13.55	646.53	15.62	644.46	14.00	646.08	15.10	644.98
MW-13	664.89	14.98	649.91	15.95	648.94	16.32	648.57	13.27	651.62	15.80	649.09	12.98	651.91	14.15	650.74
MW-14	663.91	13.63	650.28	16.81	647.1	16.8	647.11	13.71	650.20	15.88	648.03	13.71	650.20	13.88	650.03
MW-15	661.85	17.23	644.62	17.355	644.3	17.9	643.95	16.05	645.80	17.86	643.99	15.71	646.14	16.70	645.15
MW-16	665.57	9.61	655.96	10.79	654.78	11.11	654.46	9.02	656.55	10.43	655.14	9.52	656.05	9.88	655.69
RW-1	-	13.21	-	13.03	NRP	12.88	NRP	10.6	NRP	17.40	NRP	12.35	NRP	12.38	NRP
GAUGE1	659.97	19.91	640.06	19.76	640.21	18.40	641.57	15.70	644.27	15.46	644.51	14.55	645.42	15.70	644.27

ft AMSL = Feet above mean sea level
ft TOC = Feet from top of inner casing
GW = Groundwater
NM = Not measured
NRP = No Reference Point

Table 2

Groundwater Level Measurements

Well ID	ELEVATION REFERENCE POINT	4/18/2019		10/16/2019		5/20/2020		10/7/2020		4/14/2021		10/6/2021		4/13/2022	
		Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)
MW-4	676.54	22.60	653.94	23.47	653.07	22.11	654.43	24.21	652.33	23.46	653.08	22.99	653.55	22.55	653.99
MW-7	659.08	13.85	645.23	14.73	644.35	15.15	643.93	15.02	644.06	14.31	644.77	13.99	645.09	13.38	645.70
MW-10	657.59	14.50	643.09	15.02	642.57	15.02	642.57	15.15	642.44	14.77	642.82	14.24	643.35	14.12	643.47
MW-11	657.29	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-12	660.08	14.40	645.68	15.54	644.54	14.62	645.46	15.85	644.23	15.29	644.79	14.81	645.27	13.68	646.40
MW-13	664.89	13.07	651.82	14.74	650.15	15.42	649.47	16.05	648.84	14.02	650.87	14.48	650.41	12.18	652.71
MW-14	663.91	13.80	650.11	13.8	650.11	14.23	649.68	16.15	647.76	13.95	649.96	14.21	649.70	13.76	650.15
MW-15	661.85	15.60	646.25	17.05	644.80	16.52	645.33	17.69	644.16	16.61	645.24	16.40	645.45	15.69	646.16
MW-16	665.57	10.39	655.18	9.78	655.79	9.81	655.76	10.93	654.64	9.94	655.63	9.81	655.76	8.84	656.73
RW-1	-	15.22	NRP	13.00	NRP	11.40	NRP	13.83	NRP	12.72	NRP	11.49	NRP	9.28	NRP
GAUGE1	659.97	15.50	644.47	16.28	643.69	16.05	643.92	16.38	643.59	16.73	643.24	16.02	643.95	15.60	644.37

ft AMSL = Feet above mean sea level
ft TOC = Feet from top of inner casing
GW = Groundwater
NM = Not measured
NRP = No Reference Point

Table 2

Groundwater Level Measurements

Well ID	ELEVATION REFERENCE POINT	10/6/2022		4/19/2023	
		Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)
MW-4	676.54	24.00	652.54	22.02	654.52
MW-7	659.08	15.08	644.00	14.05	645.03
MW-10	657.59	14.99	642.60	14.79	642.80
MW-11	657.29	NM	-	NM	-
MW-12	660.08	15.06	645.02	14.17	645.91
MW-13	664.89	15.63	649.26	13.34	651.55
MW-14	663.91	14.15	649.76	13.95	649.96
MW-15	661.85	16.67	645.18	16.90	644.95
MW-16	665.57	10.31	655.26	9.48	656.09
RW-1	-	16.30	NRP	10.43	NRP
GAUGE1	659.97	14.65	645.32	19.31	640.66

ft AMSL = Feet above mean sea level
ft TOC = Feet from top of inner casing
GW = Groundwater
NM = Not measured
NRP = No Reference Point

Table 3

Groundwater Analytical Data
MW-4

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/14/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23
BTEX Compounds																							
Benzene	µg/L	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Ethylbenzene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
m/p-Xylene	µg/L	5	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)
o-Xylene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Toluene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
PAHs																							
Acenaphthene	µg/L	20	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	0.21	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Acenaphthylene	µg/L	NC	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Anthracene	µg/L	50	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Benzo(a)anthracene	µg/L	0.002	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Benzo(a)pyrene	µg/L	0.000	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Benzo(b)fluoranthene	µg/L	0.002	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Benzo(g,h,i)perylene	µg/L	NC	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Benzo(k)fluoranthene	µg/L	0.002	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Chrysene	µg/L	0.002	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Dibenzo(a,h)anthracene	µg/L	NC	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Fluoranthene	µg/L	50	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Fluorene	µg/L	50	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Naphthalene	µg/L	10	ND (<0.49)	3.2	2.2	2.2	2.2	ND (<0.51)	0.29	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	2.4	0.17	ND (<0.10)	ND (<0.099)	0.46	0.24	
Phenanthrene	µg/L	50	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Pyrene	µg/L	50	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)
Cyanide and Lead																							
Lead	µg/L	25	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<10)	ND (<10)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<20)	ND (<10.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)

AWQS	= Ambient Water Quality Standards
B	= Present in Associated Blank Sample
BTEX	= Benzene, Ethylbenzene, Toluene and Xylene
D	= Diluted Sample
E	= Result exceeded calibration range
F1	= MS and/or MSD Recovery outside acceptance limits.
F2	= MS/MSD RPD above control limits.
J	= Estimated Concentration Value
mg/L	= Milligrams per Liter
NC	= No Criteria
ND (<#)	= Not detected above laboratory reporting limit (indicated by #)
NS	= Not Sampled
NYSDEC	= New York State Department of Environmental Conservation
PAHs	= Polycyclic Aromatic Hydrocarbons
R	= Rejected
µg/L	= Micrograms per Liter
Bolded	= values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-4

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	04/16/15	10/14/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23
MNA/WQ Parameters																						
Alkalinity (as CaCO3)	mg/L	354	442	398	400	384	412	394	414	392	418	424	424	452	410	360	390	386	500	406	NS	402
Chloride	mg/L	275	411	304	329	295	365	304	421	377	ND (<300)	233	306	360	260	296	200	315	637	339	NS	425
Ethane	µg/L	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<0.025)	ND (<0.025)	ND (<0.030)	0.037J	ND (<0.16)	ND (<1.0)	0.036 J	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.00)	ND (<1.00)	NS	ND (<2.00)
Ethene	µg/L	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<0.035)	ND (<0.035)	ND (<0.10)	ND (<0.10)	ND (<0.032)	ND (<1.0)	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.00)	ND (<1.00)	NS	ND (<2.00)
Ferrous Iron	mg/L	ND (<0.1)	0.013	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	0.14	0.11	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	0.10	ND (<0.10)	ND (<0.10)	ND (<0.10)	NS	ND (<0.10)
Manganese	mg/L	ND (<3.0)	ND (<3.0)	ND (<3.0)	ND (<3.0)	ND (<3.0)	0.019	0.0031	0.0053	ND (<0.005)	ND (<0.005)	ND (<0.005)	0.0065	ND (<0.005)	0.0318	ND (<0.005)	0.0541	ND (<0.005)	0.0621	ND (<0.005)	ND (<0.010)	ND (<0.010)
Methane	µg/L	ND (<4.0)	ND (<4.0)	ND (<4.0)	ND (<4.0)	ND (<4.0)	ND (<4.0)	ND (<4.0)	0.32J	0.47J	0.27J	0.29J	ND (<0.30)	ND (<2.5)	ND (<2.5)	ND (<1.00)	ND (<5.00)	ND (<5.00)	3.01 J	ND (<1.00)	NS	ND (<2.00)
Nitrate	mg/L	2.4	3.5	3.6	2.7	2.9	2.9	3.4	3.2	2.2	3.2	0.69	2.1	3.9	2.7	2.8	2.2	3.9	2.2	2.6	2.2	1.8
Nitrogen	mg/L	0.31	0.31	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Sulfate	mg/L	64.7	74.7	70.7	50.8	60	60	73.9	60.8	23.0	56.7	50.0	ND (<50.0)	35.8	42.1	23.7	37.0	35.9	51.4	35.1	NS	20.1
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Table 3

Groundwater Analytical Data
MW-7

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/14/15	04/06/16	10/26/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23
BTEX Compounds																							
Benzene	µg/L	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	**1.3**	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Ethylbenzene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
m/p-Xylene	µg/L	5	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)
o-Xylene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Toluene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.3	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
PAHs																								
Acenaphthene	µg/L	20	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	0.10	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	0.13	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Acenaphthylene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	0.20	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	0.10	ND (<0.10)	0.17	0.11	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Anthracene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Benzo(a)anthracene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	**0.12**	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Benzo(a)pyrene	µg/L	0.000	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	**0.11**	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Benzo(b)fluoranthene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	**0.10**	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Benzo(g,h,i)perylene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Benzo(k)fluoranthene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Chrysene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	**0.12**	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Dibenzo(a,h)anthracene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Fluoranthene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	0.16	ND (<0.10)	0.29	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Fluorene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Naphthalene	µg/L	10	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	5.2	ND (<0.49)	3.0	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	0.83	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Phenanthrene	µg/L	50	0.49	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	0.14	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Pyrene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	0.26	ND (<0.10)	0.43	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)
Cyanide and Lead																								
Lead	µg/L	25	**33**	7.1	7.1	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	5.6	ND (<5.0)	ND (<20)	ND (<10.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	**1.4**	**0.4**	0.16	0.13	0.18	0.18	0.18	0.15	0.18	0.16	0.14	0.17	0.129	0.17	ND (<0.010)	**0.35**	0.11	0.13	**0.26**	0.15	0.15

AWQS	= Ambient Water Quality Standards
B	= Present in Associated Blank Sample
BTEX	= Benzene, Ethylbenzene, Toluene and Xylene
D	= Diluted Sample
E	= Result exceeded calibration range
F1	= MS and/or MSD Recovery outside acceptance limits.
F2	= MS/MSD RPD above control limits.
J	= Estimated Concentration Value
mg/L	= Milligrams per Liter
NC	= No Criteria
ND (<#)	= Not detected above laboratory reporting limit (indicated by #)
NS	= Not Sampled
NYSDEC	= New York State Department of Environmental Conservation
PAHs	= Polycyclic Aromatic Hydrocarbons
R	= Rejected
µg/L	= Micrograms per Liter
Bolded	= values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-7

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	04/16/15	10/14/15	04/06/16	10/26/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23
MNA/WQ Parameters																						
Alkalinity (as CaCO3)	mg/L	324	367	375	392	340	403	395	406	412	380	390	440	370	400	446	430	422	440	404	NS	394
Chloride	mg/L	114	84	79	62.8	67.7	66.7	66.2	79.4	68.9	64.6	63.6	59.4	63.9	50.9	58.1	56.5	62.6	53.4	83.3	NS	90.0
Ethane	µg/L	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	0.38J	0.86J	0.20J	0.32J	0.18J	0.13 J	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.00)	ND (<1.00)	NS	ND (<2.00)
Ethene	µg/L	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<0.035)	0.090J	ND (<0.10)	ND (<0.10)	ND (<0.032)	ND (<1.0)	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.00)	ND (<1.00)	NS	ND (<2.00)
Ferrous Iron	mg/L	ND (<0.1)	0.25	6.24	ND (<0.1)	ND (<0.1)	ND (<0.1)	0.14	0.59	3.7	3.3	2.8	3.2	2.5	2.1	4.3	2.9	0.66	2.3	0.93	NS	3.6
Manganese	mg/L	1.1	1.1	0.564	0.49	0.49	0.46	0.53	0.43	0.478	0.476	0.476	0.459	0.487	0.395	0.513	0.420	0.440	0.400	0.307	0.379	0.389
Methane	µg/L	40	23	150	82	35	96	17	160	240	120	170	150	140	160	111	30.3	ND (<5.00)	88.2	67.2	NS	19.2
Nitrate	mg/L	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	0.14	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<0.10)	ND (<0.20)	0.11	ND (<0.10)	ND (<0.10)
Nitrogen	mg/L	4.6	1.5	0.16	2	1.1	1.5	1.6	2.2	1.8	1.3	1.7	1.2	1.6	0.11	1.6	ND (<0.10)	1.7	1.7	1.4	1.6	1.4
Sulfate	mg/L	654	518	540	457	442	533	384	476	396	394	389	331	334	259	307	298	280	321	287	NS	257
Sulfide	mg/L	1.4	1.4	1.4	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	2.4	ND (<1.0)	ND (<1.0)	ND (<1.0)

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Table 3

Groundwater Analytical Data
MW-10

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/13/15	04/06/16	10/26/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	10/06/22
BTEX Compounds																							
Benzene	µg/L	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	**2.3**	ND (<1.0)	ND (<1.0)	**1.9**	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	**1.5**
Ethylbenzene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
m/p-Xylene	µg/L	5	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)
o-Xylene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Toluene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	2	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
PAHs																							
Acenaphthene	µg/L	20	2.2	1.1	0.8	ND (<0.48)	0.63	ND (<0.50)	ND (<0.50)	1.4	0.72	1.6	0.53	1.7	1.4	1.8	0.52	1.9	2.0	1.6	1.5	2.2	1.9
Acenaphthylene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	0.18	0.16	0.18	0.11	0.22	0.22	0.27	ND (<0.095)	0.43	0.38	0.27	0.24	0.29	0.25
Anthracene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	ND (<0.097)	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	0.14	0.14	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)
Benzo(a)anthracene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	**0.11**	ND (<0.099)	ND (<0.10)	ND (<0.11)	**0.13**	**0.15**	ND (<0.095)	**0.63**	**0.61**	**0.16**	**0.20**	ND (<0.10)	ND (<0.099)
Benzo(a)pyrene	µg/L	0.002	**0.55**	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	**0.10**	ND (<0.099)	ND (<0.10)	ND (<0.11)	**0.12**	**0.15**	ND (<0.095)	**0.56**	**0.67**	**0.16**	**0.16**	ND (<0.10)	ND (<0.099)
Benzo(b)fluoranthene	µg/L	0.002	**0.86**	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	**0.17**	ND (<0.099)	ND (<0.10)	ND (<0.11)	**0.13**	**0.15**	ND (<0.095)	**0.65**	**0.89**	**0.23**	**0.24**	ND (<0.10)	**0.11**
Benzo(g,h,i)perylene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	ND (<0.097)	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	0.24	0.32	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)
Benzo(k)fluoranthene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	**0.15**	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	**0.25**	**0.85**	**0.19**	**0.22**	ND (<0.10)	ND (<0.099)
Chrysene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	**0.099**	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	**0.12**	ND (<0.095)	**0.53**	**0.51**	ND (<0.11)	0.17	ND (<0.10)	ND (<0.099)
Dibenzo(a,h)anthracene	µg/L	NC	1.1	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	ND (<0.097)	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	ND (<0.099)	0.11	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)
Fluoranthene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	0.10	0.16	ND (<0.099)	ND (<0.10)	ND (<0.11)	0.18	0.22	ND (<0.095)	0.78	0.78	0.18	0.24	ND (<0.10)	0.11
Fluorene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	ND (<0.097)	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	0.21	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	ND (<0.097)	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	**0.23**	**0.30**	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)
Naphthalene	µg/L	10	0.7	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	7.9	ND (<0.50)	0.23	ND (<0.097)	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	0.49	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)
Phenanthrene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	ND (<0.097)	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	0.18	0.20	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)
Pyrene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	0.15	0.20	ND (<0.099)	ND (<0.10)	0.13	0.22	0.27	ND (<0.095)	0.97	0.90	0.26	0.30	0.14	0.15
Cyanide and Lead																							
Lead	µg/L	25	8.4	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<5.0)	ND (<10.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	6.0	ND (<20)	ND (<10.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	0.1	0.11	0.081	0.10	0.098	0.010	0.085	0.081	0.13	0.10	0.12	0.079	0.114	0.093	0.097	0.10	0.060	0.066	0.097	0.078	0.12

AWQS	= Ambient Water Quality Standards
B	= Present in Associated Blank Sample
BTEX	= Benzene, Ethylbenzene, Toluene and Xylene
D	= Diluted Sample
E	= Result exceeded calibration range
F1	= MS and/or MSD Recovery outside acceptance limits.
F2	= MS/MSD RPD above control limits.
J	= Estimated Concentration Value
mg/L	= Milligrams per Liter
NC	= No Criteria
ND (<#)	= Not detected above laboratory reporting limit (indicated by #)
NS	= Not Sampled
NYSDEC	= New York State Department of Environmental Conservation
PAHs	= Polycyclic Aromatic Hydrocarbons
R	= Rejected
µg/L	= Micrograms per Liter
Bolded	= values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-10

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	04/16/15	10/13/15	04/06/16	10/26/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23
MNA/WQ Parameters																						
Alkalinity (as CaCO3)	mg/L	584	552	566	548	512	581	586	660	628	616	606	650	550	640	624	502	524	650	612	640	586
Chloride	mg/L	286	265	470	664	698	1060	893	784	390	427	419	709	440	566	314	472	945	768	816	751	970
Ethane	µg/L	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	0.16J	0.33J	0.20J	0.24J	0.42J	0.29 J	0.34 J	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<2.00)
Ethene	µg/L	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<0.035)	0.12J	ND (<0.10)	ND (<0.10)	ND (<0.032)	ND (<1.0)	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<2.00)
Ferrous Iron	mg/L	ND (<0.10)	0.12	6.06	ND (<0.10)	ND (<0.10)	ND (<0.10)	0.11	1.0	4.2	4.7	3.2	4.8	2.6	2.2	5.3	1.2	1.1	3.2	2.0	5.9	4.3
Manganese	mg/L	1.2	0.75	1.07	1.3	1.3	1.6	1.2	1.2	1.020	1.030	0.882	0.994	0.946	1.15	0.953	0.771	1.09	1.040	1.150	1.24	1.16
Methane	µg/L	32	28	110	130	63	82	56	420	300	330	470	680	460	1300	390	451	ND (<5.00)	780	594	NS	482
Nitrate	mg/L	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	0.11	ND (<0.05)	0.12	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.50)	ND (<0.10)	ND (<0.20)	ND (<0.50)	ND (<0.10)	0.14
Nitrogen	mg/L	6.1	4.1	4.8	6.2	5.6	6.3	4	6.5	5.1	3.8	3.3	4.5	4	ND (<1.0)	2.5	1.0	4.0	4.7	3.8	3.6	3.9
Sulfate	mg/L	174	171	153	89.7	167	53.9	44.4	56.6	148	38.2	ND (<100)	23.0	59.4	20.9	55.2	23.9	7.8	9.7	12.3	4.6	12.4
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	3.4	ND (<1.0)	ND (<1.0)	ND (<1.0)

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Table 3

Groundwater Analytical Data
MW-11

CONSTITUENT	UNITS	NYSDEC AWQS Values	03/14/12	10/09/12	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/14/15 to 10/06/22*	04/19/23
BTEX Compounds											
Benzene	µg/L	1	**7.9**	**12**	**3.5**	**8.1**	**10**	**22**	**7.3**	NS	NS
Ethylbenzene	µg/L	5	3.5	ND (<1.0)	1.2	3.8	**5.1**	**7.8**	3	NS	NS
m/p-Xylene	µg/L	5	1.4J	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	2.1	ND (<2.0)	NS	NS
o-Xylene	µg/L	5	1.2	ND (<1.0)	ND (<1.0)	1.6	2.1	2.6	1.5	NS	NS
Toluene	µg/L	5	0.69J	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.1	1.9	ND (<1.0)	NS	NS
PAHs											
Acenaphthene	µg/L	20	**100**	**140 E**	**97**	**110**	**120**	**110**	**59**	NS	NS
Acenaphthylene	µg/L	NC	210	160 E	120	170	110	150	56	NS	NS
Anthracene	µg/L	50	11	23	13	28	13	16	4.2	NS	NS
Benzo(a)anthracene	µg/L	0.002	**5.2 B**	**3.8**	ND (<0.002)	**8.3**	**3.2**	**4.8**	**1.9**	NS	NS
Benzo(a)pyrene	µg/L	0.002	**2.3J**	**2.7**	**3.3**	**8.5**	**2.8**	**4.7**	**0.84**	NS	NS
Benzo(b)fluoranthene	µg/L	0.002	**1.8J**	**1.7**	ND (<0.002)	ND (<0.002)	ND (<0.002)	**4.6**	**0.68**	NS	NS
Benzo(g,h,i)perylene	µg/L	NC	1.3J	1	1	3.4	ND (<0.002)	1.8	ND (<0.002)	NS	NS
Benzo(k)fluoranthene	µg/L	0.002	**1.2J**	**1.6**	ND (<0.002)	ND (<0.002)	ND (<0.002)	**2.1**	ND (<0.002)	NS	NS
Chrysene	µg/L	0.002	ND (<5.1)	**3.4**	**4.4**	**10**	**5.4**	**7.6**	**0.99**	NS	NS
Dibenzo(a,h)anthracene	µg/L	NC	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<0.47)	ND (<0.47)	NS	NS
Fluoranthene	µg/L	50	12	24	14	28	12	16	5.4	NS	NS
Fluorene	µg/L	50	**62**	**92**	**62**	**70**	31	44	16	NS	NS
Indeno(1,2,3-cd)pyrene	µg/L	0.002	**0.69J**	**1.6**	ND (<0.002)	ND (<0.002)	ND (<0.002)	**1.2**	ND (<0.002)	NS	NS
Naphthalene	µg/L	10	**140**	**110**	**50**	**87**	ND (<10)	**51**	2.3	NS	NS
Phenanthrene	µg/L	50	**91**	**170**	**80**	**130**	5.8	**62**	1.5	NS	NS
Pyrene	µg/L	50	16	28	18	34	17	20	4.2	NS	NS
Cyanide and Lead											
Lead	µg/L	25	4.6J	ND (<5.0)	ND (<5.0)	5.9	ND (<5.0)	0.014	ND (<5.0)	NS	NS
Cyanide	mg/L	0.2	0.012	ND (<0.010)	ND (<0.010)	ND (<0.010)	0.018	0.021	0.012	NS	NS

AWQS	= Ambient Water Quality Standards
B	= Present in Associated Blank Sample
BTEX	= Benzene, Ethylbenzene, Toluene and Xylene
D	= Diluted Sample
E	= Result exceeded calibration range
F1	= MS and/or MSD Recovery outside acceptance limits.
F2	= MS/MSD RPD above control limits.
J	= Estimated Concentration Value
mg/L	= Milligrams per Liter
NC	= No Criteria
ND (<#)	= Not detected above laboratory reporting limit (indicated by #)
NS	= Not Sampled
NYSDEC	= New York State Department of Environmental Conservation
PAHs	= Polycyclic Aromatic Hydrocarbons
R	= Rejected
µg/L	= Micrograms per Liter
Bolded	= values indicated exceedance of the NYSDEC AWQS

* = Monitoring well is inaccessible due to debris and was not sampled during this time period

Table 3

Groundwater Analytical Data
MW-11

CONSTITUENT	UNITS	03/14/12	10/09/12	04/18/13	10/08/13	04/09/14	10/15/14	04/16/15	10/14/15 to 10/06/22*	04/19/23
MNA/WQ Parameters										
Alkalinity (as CaCO3)	mg/L	R	623	507	573	465	457	428	NS	NS
Chloride	mg/L	321	350	202	295	454	364	314	NS	NS
Ethane	µg/L	ND (<15)	ND (<380)	ND (<380)	ND (<380)	ND (<380)	ND (<7.5)	ND (<7.5)	NS	NS
Ethene	µg/L	ND (<15)	ND (<350)	ND (<350)	ND (<350)	ND (<350)	ND (<7.0)	ND (<7.0)	NS	NS
Ferrous Iron	mg/L	ND (<0.1)	0.5	0.18	0.22	0.29	ND (<0.1)	ND (<0.1)	NS	NS
Manganese	mg/L	0.47	0.95	0.95	0.55	0.56	0.56	0.25	NS	NS
Methane	µg/L	160	520	12	25	120	180	13	NS	NS
Nitrate	mg/L	0.092	ND (<0.050)	0.79	0.32	0.32	0.059	0.28	NS	NS
Nitrogen	mg/L	1.3	1.4	0.58	0.64	0.57	1.2	0.26	NS	NS
Sulfate	mg/L	8.5 B	16.9	112	94.1	58	44.3	82.9	NS	NS
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.8	ND (<1.0)	NS	NS

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality
* = Monitoring well is inaccessible due to debris and was not sampled during this time period

Table 3

Groundwater Analytical Data
MW-12

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/14/15	04/06/16	10/26/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23
BTEX Compounds																							
Benzene	µg/L	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Ethylbenzene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
m/p-Xylene	µg/L	5	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)
o-Xylene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Toluene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
PAHs																							
Acenaphthene	µg/L	20	ND (<0.2)	1.1	1.1	ND (<0.48)	ND (<0.48)	ND (<0.47)	ND (<0.51)	0.11	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<011)	ND (<0.097)	ND (<0.096)	ND (<0.11)	ND (<0.099)	0.11	ND (<0.098)
Acenaphthylene	µg/L	NC	ND (<0.2)	ND (<0.2)	ND (<0.2)	0.63	ND (<0.2)	ND (<0.47)	ND (<0.51)	4.4	ND (<0.097)	0.30	0.39	0.62	ND (<0.11)	1.0	0.1	0.61	0.41	0.14	0.21	2.5	0.27
Anthracene	µg/L	50	ND (<0.2)	1.1	1.1	0.88	ND (<0.2)	0.73	ND (<0.51)	1.4	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	0.099	ND (<0.11)	ND (<0.097)	ND (<0.096)	ND (<0.11)	1.4	1.5	0.31
Benzo(a)anthracene	µg/L	0.002	**0.83**	**3**	**0.66**	**1.5**	ND (<0.49)	ND (<0.47)	ND (<0.51)	**2.1**	**0.11**	**0.14**	ND (<0.099)	ND (<0.11)	ND (<0.11)	**0.24**	**0.34**	ND (<0.097)	ND (<0.096)	ND (<0.11)	**0.49**	**5.4**	**0.77**
Benzo(a)pyrene	µg/L	0.002	**1**	**3.6**	**0.92**	**1.8**	ND (<0.49)	ND (<0.47)	ND (<0.51)	**2.8**	**0.11**	**0.16**	ND (<0.099)	ND (<0.11)	ND (<0.11)	**0.3**	**0.41**	ND (<0.097)	ND (<0.096)	ND (<0.11)	**0.46**	**6.7**	**0.97**
Benzo(b)fluoranthene	µg/L	0.002	**0.91**	**3.4**	**0.71**	**2.1**	ND (<0.49)	ND (<0.47)	ND (<0.51)	**2.3**	**0.13**	**0.19**	ND (<0.099)	ND (<0.11)	ND (<0.11)	**0.24**	**0.34**	ND (<0.097)	ND (<0.096)	ND (<0.11)	**0.49**	**6.8**	**0.85**
Benzo(g,h,i)perylene	µg/L	NC	ND (<0.49)	ND (<0.49)	0.51	0.74	ND (<0.49)	ND (<0.47)	ND (<0.51)	1.6	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	0.15	0.21	ND (<0.097)	ND (<0.096)	ND (<0.11)	0.27	3.8	0.41
Benzo(k)fluoranthene	µg/L	0.002	ND (<0.49)	**0.83**	ND (<0.49)	**0.74**	ND (<0.49)	ND (<0.47)	ND (<0.51)	**0.94**	**0.11**	**0.16**	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.11)	ND (<0.097)	ND (<0.096)	ND (<0.11)	**0.45**	**6.0**	**0.74**
Chrysene	µg/L	0.002	**1**	**3**	ND (<0.49)	**1.6**	ND (<0.49)	ND (<0.47)	ND (<0.51)	**1.9**	ND (<0.097)	**0.11**	ND (<0.099)	ND (<0.11)	ND (<0.11)	**0.19**	**0.22**	ND (<0.097)	ND (<0.096)	ND (<0.11)	**0.72**	**3.9**	**0.50**
Dibenzo(a,h)anthracene	µg/L	NC	ND (<0.52)	ND (<0.52)	ND (<0.52)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<0.51)	0.29	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.11)	ND (<0.097)	ND (<0.096)	ND (<0.11)	ND (<0.099)	0.92	ND (<0.098)
Fluoranthene	µg/L	50	1.4	4.3	0.87	2.00	ND (<0.49)	ND (<0.47)	0.52	3.9	**0.11**	**0.17**	ND (<0.099)	ND (<0.11)	ND (<0.11)	0.33	0.43	ND (<0.097)	ND (<0.096)	ND (<0.11)	0.72	6.8	0.87
Fluorene	µg/L	50	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<0.51)	0.51	ND (<0.097)	ND (<0.10)	ND (<0.099)	0.13	ND (<0.11)	ND (<0.097)	ND (<0.11)	0.12	ND (<0.096)	ND (<0.11)	ND (<0.099)	0.21	ND (<0.098)
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<0.49)	**1.2**	ND (<0.49)	**0.51**	ND (<0.49)	ND (<0.47)	ND (<0.51)	**1.2**	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	**0.11**	**0.17**	ND (<0.097)	ND (<0.096)	ND (<0.11)	**0.20**	**3.0**	**0.34**
Naphthalene	µg/L	10	2.5	0.99	ND (<0.52)	1.6	ND (<0.49)	1.9	ND (<0.51)	0.96	ND (<0.097)	0.15	ND (<0.099)	ND (<0.11)	ND (<0.11)	1.8	ND (<0.11)	0.97	ND (<0.096)	ND (<0.11)	ND (<0.099)	0.15	ND (<0.098)
Phenanthrene	µg/L	50	1.1	3.6	0.61	2	ND (<0.49)	ND (<0.47)	ND (<0.51)	3.5	ND (<0.097)	0.14	ND (<0.099)	ND (<0.11)	ND (<0.11)	0.23	0.34	0.14	ND (<0.096)	ND (<0.11)	0.62	4.7	0.64
Pyrene	µg/L	50	2.4	5.8	1.3	2.8	ND (<0.49)	ND (<0.47)	0.64	5.4	0.17	0.24	ND (<0.099)	ND (<0.11)	ND (<0.11)	0.49	0.61	ND (<0.097)	ND (<0.096)	ND (<0.11)	1.0	9.6	1.3
Cyanide and Lead																							
Lead	µg/L	25	ND (<5.0)	**29**	ND (<5.0)	0.018	ND (<0.49)	ND (<10)	ND (<10)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<0.02)	ND (<10.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	ND (<0.010)	ND (<0.010)	ND (<0.010)	0.013	ND (<0.49)	ND (<0.01)	ND (<0.01)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	0.011	0.011	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)

AWQS = Ambient Water Quality Standards
B = Present in Associated Blank Sample
BTEX = Benzene, Ethylbenzene, Toluene and Xylene
D = Diluted Sample
E = Result exceeded calibration range
F1 = MS and/or MSD Recovery outside acceptance limits.
F2 = MS/MSD RPD above control limits.
J = Estimated Concentration Value
mg/L = Milligrams per Liter
NC = No Criteria
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
NYSDEC = New York State Department of Environmental Conservation
PAHs = Polycyclic Aromatic Hydrocarbons
R = Rejected
µg/L = Micrograms per Liter
Bolded = values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-12

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	04/16/15	10/14/15	04/06/16	10/26/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	10/06/22
MNA/WQ Parameters																						
Alkalinity (as CaCO3)	mg/L	391	415	329	414	368	401	415	436	466	366	456	430	416	400	380	360	430	512	356	NS	418
Chloride	mg/L	123	662	150	493	139	591	276	556	152	587	345	757	334	490	267	633	391	879	141	NS	805
Ethane	µg/L	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	0.47J	ND (<0.025)	ND (<0.030)	ND (<0.030)	ND (<0.16)	ND (<1.0)	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<2.00)
Ethene	µg/L	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<0.035)	ND (<0.035)	ND (<0.10)	ND (<0.10)	ND (<0.032)	ND (<1.0)	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<2.00)
Ferrous Iron	mg/L	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	0.11	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	NS	ND (<0.10)
Manganese	mg/L	0.19	2.1	0.36	1.2	0.16	0.039	0.062	0.202	0.0201	0.0399	0.0113	0.0152	0.0153	0.0636	0.0386	0.0074	ND (<0.005)	ND (<0.015)	0.0157	0.272	0.0396
Methane	µg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<4.0)	ND (<4.0)	ND (<4.0)	ND (<4.0)	1.95	0.24J	0.27J	1.0J	0.35J	ND (<2.5)	ND (<2.5)	ND (<0.10)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<2.00)
Nitrate	mg/L	2.5	4.8	1.4	3.7	1.4	2.5	3.3	2.9	5.1	3.6	0.84	5.6	4.3	ND (<0.10)	5.9	2.5	3	4.4	2.7	3.2	5.3
Nitrogen	mg/L	0.24	2.4	0.44	0.61	0.61	ND (<0.2)	ND (<0.2)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	5.1	ND (<1.0)	3.9	ND (<0.10)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Sulfate	mg/L	73.5	115	51.6	73.5	54.8	70.2	93.7	56.0	115	53.7	70.3	66.8	53.9	55.1	77.2	48.3	65.9	64.1	39.9	NS	101
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.6	ND (<1.0)	ND (<1.0)	1.0

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Table 3

Groundwater Analytical Data
MW-13

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/13/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23
BTEX Compounds																							
Benzene	µg/L	1	**490**	**400**	**200**	**300**	**17**	**360**	**300**	**348**	**15.5**	**363**	**11.6**	**32.8**	**16.9**	**328**	**126**	**268**	**11.7**	**187**	**7.1**	**113**	**5.9**
Ethylbenzene	µg/L	5	**600**	**320**	**200**	**340**	**17**	**190**	**270**	**366**	**7.4**	**210**	4.8	**23.3**	**12.4**	**230**	**85.6**	**193**	4.5	**164**	**5.1**	**104**	1.5
m/p-Xylene	µg/L	5	**730**	**420**	**250**	**480**	**24**	**270**	**360**	**467**	**12.1**	**257**	**8.6**	**34.8**	**16.6**	**229**	**89.5**	**179**	**8.7**	**152**	5.0	**96.2**	2.7
o-Xylene	µg/L	5	**320**	**190**	**120**	**210**	**16**	**120**	**150**	**203**	**8.4**	**117**	**9.3**	**18.6**	**9.7**	**112**	**48.6**	**90.7**	**5.5**	**74.2**	4.0	**53.6**	3.6
Toluene	µg/L	5	**710**	**440**	**270**	**430**	**17**	**320**	**410**	**552**	**7.6**	**332**	3.9	**25.1**	**11.1**	**288**	**95.7**	**279**	**5.8**	**158**	3.9	**84.2**	1.3
PAHs																							
Acenaphthene	µg/L	20	**130**	**77**	**71**	**130**	ND (<4.9)	**65 E**	**130**	**225**	0.34	**78.4**	0.16	4.3	6.8	**141**	4.6	**124**	0.35	**106**	5.6	**143**	ND (<0.096)
Acenaphthylene	µg/L	NC	430	350	22	450	ND (<4.9)	77 E	220	267	1.2	122	0.61	6.4	6.7	57.0	0.78	43.4	0.89	10.5	1.4	68.4	0.14
Anthracene	µg/L	50	ND (<47)	ND (<47)	6.9	14	ND (<4.9)	9.2 F1 F2	10	19.2	0.55	7.2	0.25	0.73	0.82	7.3	0.15	5.1	0.33	6.1	0.15	6.7	ND (<0.096)
Benzo(a)anthracene	µg/L	0.002	ND (<47)	ND (<47)	ND (<47)	**1.9**	ND (<0.001)	**0.59 F2**	ND (<9.7)	**6.7**	**0.93**	**1.7**	**0.30**	**0.22**	**0.14**	**0.79**	**0.18**	**0.51**	**0.38**	**0.98**	ND (<0.098)	**0.98**	ND (<0.096)
Benzo(a)pyrene	µg/L	0.002	ND (<47)	ND (<47)	ND (<47)	**1.6**	ND (<0.001)	ND (<0.49)	ND (<9.7)	**6.5**	**1.0**	**1.3**	**0.40**	**0.20**	ND (<0.10)	**0.58**	**0.20**	**0.31**	**0.82**	**0.87**	ND (<0.098)	**1.1**	**0.11**
Benzo(b)fluoranthene	µg/L	0.002	ND (<47)	ND (<47)	ND (<47)	**2.8**	ND (<0.001)	ND (<0.49)	ND (<9.7)	**6.2**	**1.2**	**1.6**	**0.47**	**0.22**	**0.12**	**0.49**	**0.17**	**0.27**	**0.83**	**0.97**	ND (<0.098)	**1.2**	**0.10**
Benzo(g,h,i)perylene	µg/L	NC	ND (<47)	ND (<47)	ND (<47)	0.6	ND (<0.001)	ND (<0.49)	ND (<9.7)	3.3	0.55	ND (<0.98)	0.21	ND (<0.099)	ND (<0.10)	0.23	ND (<0.10)	0.13	0.45	0.42	ND (<0.098)	0.59	ND (<0.096)
Benzo(k)fluoranthene	µg/L	0.002	ND (<47)	ND (<47)	ND (<47)	**0.53**	ND (<0.001)	ND (<0.49)	ND (<9.7)	**2.5**	**1.1**	**1.3**	**0.35**	**0.20**	**0.11**	**0.21**	ND (<0.10)	**0.11**	**0.79**	**0.84**	ND (<0.098)	**1.1**	ND (<0.096)
Chrysene	µg/L	0.002	ND (<47)	ND (<47)	ND (<47)	**1.8**	ND (<0.001)	**0.50 F1 F2**	ND (<9.7)	**6.1**	**0.81**	**1.3**	**0.22**	**0.20**	ND (<0.10)	**0.64**	**0.13**	**0.38**	**0.34**	**0.62**	ND (<0.098)	**0.75**	ND (<0.096)
Dibenzo(a,h)anthracene	µg/L	NC	ND (<47)	ND (<47)	ND (<47)	ND (<0.47)	ND (<0.001)	ND (<0.49)	ND (<9.7)	0.85	0.13	ND (<0.98)	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.098)	ND (<0.10)	ND (<0.098)	0.11	ND (<0.11)	ND (<0.098)	0.16	ND (<0.096)
Fluoranthene	µg/L	50	ND (<47)	ND (<47)	6.1	8.2	ND (<4.9)	5.5 F2	ND (<9.7)	17.8	1.9	5.4	0.51	0.77	0.66	4.6	1.3	4.0	0.58	4.4	0.27	5.4	ND (<0.096)
Fluorene	µg/L	50	**93**	**68**	30	**94J**	ND (<4.9)	43 F1 F2	**55**	**74.8**	0.46	37.9	0.19	2.6	3.7	45.7	0.16	33.2	0.27	42.5	0.89	44.5	ND (<0.096)
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<47)	ND (<47)	ND (<47)	**0.48**	ND (<0.001)	ND (<0.49)	ND (<9.7)	**2.7**	**0.42**	ND (<0.98)	**0.17**	ND (<0.099)	ND (<0.10)	**0.19**	ND (<0.10)	**0.11**	**0.34**	**0.34**	ND (<0.098)	**0.49**	ND (<0.096)
Naphthalene	µg/L	10	**7100**	**3700**	ND (<10)	**4200**	ND (<4.9)	**350 E**	**170**	**5560**	0.96	**1880**	0.45	0.31	0.14	**9,700**	0.19	**2,190**	0.76	1.6	0.16	**586**	ND (<0.096)
Phenanthrene	µg/L	50	**73**	**61**	ND (<50)	**70**	ND (<4.9)	31 F1	ND (<9.7)	**78.3**	1.5	32.8	0.60	0.37	2.40	39.8	0.14	31	0.76	24.0	ND (<0.098)	17.2	ND (<0.096)
Pyrene	µg/L	50	ND (<47)	ND (<47)	7.2	9.7	ND (<4.9)	5.8 F2	ND (<9.7)	ND (<52.1)	1.7	6.0	0.54	0.78	0.63	4.8	0.86	4.1	0.71	4.6	0.13	5.6	ND (<0.096)
Cyanide and Lead																							
Lead	µg/L	25	7.8	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<4.9)	ND (<10)	ND (<10)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<20)	ND (<10.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	**0.32**	**0.26**	0.17	**0.24**	0.11	**0.22 F1**	**0.29**	**0.23**	0.070	**0.20**	0.062	0.10	0.09	0.16	0.11	0.16	0.050	0.095	0.096	0.14	0.046

AWQS	= Ambient Water Quality Standards
B	= Present in Associated Blank Sample
BTEX	= Benzene, Ethylbenzene, Toluene and Xylene
D	= Diluted Sample
E	= Result exceeded calibration range
F1	= MS and/or MSD Recovery outside acceptance limits.
F2	= MS/MSD RPD above control l
J	= Estimated Concentration Valu
mg/L	= Milligrams per Liter
NC	= No Criteria
ND (<#)	= Not detected above laboratory reporting limit (indicated by #)
NS	= Not Sampled
NYSDEC	= New York State Department of Environmental Conservation
PAHs	= Polycyclic Aromatic Hydrocarbons
R	= Rejected
µg/L	= Micrograms per Liter
Bolded	= values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-13

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	10/13/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23
MNA/WQ Parameters																					
Alkalinity (as CaCO3)	mg/L	218	187	176	255	283 F1	311	364	234	308	226	280	230	380	268	320	232	350	304	350	297
Chloride	mg/L	20.4	7.3	9.2	17.3	11.2	9.8	11.4	3.4	7.6	92.7	31.6	8.4	19.5	9.3	6.9	11.8	8.4	ND (<3.0)	6.7	15.8
Ethane	µg/L	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	1.2	ND (<0.025)	0.88J	ND (<0.030)	0.22J	0.11 J	0.74 J	ND (<1.00)	ND (<5.0)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<2.00)
Ethene	µg/L	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.5)	3.3	ND (<0.035)	2.3	ND (<0.10)	0.46J	0.19 J	2.1	ND (<1.00)	2.34 J	ND (<5.00)	1.26 J	ND (<1.00)	NS	ND (<2.00)
Ferrous Iron	mg/L	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<1.0)	0.18	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	0.15	ND (<0.10)	ND (<0.10)	0.13	ND (<0.10)	ND (<0.10)	ND (<0.10)
Manganese	mg/L	0.11	0.088	0.14	0.031	0.064	ND (<7.5)	0.0938	0.0417	0.0705	0.0570	0.0619	0.0298	0.0710	0.0446	0.0709	0.0601	0.0859	0.034	0.062	0.0202
Methane	µg/L	36	15	74	ND (<4.0)	110	50	280	0.34J	190	12	73	41	250	84.7	218	ND (<5.00)	111	25.5	NS	10.9
Nitrate	mg/L	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	0.05	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<1.0)	ND (<1.0)	ND (<0.50)	ND (<1.0)	ND (<0.10)	ND (<0.10)	ND (<0.10)
Nitrogen	mg/L	1.8	1.2	2.1	0.62	1.4	1.2	1.3	ND (<1.0)	2.1	ND (<1.0)	4.5	ND (<0.10)	ND (<0.10)	ND (<1.0)	ND (<1.0)	2.3	ND (<1.0)	ND (<100)	ND (<1.0)	ND (<1.0)
Sulfate	mg/L	82.3	15.5	15.5	ND (<5.0)	ND (<5.0)	ND (<5.0)	18.3	16.0	42.3	20.4	28.6	26.1	23.4	10.8	17.3	32.1	8.6	25.1	8.4	13.4
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.6	1.0	ND (<1.0)	ND (<1.0)

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Table 3

Groundwater Analytical Data
MW-14

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/13/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23
BTEX Compounds																							
Benzene	µg/L	1	ND (<1.0)	**1.3**	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<0.54)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Ethylbenzene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<0.54)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
m/p-Xylene	µg/L	5	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<0.54)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)
o-Xylene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<0.54)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Toluene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<0.54)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
PAHs																							
Acenaphthene	µg/L	20	ND (<0.48)	2.2	0.5	2.00	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.19	ND (<0.096)	1.7	ND (<0.099)	ND (<0.099)	ND (<0.10)	0.18	0.8	0.2	ND (<0.10)	0.20	ND (<0.10)	0.23	ND (<0.099)
Acenaphthylene	µg/L	NC	ND (<0.48)	2.5	ND (<0.48)	2.9	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.99	0.25	4.1	0.19	0.34	0.26	0.71	8.4	1.2	0.38	1.6	0.21	0.49	0.37
Anthracene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	0.5	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.25	0.096	0.29	ND (<0.099)	0.15	0.11	0.11	3.5	0.6	0.16	0.62	ND (<0.10)	0.19	0.14
Benzo(a)anthracene	µg/L	0.002	ND (<0.48)	**0.62**	**1**	**1.9**	ND (<0.47)	ND (<0.52)	ND (<0.54)	**0.28**	**0.13**	**0.26**	**0.11**	ND (<0.099)	ND (<0.10)	ND (<0.096)	**19.8**	**2.1**	**0.51**	**3.5**	ND (<0.10)	ND (<0.10)	**0.63**
Benzo(a)pyrene	µg/L	0.002	ND (<0.48)	**0.65**	**1.3**	**2.4**	ND (<0.47)	ND (<0.52)	ND (<0.54)	**0.32**	**0.12**	**0.29**	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.096)	**24.8**	**2.6**	**0.66**	**3.9**	ND (<0.10)	ND (<0.10)	**0.72**
Benzo(b)fluoranthene	µg/L	0.002	ND (<0.48)	**0.79**	**1.2**	**3.8**	ND (<0.47)	ND (<0.52)	ND (<0.54)	**0.55**	**0.21**	**0.47**	**0.14**	ND (<0.099)	**0.7**	ND (<0.096)	**26.1**	**2.8**	**0.87**	**5.4**	ND (<0.10)	ND (<0.10)	**0.91**
Benzo(g,h,i)perylene	µg/L	NC	ND (<0.48)	ND (<0.48)	0.95	1.3	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.29	0.11	0.24	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.096)	17.5	1.9	0.54	2.7	ND (<0.10)	ND (<0.10)	0.44
Benzo(k)fluoranthene	µg/L	0.002	ND (<0.48)	ND (<0.48)	**0.83**	**1.1**	ND (<0.47)	ND (<0.52)	ND (<0.54)	**0.47**	**0.18**	**0.40**	**0.11**	ND (<0.099)	**0.14**	ND (<0.096)	**8.5**	**1.0**	**0.84**	**4.7**	ND (<0.10)	ND (<0.10)	**0.80**
Chrysene	µg/L	0.002	ND (<0.48)	**0.69**	**1.2**	**2.1**	ND (<0.47)	ND (<0.52)	ND (<0.54)	**0.27**	**0.13**	**0.24**	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.096)	**17.0**	**1.9**	**0.51**	**2.7**	ND (<0.10)	ND (<0.10)	**0.45**
Dibenzo(a,h)anthracene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<0.52)	ND (<0.54)	ND (<0.10)	ND (<0.096)	ND (<0.099)	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.096)	4.5	0.4	0.13	0.59	ND (<0.10)	ND (<0.10)	ND (<0.099)
Fluoranthene	µg/L	50	ND (<0.48)	1.2	1.5	3.2	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.45	0.17	0.55	0.13	ND (<0.099)	0.14	0.098	29.0	3.0	0.71	4.5	ND (<0.10)	ND (<0.10)	0.77
Fluorene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.14	ND (<0.096)	0.21	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.096)	1.3	0.2	ND (<0.10)	0.26	ND (<0.10)	0.14	ND (<0.099)
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<0.48)	ND (<0.48)	**0.63**	**0.95**	ND (<0.47)	ND (<0.52)	ND (<0.54)	**0.21**	ND (<0.096)	**0.18**	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.096)	**14.4**	**1.5**	**0.40**	**2.2**	ND (<0.10)	ND (<0.10)	**0.36**
Naphthalene	µg/L	10	1.7	0.48	ND (<0.48)	1.1	ND (<0.47)	ND (<0.52)	ND (<0.54)	5.2	ND (<0.096)	4.2	ND (<0.099)	ND (<0.099)	ND (<0.10)	0.72	0.86	1.10	ND (<0.10)	0.18	ND (<0.10)	ND (<0.10)	ND (<0.099)
Phenanthrene	µg/L	50	ND (<0.48)	0.67	0.63	1.4	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.22	ND (<0.096)	0.17	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.096)	9.8	1.0	0.25	1.5	ND (<0.10)	ND (<0.10)	0.22
Pyrene	µg/L	50	ND (<0.48)	1.5	2.4	5.0	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.68	0.28	0.74	0.20	ND (<0.099)	0.22	0.12	47.0	5.0	1.2	7.3	ND (<0.10)	ND (<0.10)	1.2
Cyanide and Lead																							
Lead	µg/L	25	ND (<5.0)	15	ND (<5.0)	0.031	ND (<0.01)	ND (<0.01)	ND (<10)	**33.3**	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	**256**	**50.2**	7.5	90.9	ND (<10.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	0.1	0.2	**0.9**	0.2	0.091	0.120	**0.88**	**0.67**	0.079	**0.25**	0.062	0.11	0.0838	0.11	0.12	**0.42**	0.057	0.072	0.14	0.13	0.076

AWQS	= Ambient Water Quality Standards
B	= Present in Associated Blank Sample
BTEX	= Benzene, Ethylbenzene, Toluene and Xylene
D	= Diluted Sample
E	= Result exceeded calibration range
F1	= MS and/or MSD Recovery outside acceptance limits.
F2	= MS/MSD RPD above control limits.
J	= Estimated Concentration Value
mg/L	= Milligrams per Liter
NC	= No Criteria
ND (<#)	= Not detected above laboratory reporting limit (indicated by #)
NS	= Not Sampled
NYSDEC	= New York State Department of Environmental Conservation
PAHs	= Polycyclic Aromatic Hydrocarbons
R	= Rejected
µg/L	= Micrograms per Liter
Bolded	= values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-14

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	10/13/14	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23
MNA/WQ Parameters																					
Alkalinity (as CaCO3)	mg/L	417	456	483	372	445	507	520	380	404	392	450	384	380	342	400	364	392	392	NS	310
Chloride	mg/L	2	7.6	28.5	3.9	10.7	27.4	18.0	3.5	6.6	ND (<3.0)	3.2	3.5	ND (<3.0)	ND (<3.0)	6.7	6.9	4.5	ND (<3.0)	NS	3.4
Ethane	µg/L	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	0.17J	ND (<0.025)	0.13J	ND (<0.030)	ND (<0.16)	ND (<1.0)	ND (<1.0)	1.57	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<2.0)
Ethene	µg/L	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.5)	ND (<0.035)	ND (<0.035)	ND (<0.10)	ND (<0.10)	ND (<0.032)	ND (<1.0)	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<2.0)
Ferrous Iron	mg/L	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	0.11	0.55	0.22	0.93	0.47	0.30	0.39	0.12	1.90	2.1	0.44	1.4	0.38	NS	0.177
Manganese	mg/L	0.008	0.25	1	0.019	0.011	ND (<7.5)	0.768	0.0262	0.416	0.201	0.0121	0.0208	0.051	3.79	0.940	0.268	4.29	0.203	0.0845	1.0
Methane	µg/L	ND (<1.0)	8.6	140	ND (<4.0)	ND (<4.0)	31	140	19	120	1.7J	1.4J	ND (<2.5)	19	1,020	ND (<5.00)	6.54	4.01 J	6.99	NS	7.40
Nitrate	mg/L	0.8	ND (<0.05)	ND (<0.05)	0.87	0.16	ND (<0.05)	ND (<0.10)	0.29	ND (<0.10)	ND (<0.10)	0.59	0.4	ND (<1.0)	ND (<1.0)	ND (<0.50)	0.6	0.28	0.21	ND (<0.10)	0.36
Nitrogen	mg/L	0.54	0.68	1.5	0.22	0.72	1	1.2	ND (<1.0)	ND (<1.0)	1.0	ND (<1.0)	ND (<1.0)	ND (<1.0)	4.2	3.6	1.0	1.8	ND (<1.0)	ND (<1.0)	ND (<1.0)
Sulfate	mg/L	ND (<5.0)	ND (<5.0)	363	ND (<5.0)	ND (<5.0)	324	153	12.5	52.4	15.2	20.3	ND (<10)	17.7	11.2	102.0	15.1	14.5	25.9	NS	10.6
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.4	1.0	ND (<1.0)	ND (<1.0)

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Table 3

Groundwater Analytical Data
MW-15

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/13/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23
BTEX Compounds																							
Benzene	µg/L	1	**410**	**390**	**210**	**300**	**16**	**350 E**	**330**	**714**	**111**	**373**	**48.7**	**108**	**41.2**	**364**	**55.8**	**271**	**92.7**	**18.7**	**149**	**324**	**91.7**
Ethylbenzene	µg/L	5	**75**	**53**	**38**	**74**	1.9	**92**	**110**	**244**	**24.5**	**124**	**10.2**	**45.2**	**15.7**	**135**	**19.4**	**99.9**	**31.0**	**7.9**	**86.7**	**133**	**40.7**
m/p-Xylene	µg/L	5	**19**	ND (<5.0)	ND (<5.0)	**ND (<10)**	3.2	**8.1**	ND (<8.0)	**13.7**	2.7	**9.4**	ND (<2.0)	2.8	ND (<2.0)	**17.5**	ND (<2.0)	**12.3**	ND (<2.0)	3.4	**21.6**	**10**	4.3
o-Xylene	µg/L	5	**19**	**16**	**8.5**	**28**	**7.5**	**23**	**21**	**31.7**	**7.3**	**22.8**	3.7	**18.8**	**8.1**	**26.2**	4.6	**23**	4.2	**15.4**	**28.1**	**24.4**	**12.4**
Toluene	µg/L	5	ND (<5.0)	ND (<5.0)	ND (<5.0)	**5.8**	ND (<1.0)	**7**	ND (<8.0)	**6.1**	1.1	**7.4**	ND (<1.0)	2.9	1.3	**8.5**	1.4	**6.9**	ND (<1.0)	1.1	**11.1**	**5.4**	2.3
PAHs																							
Acenaphthene	µg/L	20	**42**	**23**	18	**24**	6.7	16	**23**	**43.1**	10.1	16.3	12.4	**32.7**	12.6	**28.4**	4.7	17.2	**28.3**	**40.3**	16.6	**39.1**	**27.1**
Acenaphthylene	µg/L	NC	11	6.5	3	3.9	0.59	3.1	ND (<5.1)	2.4	1.5	2.5	1.4	3.9	1.6	1.9	0.66	1.2	2.5	3.7	1.2	1.6	2.2
Anthracene	µg/L	50	2.6	1.4	0.95	0.81	ND (<0.49)	0.57	ND (<5.1)	1.9	0.36	0.56	0.31	0.55	0.46	0.74	0.25	0.52	0.35	0.82	0.42	0.96	0.46
Benzo(a)anthracene	µg/L	0.002	**0.96**	**0.59**	ND (<0.58)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<5.1)	**0.14**	**0.13**	**0.55**	**0.14**	ND (<0.099)	**0.14**	**0.14**	**0.16**	**0.20**	**0.16**	**0.37**	**0.13**	**0.14**	**0.11**
Benzo(a)pyrene	µg/L	0.000	**0.96**	**0.59**	ND (<0.58)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<5.1)	ND (<0.10)	**0.10**	**0.58**	**0.11**	ND (<0.099)	**0.12**	ND (<0.097)	**0.18**	**0.20**	**0.13**	**0.37**	ND (<0.11)	ND (<0.099)	ND (<0.10)
Benzo(b)fluoranthene	µg/L	0.002	**0.85**	**0.62**	ND (<0.58)	**0.72**	ND (<0.49)	ND (<0.47)	ND (<5.1)	**0.11**	**0.16**	**0.81**	**0.15**	ND (<0.099)	**0.17**	**0.11**	**0.16**	**0.21**	**0.16**	**0.48**	**0.11**	**0.12**	**0.10**
Benzo(g,h,i)perylene	µg/L	NC	ND (<0.58)	ND (<0.58)	ND (<0.58)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<5.1)	ND (<0.10)	ND (<0.098)	0.4	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.097)	0.11	0.12	ND (<0.096)	0.21	ND (<0.11)	ND (<0.099)	ND (<0.10)
Benzo(k)fluoranthene	µg/L	0.002	**0.72**	ND (<0.58)	ND (<0.58)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<5.1)	ND (<0.10)	**0.13**	**0.69**	**0.11**	ND (<0.099)	**0.15**	**0.10**	ND (<0.10)	ND (<0.097)	**0.15**	**0.41**	ND (<0.11)	**0.11**	ND (<0.10)
Chrysene	µg/L	0.002	**1.2**	**0.59**	ND (<0.58)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<5.1)	**0.11**	**0.12**	**0.48**	ND (<0.099)	ND (<0.099)	**0.12**	**0.11**	**0.12**	**0.17**	**0.13**	**0.26**	ND (<0.11)	**0.10**	ND (<0.10)
Dibenzo(a,h)anthracene	µg/L	NC	ND (<0.58)	ND (<0.58)	ND (<0.58)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<5.1)	ND (<0.10)	ND (<0.098)	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.10)	ND (<0.097)	ND (<0.096)	ND (<0.10)	ND (<0.11)	ND (<0.099)	ND (<0.10)
Fluoranthene	µg/L	50	3.3	1.7	1.1	0.93	ND (<0.49)	0.61	ND (<5.1)	1.2	0.46	1.2	0.34	0.53	0.6	0.89	0.41	0.68	0.52	0.76	0.44	0.79	0.46
Fluorene	µg/L	50	13	6.1	4.3	5.2	1.2	4.1	5.9	11.8	1.9	4.1	2.4	5.3	3.4	6.6	1.4	4.0	4.4	3.3	2.9	7.9	5.4
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<0.58)	ND (<0.58)	ND (<0.58)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<5.1)	ND (<0.10)	ND (<0.098)	**0.31**	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.10)	ND (<0.097)	ND (<0.096)	**0.17**	ND (<0.11)	ND (<0.099)	ND (<0.10)
Naphthalene	µg/L	10	**94**	**13**	**29**	**210**	1.5	**48 E**	**110**	**363**	**34.1**	**69.3**	**16.8**	**138**	**43**	**512**	1.1	**272**	**15.0**	**152**	**242**	**232**	**126**
Phenanthrene	µg/L	50	10	5.1	3.4	3.7	ND (<0.49)	2.8	ND (<5.1)	8.5	1.2	2.5	0.99	1.9	1.8	3.7	0.52	2.1	1.2	2.7	1.6	3.7	1.2
Pyrene	µg/L	50	3.7	2	1.5	1.1	ND (<0.49)	0.69	ND (<5.1)	1.4	0.58	1.6	0.45	0.59	0.73	1.0	0.54	0.83	0.71	1.0	0.57	0.92	0.57
Cyanide and Lead																							
Lead	µg/L	25	10	ND (<5.0)	ND (<5.0)	0.010	0.010	0.010	ND (<10)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<20)	ND (<10.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	**0.5**	**0.5**	**0.48**	**0.58**	**0.29**	**1**	**1.1**	**1.1**	**0.42**	**1.3**	**0.56**	**0.27**	**0.171**	**0.61**	**0.32**	**0.67**	**0.23**	0.18	**0.23**	**1.1**	**0.29**

AWQS = Ambient Water Quality Standards
B = Present in Associated Blank Sample
BTEX = Benzene, Ethylbenzene, Toluene and Xylene
D = Diluted Sample
E = Result exceeded calibration range
F1 = MS and/or MSD Recovery outside acceptance limits.
F2 = MS/MSD RPD above control limits.
J = Estimated Concentration Value
mg/L = Milligrams per Liter
NC = No Criteria
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
NYSDEC = New York State Department of Environmental Conservation
PAHs = Polycyclic Aromatic Hydrocarbons
R = Rejected
µg/L = Micrograms per Liter
Bolded = values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-15

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	04/16/15	10/13/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23
MNA/WQ Parameters																						
Alkalinity (as CaCO3)	mg/L	527	585	482	557	480	600	601	676	562	610	616	600	478	590	446	550	534	480	478	600	492
Chloride	mg/L	39.4	42	44.5	44.2	14.2	49.3	55.7	65.4	25.7	58.0	15.2	15.2	43.9	38	20.3	37.4	24.6	14.0	14.9	82.6	29.1
Ethane	µg/L	ND (<380)	ND (<380)	ND (<380)	ND (<380)	ND (<380)	ND (<380)	ND (<75)	6.2	3.2	5.1	2.8	2.1	3.4	5.1	ND (<1.00)	3.53 J	ND (<5.00)	ND (<2.0)	2.02	NS	1.96 J
Ethene	µg/L	ND (<350)	ND (<350)	ND (<350)	ND (<350)	ND (<350)	ND (<350)	ND (<75)	0.038J	0.037J	ND (<0.10)	ND (<0.10)	0.042J	ND (<1.0)	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<2.00)
Ferrous Iron	mg/L	0.15	0.18	ND (<0.1)	ND (<0.1)	ND (<0.1)	0.15 HF	ND (<0.1)	8.2	3.0	5.8	3.8	9.2	2.5	3.2	4.2	6.0	8.7	14.8	3.0	7.9	10.7
Manganese	mg/L	1	1.1	0.68	1	0.68	0.7	ND (<75)	0.609	0.0639	0.735	0.484	1.56	0.775	0.952	0.312	0.685	0.894	1.27	1.03	0.508	0.724
Methane	µg/L	780	580	1,100	2,400	16	1,600	720	3,400	1,900	2,900	640	3,100	1,400	3,600	416	2,400	348	1,020	2,650	NS	1,190
Nitrate	mg/L	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	0.28	ND (<0.05)	ND (<0.5)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.50)	ND (<0.10)	ND (<0.20)	ND (<2.0)	ND (<0.50)	0.11
Nitrogen	mg/L	3	3.1	3.2	2.9	0.81	3.9	3.4	4.7	2.0	4.4	3.1	1.9	1.4	3.1	1.9	2.0	2.2	1.8	1.9	4.5	1.7
Sulfate	mg/L	113	139	122	91.1	28.7	78.5	116	67.9	17.7	60.6	39.0	28.4	25.1	65.9	31.9	71.0	46.8	1.8	24.4	122	39.0
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.6	ND (<1.0)	ND (<1.0)

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Table 3

Groundwater Analytical Data
MW-16

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/13/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23
BTEX Compounds																							
Benzene	µg/L	1	**200**	**150**	**8.7**	**59**	**91**	**40**	**76**	**149**	**5.9**	**143**	**80.6**	**127**	**126**	**143**	**56.6**	**130**	**15.0**	**97.6**	**9.1**	**59.3**	**12.4**
Ethylbenzene	µg/L	5	**150**	**92**	**6.2**	**41**	**68**	**26**	**35**	**134**	**3.1**	**124**	**60.8**	**101**	**91.5**	**118**	**38.7**	**70.4**	2.9	**65.5**	3.8	**40.8**	**5.5**
m/p-Xylene	µg/L	5	**41**	**23**	ND (<1.0)	ND (<10)	ND (<1.0)	4.9	5	4.9	ND (<2.0)	**9.3**	**6.6**	**8.7**	**9.5**	**9.3**	3.9	2.8	ND (<2.0)	4.1	ND (<2.0)	3.0	ND (<2.0)
o-Xylene	µg/L	5	**56**	**35**	ND (<1.0)	**17**	**24**	**11**	**20**	**32.1**	**1.6**	**38.0**	**21.3**	**32.8**	**31.4**	**34.6**	**12.8**	**22.3**	**6.1**	**21.5**	3.1	**12.6**	**2.2**
Toluene	µg/L	5	**14**	**9**	ND (<1.0)	**17**	ND (<1.0)	1.4	ND (<2.0)	**2.9**	ND (<1.0)	3.8	2.1	3.8	3.7	4.5	1.5	3.0	ND (<1.0)	2.9	1.6	2.1	ND (<1.0)
PAHs																							
Acenaphthene	µg/L	20	**30**	16	ND (<1.0)	**40**	**27**	14	**31**	**54.7**	3.0	**39.5**	**39.1**	**57.8**	**45.2**	**53.3**	14.6	**47.0**	9.9	**55.1**	10.6	**48.1**	12.7
Acenaphthylene	µg/L	NC	49	ND (<0.48)	ND (<0.48)	31	25	16	27	47.3	1.9	26.2	24.4	30.6	17.6	21.4	5.9	16.0	3.2	19.4	4.9	19.1	4.7
Anthracene	µg/L	50	2.8	ND (<0.48)	ND (<0.48)	2.8	1.8	1.2	ND (<2.5)	1.4	0.37	2.2	1.7	2.6	1.8	2.4	0.74	1.7	0.47	2.3	0.48	1.7	0.60
Benzo(a)anthracene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	**0.10**	**0.11**	**0.11**	**0.13**	**0.12**	**0.11**	**0.13**	ND (<0.10)	**0.23**	ND (<0.098)	**0.19**	ND (<0.098)	**0.13**	ND (<0.10)
Benzo(a)pyrene	µg/L	0.000	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	ND (<0.10)	**0.11**	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.11)	ND (<0.097)	ND (<0.10)	**0.21**	ND (<0.098)	ND (<0.10)	ND (<0.098)	ND (<0.10)	ND (<0.10)
Benzo(b)fluoranthene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	ND (<0.10)	**0.17**	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.11)	0.11	ND (<0.10)	**0.21**	ND (<0.098)	**0.12**	ND (<0.098)	ND (<0.10)	ND (<0.10)
Benzo(g,h,i)perylene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	ND (<0.10)	ND (<0.097)	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.11)	ND (<0.097)	ND (<0.10)	0.14	ND (<0.098)	ND (<0.10)	ND (<0.098)	ND (<0.10)	ND (<0.10)
Benzo(k)fluoranthene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	ND (<0.10)	**0.15**	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.11)	**0.098**	ND (<0.10)	ND (<0.098)	ND (<0.098)	**0.11**	ND (<0.098)	ND (<0.10)	ND (<0.10)
Chrysene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	ND (<0.10)	**0.098**	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.11)	**0.11**	ND (<0.10)	**0.19**	ND (<0.098)	**0.14**	ND (<0.098)	ND (<0.10)	ND (<0.10)
Dibenzo(a,h)anthracene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	ND (<0.10)	ND (<0.097)	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.098)	ND (<0.10)	ND (<0.098)	ND (<0.10)	ND (<0.10)
Fluoranthene	µg/L	50	2	ND (<0.48)	ND (<0.48)	2.7	1.6	1.1	ND (<2.5)	1.8	0.41	2.5	1.9	2.4	1.9	3.0	1.1	2.6	0.47	3.40	0.72	2.2	0.92
Fluorene	µg/L	50	21	9.1	ND (<0.48)	22	14	7.1	15	22.2	1.1	17.2	17.2	19.5	12.8	24.1	5.3	16.9	1.8	20.5	3.4	16.2	5.1
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	ND (<0.10)	ND (<0.097)	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.11)	ND (<0.097)	ND (<0.10)	**0.11**	ND (<0.098)	ND (<0.10)	ND (<0.098)	ND (<0.10)	ND (<0.10)
Naphthalene	µg/L	10	**230E**	ND (<0.48)	ND (<0.48)	1.7	4.6	5.1	7.4	4.6	0.16	5.8	**30.9**	9.8	**12.9**	**36.8**	2.2	8.0	1.4	**14.1**	8.3	**16.3**	9.0
Phenanthrene	µg/L	50	15	ND (<0.48)	ND (<0.48)	18	11	6.7	10	15.9	0.99	15.7	14.1	16.5	11.6	18.4	2.5	13.1	ND (<0.098)	15.4	3.5	13.0	4.1
Pyrene	µg/L	50	2	ND (<0.48)	ND (<0.48)	3	1.8	1.2	ND (<2.5)	2.0	0.50	2.7	2.1	2.5	2.1	3.3	1.2	2.9	0.54	3.8	0.80	2.30	1.0
Cyanide and Lead																							
Lead	µg/L	25	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<10)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	6.1	ND (<5.0)	ND (<20)	ND (<10.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	0.11	0.11	0.023	**0.25**	**0.24**	**0.24**	**0.25**	**0.26**	**0.21**	**0.26**	**0.23**	**0.26**	0.192	**0.23**	0.19	**0.25**	0.17	0.14	0.14	0.19	0.12

AWQS = Ambient Water Quality Standards
B = Present in Associated Blank Sample
BTEX = Benzene, Ethylbenzene, Toluene and Xylene
D = Diluted Sample
E = Result exceeded calibration range
F1 = MS and/or MSD Recovery outside acceptance limits.
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PAHs = Polycyclic Aromatic Hydrocarbons
R = Rejected
µg/L = Micrograms per Liter
Bolded = values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-16

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	04/16/15	10/13/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23
MNA/WQ Parameters																						
Alkalinity (as CaCO3)	mg/L	530	585	454	595	532	638	615	636	706	630	724	740	560	650	156	670	680	760	546	674	450
Chloride	mg/L	5.5	5.4	5	6.5	5.8	4.9	5.7	6.8	3.4	6.5	5.6	4.8	11.8	4.8	3.6	5.2	3.6	3.8	ND (<3.0)	5.7	ND (<3.0)
Ethane	µg/L	ND (<750)	ND (<750)	ND (<750)	ND (<750)	ND (<75)	ND (<75)	ND (<75)	1.2	0.15J	0.84J	0.82J	0.99J	0.92 J	1.1	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<2.00)
Ethene	µg/L	ND (<700)	ND (<700)	ND (<700)	ND (<700)	ND (<70)	ND (<70)	ND (<75)	0.24J	0.036J	0.16J	0.13J	0.17J	0.15 J	0.20 J	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<2.00)
Ferrous Iron	mg/L	ND (<0.1)	0.13	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	2.4	1.2	3.0	3.5	3.1	2.6	1.9	2.8	3.0	0.79	4.7	3.6	7.4	0.30
Manganese	mg/L	0.63	0.7	0.22	0.63	0.42	0.33	ND (<75)	0.601	0.522	0.599	0.551	0.592	0.603	0.658	0.373	0.650	0.373	0.646	0.275	0.553	0.125
Methane	µg/L	170	150	75	410	160	1100	110	900	180	780	820	830	850	1100	4.95 J	488	ND (<5.00)	500	173	NS	22.1
Nitrate	mg/L	0.1	ND (<0.05)	0.53	ND (<0.05)	ND (<0.05)	0.37	0.074	ND (<0.10)	0.33	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<1.0)	ND (<1.0)	ND (<0.10)	ND (<1.0)	ND (<1.0)	ND (<0.50)	0.79
Nitrogen	mg/L	3.6	2.8	2.4	3.3	2.1	1.9	2.6	5.4	2.4	3.2	2.3	3.2	3.4	3.9	2	2.8	2.4	3.9	2.2	3.7	1.0
Sulfate	mg/L	140	86	ND (<1.0)	107	38.2	22.8	13.3	145	37.8	77.7	111	75.8	79.6	67.7	39	95.7	37.5	56.8	25.9	36.2	28.5
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.0	ND (<1.0)	1.0

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Appendix A – Field Data

Well ID	Sample?	Well Size?	DTW	DTP	DTB	Comments
RW-1	No	2"	10.43		21.50	
MW-4	Yes	2"	~~10.80~~ 22.02		27.32	
MW-7	Yes	2"	14.05		22.10	
MW-10	Yes	2"	14.79		22.05	
MW-11	No	2"	———		22.90	inaccessable- debris
MW-12	Yes	2"	14.17		22.24	
MW-13	Yes	2"	13.34		22.75	MS/MSD
MW-14	Yes	2"	13.95		23.55	Field Duplicate
MW-15	Yes	2"	16.90		23.00	
MW-16	Yes	2"	9.48		19.45	
Gauge-1 (bridge)	No		19.31		19.76	

***DTW**-depth to water*
***DTP**-depth to product*
***DTB**-depth to bottom*
All from top of casing

Unable to access MW-11. Area is on adjacent property and was full of concrete/metal and wood debris.

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: KL
Job Number: 0603324-120950-221
Well Id. **MW-4**

Date: 4/19/23
Weather: RAIN 37F
Time In: 09:30 Time Out: 10:25

Well Information

		TOC	Other
Depth to Water:	(feet)	22.02	
Depth to Bottom:	(feet)	27.32	
Depth to Product:	(feet)		
Length of Water Column:	(feet)	5.3	
Volume of Water in Well:	(gal)	0.848	
Three Well Volumes:	(gal)	2.54	

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

Purging Information

Purging Method:		Bailer ☐	Peristaltic ☐	Well Wizard Dedicated Pump ☒	
Tubing/Bailer Material:		Teflon ☐	Stainless St. ☐	Polyethylene ☒	other
Sampling Method:		Bailer ☐	Peristaltic ☐	Well Wizard Dedicated Pump ☒	
Average Pumping Rate:	(ml/min)	300			
Duration of Pumping:	(min)	300			
Total Volume Removed:	(gal)	2			

Did well go dry? Yes ☐ No ☒

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

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

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
09:40	21.75	9.77	6.69	227	1.67	0.0	5.46	1.07
09:45	21.93	9.44	6.53	215	1.69	6.3	4.92	1.08
09:50	21.93	9.02	6.51	213	1.70	8.3	4.84	1.08
09:55	21.93	9.09	6.51	211	1.69	9.1	4.78	1.08
10:00	21.93	9.15	6.50	210	1.68	11.5	4.65	1.07
10:05	21.93	9.16	6.50	209	1.64	7.7	4.56	1.05
10:10	21.93	9.16	6.51	209	1.64	5.3	4.23	1.03

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

Sample ID: **MW-4-0423**
Sample Time: 10:10
Duplicate? Yes ☐ No ☒
MS/MSD? Yes ☐ No ☒

Shipped: Drop-off Albany Service Center ☐
Pace Courier ☒
Laboratory: Pace Analytical Greensburg, Pennsylvania

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: Peter Lyon
Job Number: 0603324-120950-221
Well Id. **MW-7**

Date: 4/19/23
Weather: Cloudy 37°
Time In: 1037 Time Out: 1115

Well Information

		TOC	Other
Depth to Water:	(feet)	14.05	
Depth to Bottom:	(feet)	22.10	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	8.05	
Volume of Water in Well:	(gal)	1.28	
Three Well Volumes:	(gal)	3.86	

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

Purging Information

Purging Method:	Bailer ☐	Peristaltic ☐	Well Wizard Dedicated Pump ☒		
Tubing/Bailer Material:	Teflon ☐	Stainless St. ☐	Polyethylene ☒	other ☐	
Sampling Method:	Bailer ☐	Peristaltic ☐	Well Wizard Dedicated Pump ☒		
Average Pumping Rate:	(ml/min)	200			
Duration of Pumping:	(min)	30			
Total Volume Removed:	(gal)	2			

Did well go dry? Yes ☐ No ☒

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

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

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
1040	14.43	9.18	8.29	49	1.39	39.6	5.32	0.890
1045	14.44	8.98	8.25	39	1.33	68.9	3.64	0.850
1050	14.75	9.06	8.30	26	1.31	165	2.80	0.838
1055	14.91	9.05	8.20	19	1.31	180	1.47	0.837
1100	15.12	9.07	7.89	14	1.31	144	1.31	0.839
1105	15.32	9.09	7.68	6	1.32	107	1.23	0.843
1110	15.49	9.10	7.54	-3	1.32	83.3	1.09	0.845

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

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

Sample ID: **MW-7-0423** Duplicate? Yes ☐ No ☒
Sample Time: 1110 MS/MSD? Yes ☐ No ☒

Laboratory: Pace Analytical
Greensburg, Pennsylvania

19.31

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: Peter Lyon
Job Number: 0603324-120950-221
Well Id. **MW-10**

Date: 4/19/23
Weather: overcast 37°
Time In: 0940 Time Out: 1020

Well Information

		TOC	Other
Depth to Water:	(feet)	14.79	
Depth to Bottom:	(feet)	22.05	
Depth to Product:	(feet)	-	
Length of Water Column:	(feet)	7.26	
Volume of Water in Well:	(gal)	1.16	
Three Well Volumes:	(gal)	3.48	

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

Purging Information

Purging Method:	Bailer ☐	Peristaltic ☐	Well Wizard Dedicated Pump ☒		
Tubing/Bailer Material:	Teflon ☐	Stainless St. ☐	Polyethylene ☒	other ☐	
Sampling Method:	Bailer ☐	Peristaltic ☐	Well Wizard Dedicated Pump ☒		
Average Pumping Rate:	(ml/min)	200			
Duration of Pumping:	(min)	30			
Total Volume Removed:	(gal)	2			

Did well go dry? Yes ☐ No ☒

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

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

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
0945	15.52	9.06	6.78	-72	2.44	59.8	2.36	1.56
0950	15.82	8.74	6.79	-73	2.45	51.1	1.67	1.52
0955	16.00	8.62	6.86	-79	2.48	48.9	1.37	1.59
1000	16.38	8.59	6.93	-91	2.51	47.8	1.35	1.60
1005	16.70	8.61	6.98	-91	2.49	46.3	1.58	1.60
1010	16.97	8.42	7.02	-99	2.54	44.9	1.36	1.63
1015	17.13	7.35	7.04	-105	2.56	41.6	1.07	1.64

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

Shipped: Drop-off Albany Service Center ☐
Pace Courier ☒
Laboratory: Pace Analytical Greensburg, Pennsylvania

Sample ID: **MW-10-0423** Duplicate? Yes ☐ No ☒
Sample Time: 1215 MS/MSD? Yes ☐ No ☒

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: Peter Lyon
Job Number: 0603324-120950-221
Well Id. **MW-12**

Date: 4/19/23
Weather: Overcast 37°
Time In: 1137 Time Out: 1215

Well Information

		TOC	Other
Depth to Water:	(feet)	14.17	
Depth to Bottom:	(feet)	22.24	
Depth to Product:	(feet)	-	
Length of Water Column:	(feet)	8.07	
Volume of Water in Well:	(gal)	1.29	
Three Well Volumes:	(gal)	3.87	

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

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]	
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:		Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]	
Average Pumping Rate:	(ml/min)	200			
Duration of Pumping:	(min)	30			
Total Volume Removed:	(gal)	2			

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

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

Conversion Factors

	1" ID	2" ID	4" ID	6" ID
gal/ft. of water	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
1140	14.21	9.32	6.95	148	3.13	52.3	6.76	1.99
1145	14.21	9.34	6.74	134	2.48	134	5.35	1.59
1150	14.21	9.45	6.69	183	2.34	120	5.17	1.50
1155	14.21	9.45	6.66	189	2.26	60.8	4.97	1.45
1200	14.21	9.47	6.65	192	2.22	26.4	4.89	1.42
1205	14.23	9.44	6.64	194	2.18	16.4	4.81	1.46
1210	14.21	9.42	6.60	192	2.16	9.7	4.78	1.38

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

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

Sample ID: **MW-12-0423** Duplicate? Yes [ ] No [X]
Sample Time: 1210 MS/MSD? Yes [ ] No [X]

Laboratory: Pace Analytical
Greensburg, Pennsylvania

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: [illegible]
Job Number: 0603324-120950-221
Well Id. **MW-13**

Date: 4/19/23
Weather: Cloudy 37
Time In: 10:30 Time Out: 11:40

Well Information

		TOC	Other
Depth to Water:	(feet)	13.34	
Depth to Bottom:	(feet)	22.75	
Depth to Product:	(feet)		
Length of Water Column:	(feet)	9.41	
Volume of Water in Well:	(gal)	1.50	
Three Well Volumes:	(gal)	4.51	

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

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X] other
Sampling Method:		Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]
Average Pumping Rate:	(ml/min)	200		
Duration of Pumping:	(min)	30		
Total Volume Removed:	(gal)	7		

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

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

Conversion Factors

	1" ID	2" ID	4" ID	6" ID
gal/ft. of water	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
10:40	13.42	8.41	6.91	29	0.781	0.0	6.75	0.488
10:45	13.42	8.24	7.08	8	0.594	0.0	1.92	0.379
10:50	13.42	8.14	7.09	3	0.572	0.0	1.33	0.366
10:55	13.42	8.10	7.10	6	0.567	0.0	1.23	0.364
11:00	13.42	8.05	7.11	8	0.564	0.0	1.11	0.361
11:05	13.42	8.14	7.11	7	0.566	0.0	1.00	0.362
11:10	13.42	8.26	7.12	5	0.565	0.0	0.95	0.362

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

MW-13-MS-0423 and MW-13-MSD-0423

Sample ID: **MW-13-0423** Duplicate? Yes [ ] No [X]
Sample Time: 11:10 MS/MSD? Yes [X] No [ ]

Shipped: Drop-off Albany Service Center [ ]
Pace Courier [X]
Laboratory: Pace Analytical Greensburg, Pennsylvania

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: AS
Job Number: 0603324-120950-221
Well Id. **MW-14**

Date: 4/19/23
Weather: 35°F, light rain
Time In: 1200 Time Out: 1300

Well Information

		TOC	Other
Depth to Water:	(feet)	13.75	
Depth to Bottom:	(feet)	23.55	
Depth to Product:	(feet)	NP	
Length of Water Column:	(feet)	9.80	
Volume of Water in Well:	(gal)	1.53	
Three Well Volumes:	(gal)	4.60	

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

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]	
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:		Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]	
Average Pumping Rate:	250 (ml/min)	240			
Duration of Pumping:	30 (min)	30			
Total Volume Removed:	2.5 (gal)	7			

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

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

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

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
1205	14.49	7.52	7.66	157	0.771	858	8.60	0.496
1210	15.01	8.03	7.64	204	0.681	1000	6.44	0.459
1215	15.20	8.35	7.60	237	0.647	608	4.26	0.376
1220	15.30	8.44	7.58	221	0.609	209	3.95	0.350
1225	15.50	8.43	7.58	170	0.609	30.5	3.77	0.390
1230	15.60	8.47	7.58	115	0.612	58.0	3.58	0.391
1235	15.80	8.54	7.58	64	0.614	47.0	3.34	0.393

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

Field Duplicate-0423

Sample ID: **MW-14-0423** Duplicate? Yes [X] No [X]
Sample Time: 1240 MS/MSD? Yes [ ] No [X]

Shipped: Drop-off Albany Service Center [ ]
Pace Courier [X]
Laboratory: Pace Analytical Greensburg, Pennsylvania

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: [illegible]
Job Number: 0603324-120950-221
Well Id. **MW-15**

Date: 4/19/23
Weather: Rain 37
Time In: 12:a0 Time Out: 12:40

Well Information

		TOC	Other
Depth to Water:	(feet)	16.90	
Depth to Bottom:	(feet)	23.00	
Depth to Product:	(feet)		
Length of Water Column:	(feet)	6.6	
Volume of Water in Well:	(gal)	1.05	
Three Well Volumes:	(gal)	3.16	

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

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]	
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:		Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]	
Average Pumping Rate:	(ml/min)	250			
Duration of Pumping:	(min)	30			
Total Volume Removed:	(gal)	2			

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

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

Conversion Factors

	1" ID	2" ID	4" ID	6" ID
gal/ft. of water	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
12:05	16.62	9.59	6.85	29	0.949	0.0	10.53	0.627
12:10	16.95	9.32	6.78	-67	1.03	0.0	9.61	0.651
12:15	17.30	8.98	6.64	-95	0.914	0.0	8.50	0.585
12:20	17.52	8.75	6.61	-97	0.941	0.0	7.86	0.603
12:25	17.78	8.69	6.57	-96	1.00	0.0	7.06	0.640
12:30	17.90	8.70	6.55	-97	1.03	0.0	6.80	0.659
12:35	18.03	8.73	6.55	-97	1.10	0.0	6.47	0.723

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

Sample ID: **MW-15-0423**
Sample Time: 12:35

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

Shipped: Drop-off Albany Service Center [ ]
Pace Courier [X]
Laboratory: Pace Analytical Greensburg, Pennsylvania

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: AS
Job Number: 0603324-120950-221
Well Id. **MW-16**

Date: 4/19/23
Weather: 38°F, cloudy
Time In: 1105 Time Out: 1155

Well Information

		TOC	Other
Depth to Water:	(feet)	9.48	
Depth to Bottom:	(feet)	19.45	
Depth to Product:	(feet)	NP	
Length of Water Column:	(feet)	9.97	
Volume of Water in Well:	(gal)	1.59	
Three Well Volumes:	(gal)	4.78	

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

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]	
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other
Sampling Method:		Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]	
Average Pumping Rate:	250 (ml/min)	200			
Duration of Pumping:	30 (min)	30			
Total Volume Removed:	2.5 (gal)	2			

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

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

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

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
1110	9.75	8.24	7.82	-38	1.16	187	10.16	0.744
1115	9.82	8.04	7.70	-50	1.06	240	9.11	0.684
1120	10.50	7.65	7.50	-37	0.917	213	7.56	0.591
1125	10.62	7.21	7.38	2	0.844	81.6	7.07	0.540
1130	10.85	7.07	7.37	38	0.844	39.0	7.25	0.540
1135	11.22	7.01	7.36	44	0.855	21.5	7.20	0.546
1140	11.61	7.01	7.31	47	0.868	11.2	6.83	0.555

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

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

Sample ID: **MW-16-0423** Duplicate? Yes [ ] No [X]
Sample Time: 1145 MS/MSD? Yes [ ] No [X]

Laboratory: Pace Analytical
Greensburg, Pennsylvania

CHAIN-OF-CUSTODY / Analytical Request Document

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

Pace Analytical™
www.pacelabs.com

Section A — Required Client Information:	Section B — Required Project Information:	Section C — Invoice Information:
Company: GES - Syracuse	Report To: Devin Shay (GES) dshay@gesonline.com	Attention: Accounts Payable via email at ges-invoices@ges...
Address: 6780 Northern Blvd, Suite 100	Report To: Tim Beaumont (GES) tbeaumont@gesonline.com	Company Name: Groundwater & Environmental Services, Inc.
East Syracuse, New York 13057		Address: 6780 Northern Blvd, Suite 100, East Syracuse, NY 13057
Email To: dshay@gesonline.com	Purchase Order No.:	Pace Quote Reference:
Phone: 800.220.3069x4052 / Fax: None	Project Name: National Grid – 109 North Market Street, Johnstown NY	Pace Project Manager: Rachel Christner
Requested Due Date/TAT: Standard	Project Number: 0603324-120950-221-1106	Semi-Annual GWS

REGULATORY AGENCY: NPDES / GROUND WATER / DRINKING WATER / UST / RCRA / OTHER____

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

Filtered (Y/N)

Section D Required Client Information — **SAMPLE ID** — One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE

COLLECTED — Preservatives — Requested Analysis:

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	GRAB DATE	GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	NaOH and Zn Acetate	Benzylkonium Chloride	Methane/Ethane/Ethene/Carbon Dioxide by RSK-175	SVOCs PAH's by Method 8270	Total Kjeldahl Nitrogen by EPA Method 351.2 (Low Level)	Metals (Lead and Manganese) by EPA Method 6010	VOCs BTEX by Method 8260C	Ferrous Iron by SM 3500 Fe D, Chloride by SM 4500 Cl E / Total Alkalinity by EPA Method 310.2	Total Cyanide by EPA Method 9012B	Nitrate and Nitrite by EPA Method 353.2, Sulfide by EPA Method 376.1, and Sulfate by EPA Method 375.4	Pace Project Number Lab I.D.
1	MW-4-0423	WT	G			4/19/23	10:10		13	3	1	1	6	1		1		3	2	1	1	3	1	1	1	
2	MW-7-0423	WT	G				11:10		13	3	1	1	6	1		1		3	2	1	1	3	1	1	1	
3	MW-10-0423	WT	G				10:15		13	3	1	1	6	1		1		3	2	1	1	3	1	1	1	
4	MW-11-0423	WT	G				—		13	3	1	1	6	1		1		3	2	1	1	3	1	1	1	
5	MW-12-0423	WT	G				12:10		13	3	1	1	6	1		1		3	2	1	1	3	1	1	1	
6	MW-13-0423	WT	G				11:10		13	3	1	1	6	1		1		3	2	1	1	3	1	1	1	
7	MW-13-MS-0423	WT	G				11:10		13	3	1	1	6	1		1		3	2	1	1	3	1	1	1	
8	MW-13-MSD-0423	WT	G				11:10		13	3	1	1	6	1		1		3	2	1	1	3	1	1	1	
9	MW-14-0423	WT	G				12:40		13	3	1	1	6	1		1		3	2	1	1	3	1	1	1	
10	MW-15-0423	WT	G				12:35		13	3	1	1	6	1		1		3	2	1	1	3	1	1	1	
11	MW-16-0423	WT	G				11:45		13	3	1	1	6	1		1		3	2	1	1	3	1	1	1	
12	Field Duplicate - 0423	WT	G				—		13	3	1	1	6	1		1		3	2	1	1	3	1	1	1	
13	Trip Blank	WT	Lab				12:40		2				2									2				

Additional Comments:

SAMPLES WILL ARRIVE IN # ____ COOLERS.

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
[signature]	4/19/23	13:[illegible]					Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
						Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact

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

NERegion@gesonline.com, ges@equisonline.com

SPECIFIC EDD NAME:

NGJohnstown-Jobnumber-28351.EQEDD.zip

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: [illegible]

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 4/19/23

svrrmt88-vm3\syracuse-01\Dashboard\Planning\[illegible].xlsm

Appendix B – Data Usability Summary Report

Groundwater & Environmental Services, Inc.
708 North Main Street, Suite 201
Blacksburg, VA 24060
T. 800.662.5067

June 19, 2023

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

RE: Data Usability Summary Report for National Grid: Johnstown, NY Site Data Package
Pace Analytical Job No. 30580318

Groundwater & Environmental Services, Inc. (GES) reviewed one data package (Laboratory Project Number 30580318) from Pace Analytical Services, Inc., for the analysis of groundwater samples collected on April 19, 2023 from monitoring wells located at the National Grid: Johnstown, NY Site. Eight aqueous samples and a field duplicate were analyzed for dissolved gases, PAHs, Nitrogen, Metals, Alkalinity, Chloride, Ferrous Iron, Cyanide, Sulfide and Sulfate. Methodologies utilized were, ASTM D516-11, EPA 351.2, EPA 6010D, SM 4500NO3F-2011, SM4500CIE-2011, SM 4500S2F-2011, SM 3500-FeB-2011, SM 2320B-2011, and the USEPA SW846 methods 8260C/8270DSIM/9012B, with additional QC requirements of the NYSDEC ASP. Dissolved gases analyses were subcontracted to Microbac Laboratories, 158 Starlite Drive, Marietta, OH.

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

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

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

In summary, sample results were usable as reported, with exceptions due to poor precision or BS/BSD and MS/MSD recoveries.

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	Microbac ID	Sample ID	Date Collected	Date Received
30580318001	M3D1276-01	MW-4-0423	04/19/23 10:00	04/20/23 9:40
30580318002	M3D1276-02	MW-7-0423	04/19/23 11:10	04/20/23 9:40
30580318003	M3D1276-03	MW-10-0423	04/19/23 10:15	04/20/23 9:40
30580318004	M3D1276-04	MW-12-0423	04/19/23 12:10	04/20/23 9:40
30580318005	M3D1276-05	MW-13-0423	04/19/23 11:10	04/20/23 9:40
30580318006		MW-13-MS-0423	04/19/23 11:10	04/20/23 9:40
30580318007		MW-13-MSD-0423	04/19/23 11:10	04/20/23 9:40
30580318008	M3D1276-06	MW-14-0423	04/19/23 12:40	04/20/23 9:40
30580318009	M3D1276-07	MW-15-0423	04/19/23 12:35	04/20/23 9:40
30580318010	M3D1276-08	MW-16-0423	04/19/23 11:45	04/20/23 9:40
30580318011	M3D1276-09	Field Duplicate -0423	04/19/23 00:00	04/20/23 9:40
30580318012		trip blank	04/19/23 00:01	04/20/23 9:40

Table 2. Validation Qualifiers

Sample ID	Qualifier	Analyte	Reason for qualification
All Samples	J	Ferrous Iron	Analyzed outside of hold time.
MW-13	J+	Acenaphthylene	High recovery MS/MSD
	UJ	Acenaphthene Fluorene	RPD > 30%
	J-	Alkalinity	Low recovery MS/MSD
	J+	Carbon Dioxide	High recovery MS/MSD
	J-	Ethylbenzene, Toluene m&p Xylene o- Xylene	Low recovery MS/MSD
	UJ	Nitrogen, Kjeldahl, Total	High recovery in MS/MSD Low recovery in second batch MS/MSD
	J-	Cyanide	Low recovery MS/MSD
	J+	Chloride	High recovery MS/MSD
MW-14 Duplicate	J-	Cyanide	Low recovery in MS/MSD
MW-10 MW-12 MW-13 MW-14 MW-15	J detects	Benzo(b)fluoranthene Benzo(k)fluoranthene	Coeluting peaks

In summary, sample results were usable as reported.

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

BTEX and TCL Volatiles by EPA 8260C/NYSDEC ASP

Sample holding times were met and instrumental tune fragmentations were within acceptance ranges. Surrogate and internal standard recoveries were within required limits. Laboratory and field-generated blanks reported no detections above reporting limit. Calibration standards show acceptable responses within analytical protocol and validation action limits. The MS/MSD and BS/BSD recoveries were within criteria. Precision calculations showed that the recoveries were consistent, as RPDs were within expected ranges. Precision calculations for LCS/LCSD indicate good reproducibility. Surrogate recovery was within bounds, and LCS recoveries were compliant, and used to determine method efficacy.

The field duplicate correlations were not calculated as neither sample had above reporting limit detections.

PAHs by EPA8270D/NYSDEC ASP

Holding times were met. Instrumental tune fragmentations were within acceptance ranges. Surrogate recoveries were within analytical and validation guidelines. Blanks show no contamination. Calibration standards, both initial and continuing, show acceptable responses within analytical method protocols and validation guidelines.

Benzo(b)fluoranthene and Benzo(k)fluoranthene elute together on the instrument, and must be considered a combined total. The blind field duplicate correlations of MW-14-2023 fall within guidance limits.

The MS/MSD recovered within laboratory-provided criteria, with the exception of the recovery of Acenaphthene, which recovered high, and the RPDs of Acenaphthene, Acenaphthylene, and Fluorene, which reported variance above criteria.

Field precision calculations indicate good reproducibility. Surrogate recovery was within bounds. LCS recoveries were compliant for accuracy and precision, and no qualifications were required.

Lead and Manganese by EPA 6010/NYDESC ASP

The matrix spikes of MW-13 and MW-4 recovered within criteria. Instrument performance is compliant, and blanks show no contamination above the reporting limit. The ICP serial dilution evaluations were within specification for samples with detections of the target elements above the action limit.

Wet Chemistry Tests and Total Cyanide by 9012B/ NYSDEC ASP

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

- Alkalinity recovery in MW-13 was low in the MS/MSD. The concentration reported is qualified as possibly biased low.
- Cyanide recovery in MW-13 was low in the MS/MSD. The concentration reported is qualified as possibly biased low.

- Cyanide recovery in the MS/MSD was low in the duplicate associated with MW-14. The concentrations reported in the duplicate and original samples are qualified as possibly biased low.

Nitrate had to be diluted due to the presence of an interfering element in the matrix. Elevated reporting limits are provided. Calibration standard responses were compliant. Blanks show no detections above the reporting limits.

Ferrous Iron by S<3500-FeD-00/ NYSDEC ASP

Review was conducted for method compliance, holding times, transcription, calculations, standard and blank acceptability, and accuracy and precision. Samples were prepared outside of hold time, and all sample data is qualified as estimated with an indeterminate bias. All other compliance data were found acceptable for the validated samples.

Calibration standard responses were compliant. Blanks show no detections above the reporting limits.

Total Kjeldahl Nitrogen, Nitrogen as Nitrate/Nitrite by EPA 351.2 & 353.2/NYDESC ASP

Review was conducted for method compliance, holding times, transcription, calculations, standard and blank acceptability, accuracy and precision, etc., as applicable to each procedure. All were found acceptable for the validated samples. Calibration standard responses were compliant. Blanks show no detections above the reporting limits. The MS/MSD recoveries were out of specification for MW-13 associated samples:

- Nitrogen, Kjeldahl: recovery was high, the analyte was non-detect, and no qualifications are required.

Dissolved Gases by EPA 5021/RSK-175

Holding times were met. Instrumental tune fragmentations were within acceptance ranges. Surrogate recoveries were within analytical and validation guidelines. Blanks show no contamination. The case narrative stated the samples were received in improper containers, but the implications for the data were not noted.

The blank spike/blank spike duplicate recovery was high for ethene. There were no positive detections in the sample, so no qualifications were required.

Carbon dioxide recovered high in the MS/MSD. Carbon dioxide in MW-13 is qualified as estimated with a possible high bias.

All other criteria were found acceptable for the validated samples. Calibration standard responses were compliant. Blanks show no detections above the reporting limits.

Field duplicate correlations for methane were outside project objectives and the data were qualified as estimated.

Data Precision

Table 3
Field Precision
JOHNSTOWN NY SITE
April 2023

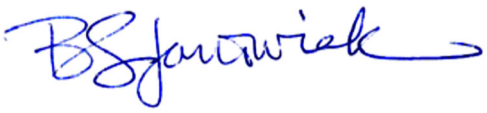
Field Identification	Analyte	Sample Result (µg/L)	Duplicate Result (µg/L)	RPD (%)	Qualified
MW-14/FIELD DUP	Alkalinity	310	290	6.7	A
	Nitrogen, NO2 Plus NO3	0.36	0.36	0.0	A
	Sulfate	10.6	11.9	11.6	A
	Iron, Ferrous	1.0	0.86	15.1	A
	Chloride	3.4	3.3	3.0	A
	Cyanide	0.076	0.079	3.9	A
	Manganese	177	183	3.3	A
	Methane	7.4	ND	7.4	A
	Acenaphthylene	0.37	0.35	13.6	A
	Anthracene	0.14	0.13	14.9	A
	Benzo(a)anthracene	0.63	0.55	14.1	A
	Benzo(a)pyrene	0.72	0.62	12.0	A
	Benzo(b)fluoranthene	0.91	0.79	14.8	A
	Benzo(g,h,i)perylene	0.44	0.39	9.3	A
	Benzo(k)fluoranthene	0.80	0.69	8.1	A
	Chrysene	0.45	0.41	11.8	A
	Fluoranthene	0.77	0.71	8.7	A
	Indeno(1,2,3-cd)pyrene	0.36	0.32	8.7	A
	Phenanthrene	0.22	0.24	6.7	A
	Pyrene	1.2	1.1	0.0	A

A: Acceptable
NC: Not calculated

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.
Principal 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

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

SAMPLE SUMMARY

Project: National Grid-109 North Market
Pace Project No.: 30580318

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30580318001	**MW-4-0423**	Water	04/19/23 10:00	04/20/23 09:40
30580318002	**MW-7-0423**	Water	04/19/23 11:10	04/20/23 09:40
30580318003	**MW-10-0423**	Water	04/19/23 10:15	04/20/23 09:40
30580318004	**MW-12-0423**	Water	04/19/23 12:10	04/20/23 09:40
30580318005	**MW-13-0423**	Water	04/19/23 11:10	04/20/23 09:40
30580318006	**MW-13-MS-0423**	Water	04/19/23 11:10	04/20/23 09:40
30580318007	**MW-13-MSD-0423**	Water	04/19/23 11:10	04/20/23 09:40
30580318008	**MW-14-0423**	Water	04/19/23 12:40	04/20/23 09:40
30580318009	**MW-15-0423**	Water	04/19/23 12:35	04/20/23 09:40
30580318010	**MW-16-0423**	Water	04/19/23 11:45	04/20/23 09:40
30580318011	**Field Duplicate -0423**	Water	04/19/23 00:00	04/20/23 09:40
30580318012	**Trip Blank**	Water	04/19/23 00:01	04/20/23 09:40

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

PROJECT NARRATIVE

Project: National Grid-109 North Market
Pace Project No.: 30580318

Method: **EPA 6010D**
Description: 6010D MET ICP
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: May 03, 2023

General Information:
11 samples were analyzed for EPA 6010D 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3005A 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.

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:

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

PROJECT NARRATIVE

Project: National Grid-109 North Market
Pace Project No.: 30580318

Method: **EPA 8270D by SIM**
Description: 8270D PAH SIM Reduced Volume
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: May 03, 2023

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

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

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

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

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

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

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

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

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

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

QC Batch: 583408

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30580318005

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

- MS (Lab ID: 2833129)
  - Acenaphthene

R1: RPD value was outside control limits.

- MSD (Lab ID: 2833130)
  - Acenaphthene
  - Acenaphthylene
  - Fluorene

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

PROJECT NARRATIVE

Project: National Grid-109 North Market
Pace Project No.: 30580318

Method: **EPA 8270D by SIM**
Description: 8270D PAH SIM Reduced Volume
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: May 03, 2023

Additional Comments:

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

PROJECT NARRATIVE

Project: National Grid-109 North Market
Pace Project No.: 30580318

Method: **EPA 8260C**
Description: 8260C MSV
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: May 03, 2023

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

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

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

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

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

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

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

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

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

QC Batch: 582729

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30580177008

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

- MS (Lab ID: 2830688)
  - Ethylbenzene
  - Toluene
  - m&p-Xylene
  - o-Xylene
- MSD (Lab ID: 2830689)
  - Ethylbenzene
  - Toluene
  - m&p-Xylene
  - o-Xylene

Additional Comments:

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

PROJECT NARRATIVE

Project: National Grid-109 North Market
Pace Project No.: 30580318

Method: **SM 2320B-2011**
Description: 2320B Alkalinity
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: May 03, 2023

General Information:
11 samples were analyzed for SM 2320B-2011 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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: 583431

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30580318005

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

- MS (Lab ID: 2833260)
  - Alkalinity,Total (CaCO3 pH4.5)
- MSD (Lab ID: 2833261)
  - Alkalinity,Total (CaCO3 pH4.5)

Additional Comments:

Analyte Comments:

QC Batch: 583431

1c: Alkalinity TV: 0.00 mg/L

- BLANK (Lab ID: 2833258)
  - Alkalinity,Total (CaCO3 pH4.5)

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

PROJECT NARRATIVE

Project: National Grid-109 North Market
Pace Project No.: 30580318

Method: **SM 3500-FeB-2011**
Description: Iron, Ferrous
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: May 03, 2023

General Information:
11 samples were analyzed for SM 3500-FeB-2011 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

H1: Analysis conducted outside the EPA method holding time.
- MW-10-0423 (Lab ID: 30580318003)
- MW-12-0423 (Lab ID: 30580318004)
- MW-13-0423 (Lab ID: 30580318005)
- MW-13-MS-0423 (Lab ID: 30580318006)
- MW-13-MSD-0423 (Lab ID: 30580318007)
- MW-14-0423 (Lab ID: 30580318008)
- MW-15-0423 (Lab ID: 30580318009)
- MW-16-0423 (Lab ID: 30580318010)
- MW-4-0423 (Lab ID: 30580318001)
- MW-7-0423 (Lab ID: 30580318002)

H3: Sample was received or analysis requested beyond the recognized method holding time.
- Field Duplicate -0423 (Lab ID: 30580318011)

H6: Analysis initiated outside of the 15 minute EPA required holding time.
- Field Duplicate -0423 (Lab ID: 30580318011)
- MW-10-0423 (Lab ID: 30580318003)
- MW-12-0423 (Lab ID: 30580318004)
- MW-13-0423 (Lab ID: 30580318005)
- MW-13-MS-0423 (Lab ID: 30580318006)
- MW-13-MSD-0423 (Lab ID: 30580318007)
- MW-14-0423 (Lab ID: 30580318008)
- MW-15-0423 (Lab ID: 30580318009)
- MW-16-0423 (Lab ID: 30580318010)
- MW-4-0423 (Lab ID: 30580318001)
- MW-7-0423 (Lab ID: 30580318002)

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

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

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

Additional Comments:

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: National Grid-109 North Market
Pace Project No.: 30580318

Method: **SM 4500-S2-F-2011**
Description: 4500-S2-F Sulfide, Iodometric
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: May 03, 2023

General Information:
11 samples were analyzed for SM 4500-S2-F-2011 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

Additional Comments:

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

PROJECT NARRATIVE

Project: National Grid-109 North Market
Pace Project No.: 30580318

Method: **EPA 351.2**
Description: 351.2 Total Kjeldahl Nitrogen
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: May 03, 2023

General Information:
11 samples were analyzed for EPA 351.2 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

Sample Preparation:
The samples were prepared in accordance with EPA 351.2 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: 583016

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30579889002,30580318005

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

- MSD (Lab ID: 2831475)
  - Nitrogen, Kjeldahl, Total

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

- MS (Lab ID: 2831474)
  - Nitrogen, Kjeldahl, Total

QC Batch: 583017

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30580318006,30580428001

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

- MS (Lab ID: 2831480)
  - Nitrogen, Kjeldahl, Total
- MS (Lab ID: 2831492)
  - Nitrogen, Kjeldahl, Total
- MSD (Lab ID: 2831493)
  - Nitrogen, Kjeldahl, Total

Additional Comments:

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

PROJECT NARRATIVE

Project: National Grid-109 North Market
Pace Project No.: 30580318

Method: **SM 4500-Cl-E-2011**
Description: 4500 Chloride
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: May 03, 2023

General Information:
11 samples were analyzed for SM 4500-Cl-E-2011 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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: 583787

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30580318005

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

- MS (Lab ID: 2834951)
  - Chloride
- MSD (Lab ID: 2834952)
  - Chloride

QC Batch: 584641

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30580318003

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

- MS (Lab ID: 2839253)
  - Chloride
- MSD (Lab ID: 2839254)
  - Chloride

Additional Comments:

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

PROJECT NARRATIVE

Project: National Grid-109 North Market
Pace Project No.: 30580318

Method: **SM 4500NO3-F-2016**
Description: SM4500NO3-F, NO3-NO2
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: May 03, 2023

General Information:
11 samples were analyzed for SM 4500NO3-F-2016 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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: 582753

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30579339002

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

- MS (Lab ID: 2830239)
  - Nitrogen, NO2 plus NO3
- MSD (Lab ID: 2830240)
  - Nitrogen, NO2 plus NO3

Additional Comments:

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

PROJECT NARRATIVE

Project: National Grid-109 North Market
Pace Project No.: 30580318

Method: **EPA 9012B**
Description: 9012B Cyanide, Total
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: May 03, 2023

General Information:
11 samples were analyzed for EPA 9012B by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

Sample Preparation:
The samples were prepared in accordance with EPA 9012B with any exceptions noted below.

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

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

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

QC Batch: 583613

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30580318005,30580318011

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

- MS (Lab ID: 2834371)
  - Cyanide
- MS (Lab ID: 2834373)
  - Cyanide
- MSD (Lab ID: 2834372)
  - Cyanide
- MSD (Lab ID: 2834374)
  - Cyanide

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: National Grid-109 North Market
Pace Project No.: 30580318

Method: **ASTM D516-16**
Description: ASTM D516-16 Sulfate Water
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: May 03, 2023

General Information:
11 samples were analyzed for ASTM D516-16 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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: 584372

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30580318005,30581843001

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

- MS (Lab ID: 2837765)
  - Sulfate

Additional Comments:

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

MICROBAC®

Sample Summary

Laboratory Report Number: M3D1276

Client Project ID: Misc. Analysis

Microbac Laboratories Inc., - Marietta, OH

Client Sample ID:	Lab Sample ID:	Sampled:
30580318001	M3D1276-01	04/19/23 10:00
30580318002	M3D1276-02	04/19/23 11:10
30580318003	M3D1276-03	04/19/23 10:15
30580318004	M3D1276-04	04/19/23 12:10
30580318005	M3D1276-05	04/19/23 11:10
30580318008	M3D1276-06	04/19/23 12:40
30580318009	M3D1276-07	04/19/23 12:35
30580318010	M3D1276-08	04/19/23 11:45
30580318011	M3D1276-09	04/19/23 00:01

MICROBAC®

GC Volatiles - Class Narrative and Notes

All test results meet the requirements of the QAPP and other applicable contract terms and conditions . Any exceptions are listed below in the sample and qc notes sections. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request.

Sample Notes

EPA RSK-175

A8 **Sample was received in an improper container.**

M3D1276-01	30580318001	M3D1276-02	30580318002
M3D1276-03	30580318003	M3D1276-04	30580318004
M3D1276-05	30580318005	M3D1276-06	30580318008
M3D1276-07	30580318009	M3D1276-08	30580318010
M3D1276-09	30580318011		

D3 **Dilution was performed due to high target analyte concentration.**

Methane

M3D1276-07RE1	30580318009

Q2 **LCS recovery is above acceptance limits. However there is no impact on the reported value.**

Ethene

M3D1276-01	30580318001	M3D1276-02	30580318002
M3D1276-03	30580318003	M3D1276-04	30580318004
M3D1276-05	30580318005	M3D1276-06	30580318008
M3D1276-07	30580318009	M3D1276-08	30580318010
M3D1276-09	30580318011		

QC Sample Notes

M1 **Matrix spike recovery is outside of acceptance limits, biased high.**

EPA RSK-175

Carbon dioxide

B3E0025-MS1	Matrix Spike	B3E0025-MSD1	Matrix Spike Dup

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

December 22, 2023

Mr. Michael Squire
Remedial Bureau C, 11th Floor
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7014

Re: Johnstown (N. Market St.)
Former Manufactured Gas Plant Site (MGP)
Site # 518020
Semi-Annual Groundwater Monitoring Report (December 2023)

Dear Mr. Squire:

Enclosed is the Semi-Annual Groundwater Monitoring Report July through December 2023 for the Johnstown (N. Market St.) MGP Site located in Johnstown, New York. The report includes the groundwater monitoring results from October 11, 2023.

National Grid acknowledges the NYSDEC Fact sheet dated June 2016 approving the site's environmental remediation construction completion. Long-term OM&M activities are being conducted in accordance with the approved Site Management Plan (SMP) and the site's Environmental Easement.

Please contact me at (315) 428-5652 or Steven.Stucker@NationalGrid.com if you have any questions regarding the report.

Sincerely,

for

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

Cc: Joseph Giordano -National Grid
Nathan Freeman- NYSDOH

National Grid

Semi-Annual Groundwater Monitoring Report

National Grid
109 North Market Street
Johnstown, NY 12095

December 2023

Version 1

Semi-Annual Groundwater Monitoring Report

National Grid Johnstown Site
109 North Market Street
Johnstown, NY 12095

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:
0603400.120950.221

Date:
December 22, 2023

Devin T. Shay, PG
Program Manager / Principal Hydrogeologist

Table of Contents

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Tables

Appendices

Acronyms

bgs	Below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, and Total Xylenes
COCs	Constituents of Concern
cu. ft.	Cubic feet
DO	Dissolved Oxygen
DTB	Depth to Bottom
DTP	Depth to Product
DTW	Depth to Water
DUSR	Data Usability Summary Report
FS	Feasibility Study
GES	Groundwater & Environmental Services, Inc.
IRMs	Interim Remedial Measures
mg/L	Milligrams per Liter
MGP	Manufactured Gas Plant
MNA	Monitored Natural Attenuation
NYSDEC	New York State Department of Environmental Conservation
ORP	Oxidation-Reduction Potential
PAHs	Polycyclic Aromatic Hydrocarbons
PSA	Preliminary Site Assessment
QA/QC	Quality Assurance / Quality Control
RI	Remedial Investigation
ROD	Record of Decision
SMP	Site Management Plan
SU	Standard Units
SVOCs	Semi-Volatile Organic Compounds
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds
µg/L	Micrograms per Liter
WQ	Water Quality

1 Introduction

1.1 Overview

This Semi-Annual Groundwater Monitoring Report (the Report) summarizes the results of the October 2023 groundwater sampling event at the Johnstown, New York (N. Market Street) Former Manufactured Gas Plant (MGP) Site (the Site). This Report was developed as part of the long-term groundwater monitoring program on behalf of National Grid.

National Grid has been addressing the Site environmental conditions under an Order on Consent (Index Number D0-0001-9210), dated April 1999, that was entered into by Niagara Mohawk and the New York State Department of Environmental Conservation (NYSDEC). That Order on Consent was for the investigation and remediation of 21 former MGP sites, including the Johnstown (N. Market Street) Site. It was superseded by a new Order on Consent (Index Number A4-0473-0000), dated November 7, 2003. A NYSDEC-approved Supplemental Remedial Investigation (RI) Work Plan was finalized during November 2007, and a Final Supplemental RI Report was submitted to the NYSDEC, dated December 2008. The RI results report and subsequent Feasibility Study were approved in February 2010.

A Record of Decision (ROD) was issued by the NYSDEC, dated March 2010, in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, 6 NYCRR Part 375. Based upon the results of the remedial investigation/feasibility study (RI/FS) for the Site, the interim remedial measures (IRMs) previously completed, and the ROD, the draft Final Engineering Report and Site Management Plan (SMP) were developed and submitted to the NYSDEC in June 2010. The Final Engineering Report, the Final SMP, and the Final Environmental Easement were approved by the NYSDEC in their June 2016 Fact Sheet.

The Final SMP includes:

1. Semi-annual (April & October) site inspection and groundwater level measurements at monitoring wells MW-4, MW-7, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, RMW-1, and the creek surface gauging station (bridge);
2. Semi-annual groundwater sampling/analysis [Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Heavy Metals, and Natural Attenuation Parameters] for monitoring wells MW-4, MW-7, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, and MW-16 (RMW-1 will not be sampled); and
3. Semi-annual reporting to NYSDEC.

1.2 Purpose and Objective

The purpose of this Report is to summarize the groundwater sampling activities and results of the latest event, and to compare the results to previous events. As described in the December 2008 Supplemental RI Report and the subsequent ROD, one of the primary goals is to evaluate whether

or not the groundwater constituents of concern (COCs) concentrations have decreased, in addition to continued assessment of the effectiveness of monitored natural attenuation.

2 Background

2.1 Site Description

The Site is located in the City of Johnstown, County of Fulton, New York (**Figure 1** presents the site location map) and is identified as Block 14 and Lot 7 on the Johnstown City Tax Map. The Site is an approximate 0.7-acre area bounded by the Cayadutta Creek to the north, the Colonial Cemetery to the south, Market Street to the east, and a wooded parcel of property to the west (**Figure 2** presents the site plan). The Site is located in a mixed commercial, industrial, and residential area.

Currently, National Grid operates a natural gas regulator station at the Site with equipment contained in fenced enclosures along the Site's southern boundary. The rest of the Site is grass-covered, including the stream bank adjacent to Cayadutta Creek along the northern boundary of the Site. An embankment exists along the north end of the Site that slopes down to the Cayadutta Creek. A chain-link fence exists along the north and west sides of the Site, and a retaining wall runs along the south side of the Site. Access to the Site is from North Market Street to the east.

The Johnstown Hospital is located south of the Site within one mile, and numerous residences exist to the west and east of the Site. The Johnstown Senior High School and Warren Street Elementary School are located within one mile of the Site to the west.

2.2 Site History

The Johnstown MGP Site was incorporated in March 1857 as the Johnstown Gas Light Company. The company operated a small coal gas plant with a 20,000 cubic foot (cu. ft.) holder (Holder #1), that was constructed in 1859 (see Figure 2 for all Holder locations at the former MGP Site). In 1861, the plant was improved with the addition of a coal shed and a covering for the tank holder. In 1886, the Johnstown and Gloversville Gas Light Corporation was formed, and the company purchased the rights to the Lowe water gas process. The United Gas Improvement Company planned the construction of a water gas plant for the Johnstown and Gloversville franchises.

In 1887, the Site consisted of a tool shop, an office, a coal gasometer, a lime house, a purifier room, a retort house, and a coal shed. Between 1887 and 1918, Holder #2 was located in the western-central part of the Site (exact size unknown). In 1892, a steam generator was constructed adjacent to the coal shed for the Lowe water gas process, and Holder #1 was decommissioned in 1896. In 1898, a 72,000 cu. ft. gas holder (Holder #3) was constructed on the Site. Between 1912 and 1918, the small gas holder (Holder #2) in the western-central area of the Site was removed. In 1929, a gas pipeline from an MGP in Troy, New York, reached Johnstown, and local gas production was only performed on a seasonal (winter) basis until local production of gas ceased in 1931. Niagara Hudson Power Company was the owner of the Site in 1930. By 1948, Holder #3 was decommissioned. In 1950, Niagara Hudson Power was consolidated under the

name Niagara Mohawk Power Company. By 1980, all Site buildings were removed. Currently, National Grid operates a natural gas regulator station at the Site.

2.2.1 Site Assessment and Investigations

An investigation of the Site began in 1997 with a Preliminary Site Assessment (PSA), which found that the Site was impacted with MGP wastes. A Supplemental PSA was conducted at the Site in 1998, followed by a RI in January 2000 and subsequent IRMs. The IRMs are discussed separately within this section.

A 2009 Supplemental RI was initiated to collect data to address potential residual MGP-related contaminants remaining in groundwater at the Site and to assess hydrogeologic conditions and groundwater quality on the Site. The results of the Supplemental RI were used to formulate potential remedial alternatives for groundwater and residual soil contamination. The Supplemental RI results were evaluated and presented in the 2010 Feasibility Study Report.

2.2.2 Interim Remedial Measures Completed

Several IRMs were performed to address the residual MGP impacts. In 2002 and 2003, the former holders and associated impacted soil were removed. During this IRM, former Holder #2 and the northern half of former Holder #3 were demolished and removed from the Site. Approximately 13,870 cubic yards of soil were excavated and disposed of off-site at a NYSDEC-approved facility. Permanent steel sheeting was left in place along the northeastern perimeter of the Site to avoid disturbance of the roadway and to provide containment of residual material left at depth.

Between 2005 and 2006, National Grid provided support to the City of Johnstown for subsurface work associated with the replacement of the North Market Street Bridge across Cayadutta Creek. Approximately 1,413 cubic yards of impacted soil were excavated from within the cofferdam area and disposed of off-site at a NYSDEC-approved facility.

In August 2009, the rip-rap area along the bank of Cayadutta Creek that had been restored during the previous IRMs was enhanced to allow for establishment of stream-side vegetation. Post-IRM inspections of the restored Cayadutta Creek bank were conducted in September 2009 and May 2010.

2.3 Environmental Setting

The Johnstown (N. Market Street) Site slopes northward toward Cayadutta Creek with elevations ranging from 652 to 672 feet (ft.) above sea level. Currently, the Site topography gradually slopes from south to north, becoming increasingly steeper adjacent to the Creek, and is generally covered with either vegetation or stone. Surface drainage is primarily to the north into the creek. Access to the Site is from North Market Street to the east, and the Site is currently used to support the natural gas regulator station operations.

2.3.1 Site Geology

The main units of unconsolidated deposits identified at the Site can be characterized in descending order as fill and native glacial deposits to bedrock. The glacial deposits are of lacustrine origin with glacial tills to the top of shale bedrock (Utica Shale). Bedrock was reached beneath the till in two soil borings explored during the 1998 Supplemental PSA. These stratigraphic units are more specifically described below, based on information obtained from the previous investigations and from the soil borings and monitoring well borings conducted during the 2007/ 2008 SRI.

Site geology includes a layer of disturbed soils (primarily fill) overlying glacial deposits. Based upon on-site soils and monitoring well borings, disturbed soils (including fills) varied in thickness up to 13 ft. and are typically composed of sand, gravel, silt, clay, wood, coal, and anthropogenic materials including ash, cinders, clinkers, brick fragments, wire, and wood chips. Wood chips were identified in three borings (SB-09, SB-12, and MW-8) and are often associated with purifier waste.

A thin layer of peat underlies the disturbed soils in the northern portion of the Site, ranging in thickness from 0.5 ft. to 3 ft., and appears to thicken and dip to the north. Except where it is locally covered by sedimentary deposits such as silts, sands, and clays, the peat, where present, appears to have been the historical ground cover prior to development of the Site.

Underlying the peat, where present, the soil consists of lacustrine deposits composed of silts, sands, and clays. The surface of the lacustrine deposits appears to dip and thin out toward the north. A sand and gravel unit (an outwash deposit of stratified drift) underlies the lacustrine deposits across the Site area. This unit contains varying amounts of silt and clay. These deposits overlie a dense, low-permeability glacial till to bedrock (Shale).

2.3.2 Site Hydrogeology

Groundwater depths on-site are typically in the 10- to 20-foot below ground surface (bgs) range, generally in the glacial deposits below the bottom of the fill material. Groundwater flow is consistently northward through the Site area toward Cayadutta Creek, with the steepest gradient from the center of the Site proximal to former gas holders #2 and #3 to the southern Creek bank (about 0.09 ft./ft.). In comparison, the average hydraulic gradient decreases to a value of approximately 0.05 ft./ft. on the east and west sides of the Site away from the former gas holders. The local groundwater flow is consistent with regional groundwater flow direction. The groundwater flow direction and hydraulic gradients calculated during this monitoring period are also generally consistent with historic data obtained prior to the issuance of the ROD.

3 Monitoring Activities

The long-term semi-annual groundwater monitoring program currently consists of the following elements:

- Semi-Annual Site Inspection including the creek bank protection, vegetative cover, monitoring wells, and security fence.
- Semi-Annual Groundwater Well Gauging of the following wells: RW-1, MW-4, MW-7, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15 and MW-16 (Figure 2 presents the well locations). The creek surface water level is also gauged at one location: SG-1.
- Semi-Annual Groundwater Sampling and Analysis of the following: MW-4, MW-7, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15 and MW-16. Note that recovery well RW-1 is not sampled as part of the program but is inspected for the presence of non-aqueous phase liquids (NAPL). Note: Monitoring well MW-11 was not gauged or sampled during the October 2023 sampling round due to concrete/metal and wood debris at this off-site well location. However, the City of Johnstown removed a debris pile in December of 2023, and the well was located. The condition of the well will be assessed prior to the Spring 2024 sampling event.

3.1 Groundwater Gauging and Sampling Procedures

3.1.1 Gauging

Long-term groundwater monitoring includes water level gauging at eight groundwater monitoring wells and one groundwater recovery well using an electronic oil/water interface probe. Depth to bottom of well (DTB), depth to product (DTP), and depth to water (DTW) are to be recorded at each well. Refer to **Table 2** for a summary of the water level measurements from October 2023 as well as previous events. **Appendix A** also presents the field documentation from the October 2023 water gauging event.

No product was present in recovery well RW-1 or the other eight groundwater monitoring wells that were gauged.

A creek surface water level measurement was collected from the Cayadutta Creek Bridge using a water level probe (from the surveyed gauging point at the bridge).

3.1.2 Sampling

Groundwater sampling was performed following low-flow sampling techniques [equivalent to United States Environmental Protection Agency (USEPA) low-flow procedures] using a pressure-driven peristaltic pump. During purging, measurements were collected for the following field parameters: pH, specific conductivity, turbidity, dissolved oxygen (DO), temperature, and oxidation-reduction potential (ORP). A Horiba U-22 was used to collect the field parameter data

in a flow-through cell. The monitored field parameters are observed and recorded during low-flow sampling to determine when they have stabilized, and thus when the well has been adequately purged. Field parameter measurements were recorded at approximately 5-minute intervals. The monitoring wells were purged until stabilization of the field parameters (±0.1 Standard Unit (SU) for pH, ±3% for specific conductivity, ±10 millivolts (mV) for ORP, and ±10% for DO) and turbidity was less than 50 Nephalometric Turbidity Units (NTU). Refer to **Attachment A** for the field data.

After stabilization of the field parameters, eight groundwater samples were collected directly from the dedicated tubing into laboratory-supplied sample containers (pre-preserved as required per the analytical method). Quality Assurance/Quality Control (QA/QC) samples included the collection of one field duplicate sample, one matrix spike (MS) sample, one duplicate matrix spike (DMS) sample, and one trip blank sample (VOCs only). Samples were transported to the laboratory, accompanied by the appropriate chain-of-custody documentation. Analytical results were validated.

3.1.3 Natural Attenuation Parameters

The ORP of groundwater may be used as a general indicator of the dominant attenuation processes and the relative tendency of the biological processes to accept or transfer electrons. ORP is dependent on and influences rates of biodegradation. Lower ORP readings indicate reduced conditions and are indicative of anaerobic biologic degradation processes.

The pH of the groundwater affects the presence and activity of microorganisms in the groundwater. The microorganisms may produce either organic acids or carbon dioxide which, when dissolved in water, forms weak carbonic acid. Microorganisms capable of degrading petroleum hydrocarbons are most active with pH values ranging from 6 to 8 SU.

Groundwater temperature affects the solubility of dissolved gases such as oxygen and carbon dioxide as well as the metabolic activity of microorganisms. Oxygen is less soluble in warm water, and groundwater temperatures below approximately 5 degrees Celsius tend to inhibit biodegradation.

DO is the most thermodynamically favored electron acceptor used by microorganisms during the degradation of both natural and anthropogenic organic carbon. An inverse relationship of high hydrocarbon concentrations and low DO concentrations can be used as a key indicator of biodegradation.

Nitrate, if available, may be used as an electron acceptor for anaerobic biodegradation after the depletion of DO [typically considered less than 0.5 milligrams per liter (mg/L)] and is used to biodegrade petroleum hydrocarbons. Lower nitrate concentrations in groundwater within a plume, with respect to higher concentrations in areas upgradient and outside a plume, may be expected.

Ferrous iron is a metabolic byproduct of hydrocarbon degradation. Reducing conditions in nitrogen- and oxygen-depleted groundwater creates an anaerobic environment that causes the reduction of ferric iron (Fe^{3+}) to ferrous iron (Fe^{2+}). Relatively low ferrous iron concentrations may be present in areas where natural attenuation is occurring if free ferrous iron is re-precipitating as sulfides or carbonates.

Sulfate may be used as an electron acceptor after the depletion or use limitation of DO, nitrate, and ferric iron. Lower sulfate concentrations in groundwater within a plume, with respect to higher concentrations in areas upgradient and outside a plume, may be expected.

The production of methane, termed methanogenesis, occurs only in strongly reducing conditions and generally after oxygen, nitrate, and sulfate have been depleted. The presence of methane in groundwater suggests Benzene, Toluene, Ethylbenzene, Xylene (BTEX) degradation via methanogenesis. Methane is not present in fuels, and therefore its presence at high concentrations relative to areas upgradient and outside a plume is indicative of the biodegradation of petroleum hydrocarbons.

The buffering capacity of groundwater is a function of alkalinity. Typically, alkalinity is primarily due to carbonate alkalinity. The organic acids or carbon dioxide (which produces a weak carbonic acid when dissolved in water) produced by biodegradation solubilize carbonate from the soil. Alkalinity concentrations that are elevated with respect to areas upgradient and outside a plume may be an indication of microbial activity and thus natural attenuation.

Typically, the relationships between BTEX and electron acceptors/metabolic byproduct concentrations (geochemical indicators) indicate potential for biodegradation. The concentrations are dependent on the location (and groundwater conditions) within the plume or outside of the plume limits.

3.2 Groundwater Analytical Results

The groundwater samples were analyzed for BTEX, Polycyclic Aromatic Hydrocarbons (PAHs), lead, total cyanide, and monitored natural attenuation/water quality (MNA/WQ) parameters including alkalinity, chloride, ethane, ethene, ferrous iron, manganese, methane, nitrate, nitrogen, sulfate and sulfide. BTEX, PAHs, and cyanide are constituents commonly associated with former MGP sites. BTEX, PAHs, lead, and cyanide were the primary contaminants detected during previous investigation activities conducted at the Site. The MNA/WQ parameters, as well as field-measured ORP, pH, temperature, and DO, are relevant to establishing whether conditions are favorable for natural attenuation to occur at the Site.

- Refer to Table 3 for the analytical results summary.
- Refer to Appendix A for field data.
- Refer to Appendix B for the data usability summary report (DUSR).

Groundwater analytical results were compared with levels specified in the NYSDEC Division of Water Final Amendment to Water Quality Standards Regulations, effective February 16, 2008 [hereafter referred to as NYSDEC WQ Values]. For groundwater, Class GA values were applied. Class GA waters are defined as fresh groundwater, found in the saturated zone of unconsolidated deposits and consolidated rock or bedrock, which are used as a source of potable water supply.

3.2.1 Site Related Parameters

BTEX - Groundwater samples collected on October 11, 2023, from monitoring wells MW-13, MW-15, and MW-16 contained concentrations of some or all individual BTEX constituents above their respective NYSDEC WQ Values [1 microgram per liter (µg/L) for benzene and 5 µg/L for other BTEX constituents]. The highest concentrations of BTEX were observed in the groundwater samples collected from monitoring well MW-13. Monitoring well MW-13 is located between former gas holder #2 and #3.

PAHs – PAHs above NYSDEC WQ Values were detected in samples collected on October 11, 2023, from monitoring wells MW-12, MW-13, MW-14, MW-15, and MW-16. Naphthalene (MW-13) has typically been detected at the highest concentration of any PAH.

Cyanide - Concentrations of cyanide were below the NYSDEC WQ Value (0.2 mg/L) in all groundwater samples October 11, 2023, with the exception of MW-15 (0.25 mg/L).

3.2.2 Monitored Natural Attenuation Parameters

Site-specific levels of the MNA/WQ parameters (geochemical indicators) were compared to known screening values to identify whether the site-specific values are within the ranges known to be suitable for biodegradation. The October 2023 MNA/WQ analytical results for the individual monitoring wells are summarized in **Table 3**. **Figure 4** presents the groundwater data for the key MNA data parameters at their respective locations to assist with the MNA evaluation. Indications of biodegradation of petroleum-related MGP constituents within the plume include low levels of DO, nitrate and sulfate, with generally higher levels of manganese, ferrous iron and methane.

Indicator concentrations detected at monitoring wells identified within source and downgradient areas of the Site were compared to levels detected at upgradient and side gradient monitoring wells exhibiting little or no MGP-related contamination. Generally, indicator concentration levels at a distance from the center of the plume are expected to be significantly lower than levels within the plume. A summary of the MNA/WQ results and associated field indicator parameters are provided below:

- DO and ORP values demonstrate depleted levels of DO and a transformation to more anaerobic or reducing conditions at the former source and downgradient areas relative to side gradient and upgradient areas of the Site. These values suggest that biodegradation of MGP petroleum-related compounds at the source and at downgradient areas are occurring, consuming the available oxygen which produces decreased DO levels.
- The range of ORP levels observed at the source and downgradient area monitoring wells generally indicates reduced aquifer conditions which could be suitable for denitrification, ferric iron reduction, sulfate reduction, and methanogenesis.
- Nitrate concentrations are generally depleted at the former source and downgradient areas of the Site relative to upgradient (MW-4) and side gradient (MW-12) areas, indicating denitrification may be a noteworthy biodegradation process occurring at this time at the source and downgradient areas.

- Ferrous iron concentrations at the former source and downgradient area monitoring wells (MW-7, MW-10, MW-14, MW-15) exhibit higher levels relative to side gradient and upgradient monitoring wells (MW-4, MW-12). The presence of these metabolic by-products downgradient of the source area suggest biodegradation of MGP petroleum-related compounds may be occurring.
- Sulfate concentrations at the former source and downgradient areas are not depleted relative to upgradient and side gradient areas. This observation indicates sulfate reduction is not likely to be a significant biodegradation process at this time at the source and downgradient areas.
- Based on the presence of methane, low DO concentrations, and the reduced ORP levels, methanogenesis is likely an important factor for biodegradation capacity in the source and downgradient areas of the Site.

3.2.3 Natural Attenuation Trending

Previous groundwater sampling data collected since April 2013 (the dataset) were utilized to develop and evaluate the contaminant plume and concentration trends of specific constituents at the Site. Plume size and concentration data are indicative of biodegradation capacity (natural attenuation) at the Site and whether the capacity has reached a limit of effectiveness. In order to determine and evaluate natural attenuation effectiveness, statistical testing was utilized for groundwater data collected from monitoring wells at the Site. The Mann-Kendall test was performed on the dataset to identify potential trends in groundwater concentrations of site contaminants. The Mann-Kendall test is a nonparametric evaluation used to identify a trend in a series, even if there is a seasonal component in the series. The three possible hypotheses are that there is a negative, null, or positive trend. The resultant statistical trend analysis for individual monitoring wells suggests (with 80% and 90% confidence) that total BTEX compounds and the naphthalene plume lifecycle demonstrate either no trend or a decreasing trend throughout the monitoring period. It is worth noting that a failure to reject the null hypothesis (i.e., “no trend”) does not prove that there is no trend; it merely means that the available data is not sufficient to conclude there is a trend. In cases where no trend was determined, a comparison of the dataset to the historical highs and lows was performed to determine if the plume is stable; in every case, this evaluation concluded the plume is stable. The table below depicts general concentration trend analysis results (decreasing, no trend or increasing) at 80% confidence levels for each well and associated constituents during the monitoring period. No trend is indicative of plume stability at well locations with contaminant detections throughout the monitoring period.

Table 1 – Contaminant Trend Analysis

Well ID	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene
MW-4	Stable	Stable	Stable	Stable	Decreasing
MW-7	Stable	Stable	Stable	Stable	Decreasing
MW-10	No Trend	Stable	Stable	Stable	Decreasing
MW-11	Not sampled	Not sampled	Not sampled	Not sampled	Not sampled
MW-12	Stable	Stable	Stable	Stable	Decreasing
MW-13	Decreasing	Decreasing	Decreasing	Decreasing	Decreasing
MW-14	Stable	No Trend	No Trend	No Trend	Decreasing
MW-15	Decreasing	Stable	Stable	No Trend	Probably Increasing
MW-16	Probably Decreasing	Probably Decreasing	Probably Decreasing	No Trend	Increasing

Isoconcentration contour maps were developed for total BTEX (**Figure 5**) and naphthalene (**Figure 6**) contamination. The figures present locations of the groundwater monitoring wells and plume contours for total BTEX (as compared to the benzene WQ value of 1 µg/L) and naphthalene exceeding the NYSDEC WQ values. Evaluation of the isoconcentration figures suggests that the contaminant plumes were relatively stable to decreasing (smaller footprint with time) within the Site boundary. BTEX constituent plume trends (concentrations above the benzene WQ value of 1 µg/L) have consistently included monitoring wells MW-13, MW-15, and MW-16. The naphthalene plume (concentrations above the WQ) currently includes monitoring wells MW-13, MW-15, and MW-16.

4 Conclusions and Recommendations

4.1 Conclusions

4.1.1 Groundwater Levels

The groundwater elevation data indicates groundwater within the Site flows from the south to the north, toward Cayadutta Creek. The groundwater flow direction has been consistent during previous gauging events and with data obtained prior to the ROD. **Figure 3** is a groundwater monitoring map verifying groundwater flow direction.

4.1.2 Site-Related Constituents

The highest concentrations of BTEX constituents and PAH compounds are at wells MW-13, MW-15, and MW-16. Site institutional controls continue to be effective and will continue to be monitored semi-annually.

There are minimal concentrations of lead in groundwater samples; however, Total Cyanide has been detected consistently in most wells.

4.1.3 Natural Attenuation

Plume stability at the Site is an indication that biodegradation capacity likely has not reached its limit of effectiveness. The use of statistical testing has identified the plume trends based on the constituent concentrations were typically either stable or decreasing.

4.2 Recommendations

Based on the results of the October 2023 groundwater sampling and monitoring event and results from previous events, it is recommended to continue the long-term semi-annual site inspection and groundwater monitoring program. The next event will occur in April 2024.

5 References

Borden, Robert C., et. al., "Geochemical Indicators of Intrinsic Bioremediation". Groundwater, Volume 33, Number 2, March/April 1995.

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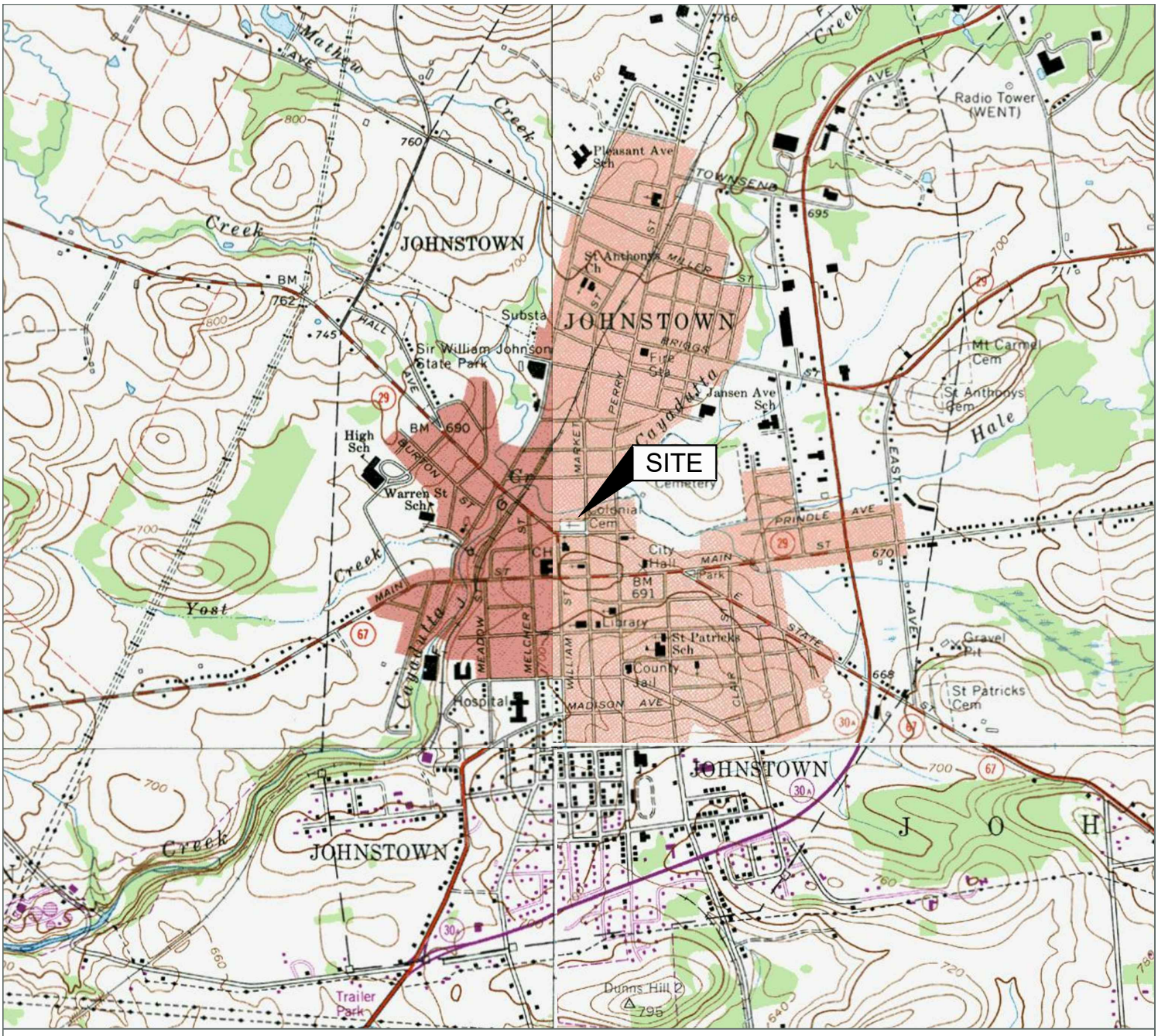
Niagara Mohawk Power Corporation. "Record of Decision for the Johnstown (N. Market Street) Former MGP Site, Johnstown, New York". Niagara Mohawk Power Corporation, March 2010.

Figures



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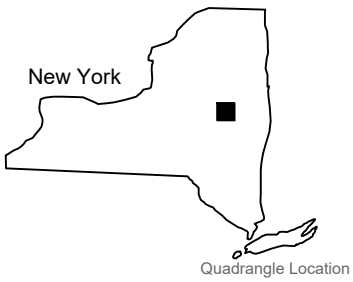
USGS 7.5 Minute Series
Topographic Quadrangle, 1970
Gloversville, New York
Contour Interval = 20'



Site Location Map

National Grid
Former MGP Site
105 N Market Street
Johnstown, New York

Drawn
W.G.S.
Designed

Approved

Date
11/15/19
Figure
1

N

Scale In Feet
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Groundwater & Environmental Services, Inc.

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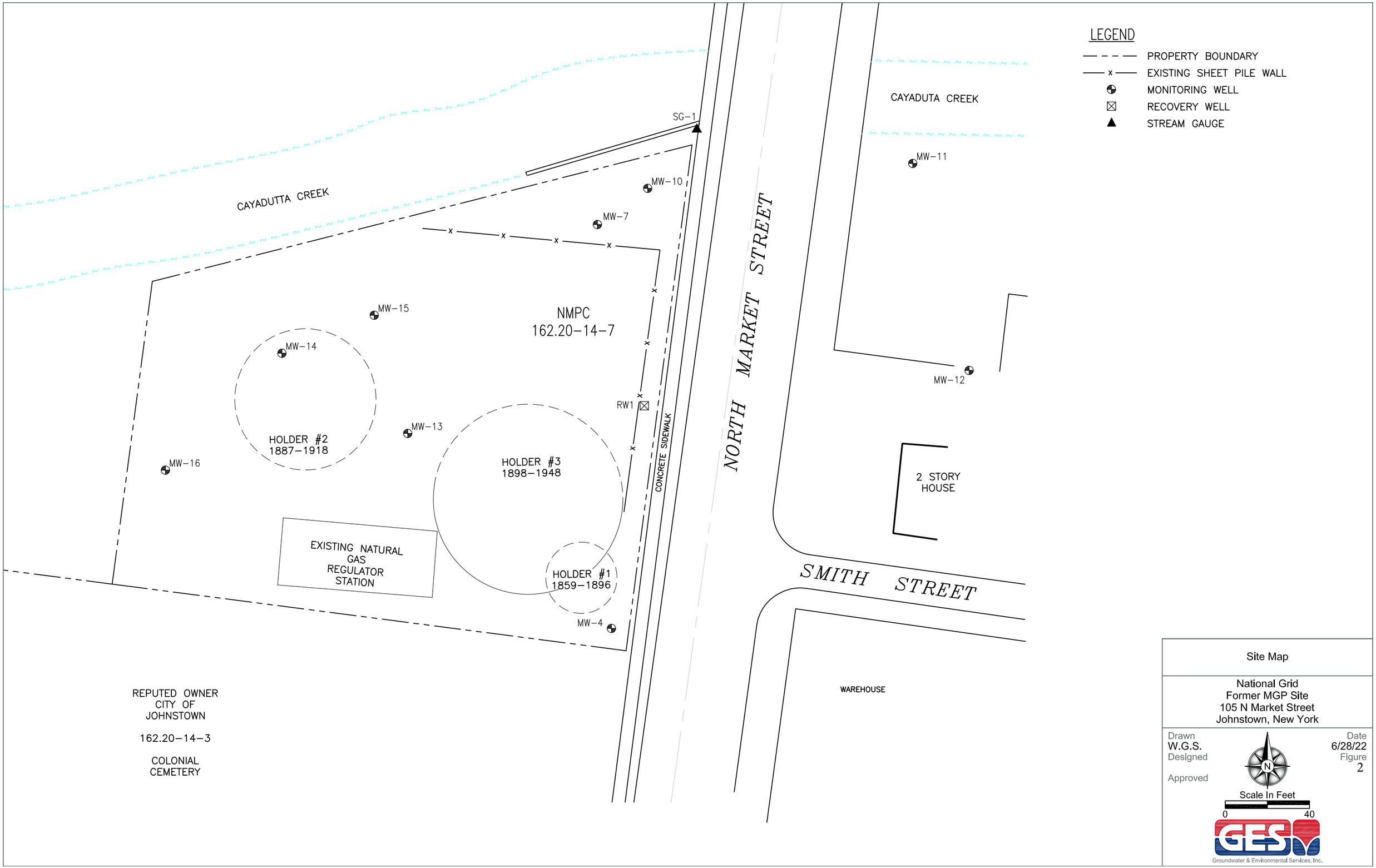

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Site Map

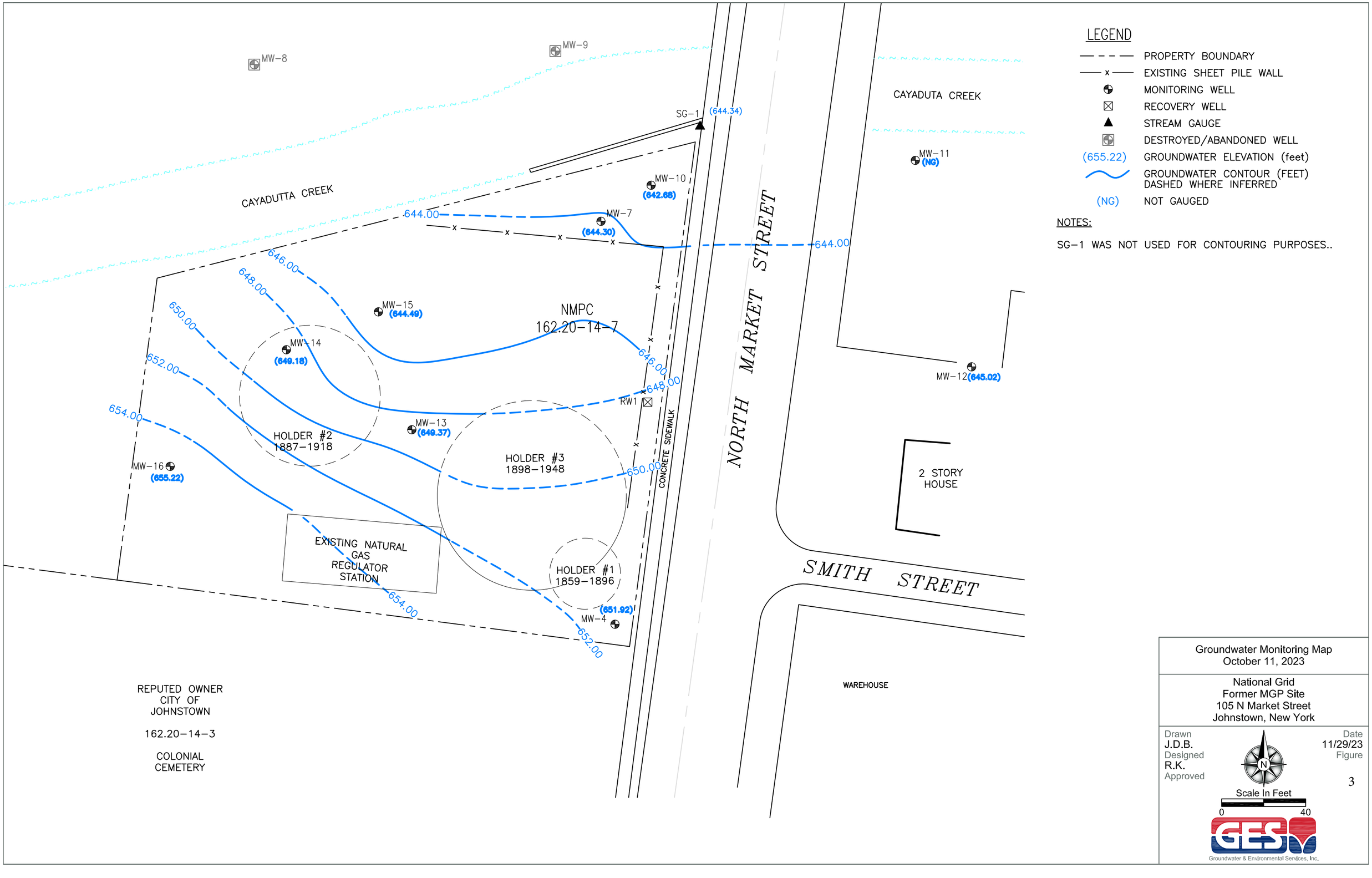
National Grid
Former MGP Site
105 N Market Street
Johnstown, New York

Drawn W.G.S.
Designed
Approved

Date 6/28/22
Figure 2

Scale In Feet
0 40

Groundwater & Environmental Services, Inc.



LEGEND

- PROPERTY BOUNDARY
- EXISTING SHEET PILE WALL
- MONITORING WELL
- RECOVERY WELL
- STREAM GAUGE
- DESTROYED/ABANDONED WELL
- (655.22) GROUNDWATER ELEVATION (feet)
- GROUNDWATER CONTOUR (FEET) DASHED WHERE INFERRED
- (NG) NOT GAUGED

NOTES:

SG-1 WAS NOT USED FOR CONTOURING PURPOSES..

Groundwater Monitoring Map
October 11, 2023

National Grid
Former MGP Site
105 N Market Street
Johnstown, New York

Drawn J.D.B.
Designed R.K.
Approved

Date 11/29/23
Figure 3

Scale In Feet
0 40

Groundwater & Environmental Services, Inc.

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MW15 10-11-23		
ALKALINITY (as CaCO3)	mg/L	532
CHLORIDE	mg/L	29.2
ETHANE	µg/L	ND(<10.0)
ETHENE	µg/L	ND(<1.0)
FERROUS IRON	mg/L	9.5
MANGANESE	mg/L	0.818
METHANE	µg/L	3,250
NITRATE	mg/L	ND(<0.10)
NITROGEN	mg/L	2.6
SULFATE	mg/L	57.2
SULFIDE	mg/L	ND(<1.0)

MW7 10/11/23		
ALKALINITY (as CaCO3)	mg/L	406
CHLORIDE	mg/L	68.4
ETHANE	µg/L	ND(<1.0)
ETHENE	µg/L	ND(<1.0)
FERROUS IRON	mg/L	5.7
MANGANESE	mg/L	0.401
METHANE	µg/L	61.4
NITRATE	mg/L	ND(<0.10)
NITROGEN	mg/L	1.5
SULFATE	mg/L	281
SULFIDE	mg/L	ND(<1.0)

MW10 10/11/23		
ALKALINITY (as CaCO3)	mg/L	614
CHLORIDE	mg/L	823
ETHANE	µg/L	ND(<1.0)
ETHENE	µg/L	ND(<1.0)
FERROUS IRON	mg/L	11.5
MANGANESE	mg/L	1.47
METHANE	µg/L	63.1
NITRATE	mg/L	0.41
NITROGEN	mg/L	4.5
SULFATE	mg/L	5.0
SULFIDE	mg/L	ND(<1.0)

MW14 10/11/23		
ALKALINITY (as CaCO3)	mg/L	384
CHLORIDE	mg/L	5.2
ETHANE	µg/L	ND(<1.0)
ETHENE	µg/L	ND(<1.0)
FERROUS IRON	mg/L	1.4
MANGANESE	mg/L	0.116
METHANE	µg/L	13.3
NITRATE	mg/L	0.21
NITROGEN	mg/L	1.5
SULFATE	mg/L	17.1
SULFIDE	mg/L	ND(<1.0)

MW12 10/11/23		
ALKALINITY (as CaCO3)	mg/L	392
CHLORIDE	mg/L	1,250
ETHANE	µg/L	ND(<1.0)
ETHENE	µg/L	ND(<1.0)
FERROUS IRON	mg/L	ND(<0.10)
MANGANESE	mg/L	0.0385
METHANE	µg/L	ND(<1.0)
NITRATE	mg/L	5.2
NITROGEN	mg/L	ND(<1.0)
SULFATE	mg/L	54
SULFIDE	mg/L	ND(<1.0)

MW16 10/11/23		
ALKALINITY (as CaCO3)	mg/L	674
CHLORIDE	mg/L	5.7
ETHANE	µg/L	ND(<5.0)
ETHENE	µg/L	ND(<1.0)
FERROUS IRON	mg/L	9.0
MANGANESE	mg/L	0.634
METHANE	µg/L	641
NITRATE	mg/L	ND(<0.10)
NITROGEN	mg/L	3.9
SULFATE	mg/L	30.2
SULFIDE	mg/L	ND(<1.0)

MW13 10/11/23		
ALKALINITY (as CaCO3)	mg/L	336
CHLORIDE	mg/L	8.3
ETHANE	µg/L	ND(<1.0)
ETHENE	µg/L	1.02
FERROUS IRON	mg/L	0.11
MANGANESE	mg/L	0.0822
METHANE	µg/L	169
NITRATE	mg/L	ND(<0.10)
NITROGEN	mg/L	1.1
SULFATE	mg/L	3.4
SULFIDE	mg/L	ND(<1.0)

MW4 10/11/23		
ALKALINITY (as CaCO3)	mg/L	436
CHLORIDE	mg/L	266
ETHANE	µg/L	ND(<1.0)
ETHENE	µg/L	ND(<1.0)
FERROUS IRON	mg/L	ND(<0.10)
MANGANESE	mg/L	ND(<0.010)
METHANE	µg/L	ND(<1.0)
NITRATE	mg/L	1.8
NITROGEN	mg/L	ND(<1.0)
SULFATE	mg/L	38.1
SULFIDE	mg/L	ND(<1.0)

MW-8
MW-9
MW-10
MW-11 (NS)
MW-12
MW-13
MW-14
MW-15
MW-16
MW-7
MW-4
SG-1
RW1

CAYADUTTA CREEK
CAYADUTA CREEK

NMPC
162.20-14-7

HOLDER #2
1887-1918
HOLDER #3
1898-1948
HOLDER #1
1859-1896

EXISTING NATURAL GAS REGULATOR STATION

2 STORY HOUSE

WAREHOUSE

REPUTED OWNER
CITY OF
JOHNSTOWN

162.20-14-3

COLONIAL
CEMETERY

NORTH MARKET STREET
SMITH STREET
CONCRETE SIDEWALK

LEGEND

———	PROPERTY BOUNDARY
——x——	EXISTING SHEET PILE WALL
⊕	MONITORING WELL
☒	RECOVERY WELL
▲	STREAM GAUGE
⊕	DESTROYED/ABANDONED WELL
µg/L	MICROGRAMS PER LITER
mg/L	MILLIGRAMS PER LITER
NA	NOT ANALYZED
U	NOT DETECTED
NS	NOT SAMPLED
J	ESTIMATED CONCENTRATION

Natural Attenuation Map
October 11, 2023

National Grid
Former MGP Site
105 N Market Street
Johnstown, New York

Drawn J.D.B.
Designed R.K.
Approved

Date 11/29/23
Figure 4

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Scale In Feet
0 40

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BTEX Concentration Map
October 11, 2023

National Grid
Former MGP Site
105 N Market Street
Johnstown, New York

Drawn J.D.B.
Designed R.K.
Approved

Date 11/28/23
Figure 5

Scale In Feet
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Groundwater & Environmental Services, Inc.

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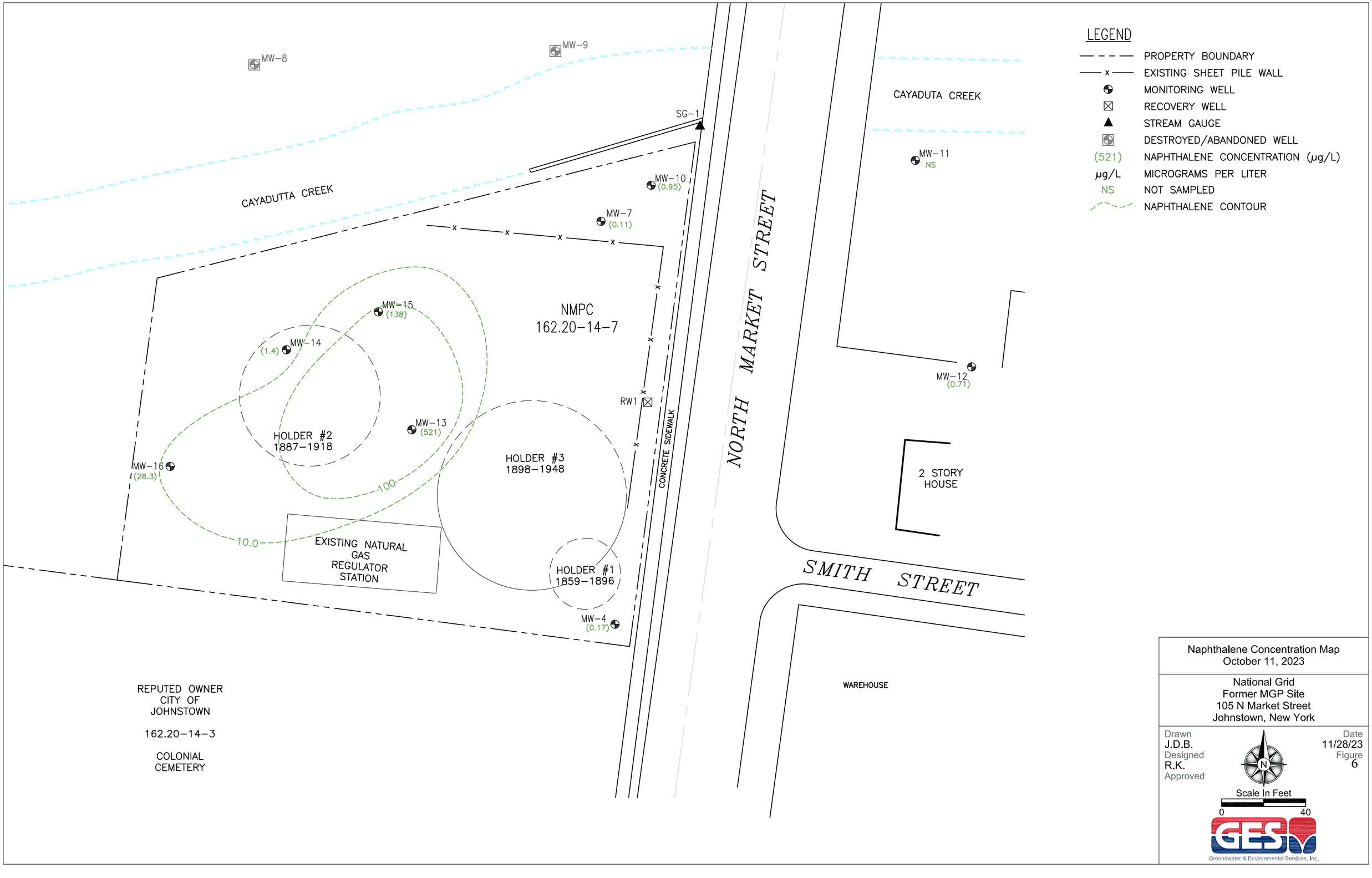

Naphthalene Concentration Map
October 11, 2023

National Grid
Former MGP Site
105 N Market Street
Johnstown, New York

Drawn J.D.B.
Designed R.K.
Approved

Date 11/28/23
Figure 6

Scale In Feet
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Groundwater & Environmental Services, Inc.

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Tables

Table 2

Groundwater Level Measurements

Well ID	ELEVATION REFERENCE POINT	6/30/2010		9/29/2010		1/5/2011		4/8/2011		6/16/2011		10/13/2011		12/15/2011	
		Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)
MW-4	676.54	23.10	653.44	23.41	653.13	22.95	653.59	22.50	654.04	22.04	654.50	21.41	655.13	22.78	653.76
MW-7	659.08	14.25	644.83	13.18	645.90	13.88	645.20	12.87	646.21	13.80	645.28	13.15	645.93	15.45	643.63
MW-10	657.59	14.80	642.79	14.60	642.99	14.75	642.84	14.09	643.50	14.77	642.82	14.11	643.48	14.22	643.37
MW-11	657.29	NM	NM	13.57	643.72	13.59	643.70	12.51	644.78	13.38	643.91	12.95	644.34	12.76	644.53
MW-12	660.08	NM	NM	NM	NM	15.06	645.02	NM	NM	NM	NM	13.61	646.47	14.54	645.54
MW-13	664.89	14.65	650.24	15.22	649.67	14.95	649.94	11.18	653.71	13.99	650.90	11.91	652.98	14.31	650.58
MW-14	663.91	13.50	650.41	14.46	649.45	14.28	649.63	12.86	651.05	13.65	650.26	13.26	650.65	13.65	650.26
MW-15	661.85	16.90	644.95	17.24	644.61	17.68	644.17	15.07	646.78	16.63	645.22	15.95	645.90	16.38	645.47
MW-16	665.57	9.70	655.87	10.19	655.38	12.33	653.24	11.00	654.57	10.50	655.07	9.79	655.78	9.91	655.66
RW-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GAUGE1	659.97	15.07	644.90	20.20	639.77	16.30	643.67	15.75	644.22	16.75	643.22	16.05	643.92	15.62	644.35

ft AMSL = Feet above mean sea level
ft TOC = Feet from top of inner casing
GW = Groundwater
NM = Not measured
NRP = No Reference Point

Table 2

Groundwater Level Measurements

Well ID	ELEVATION REFERENCE POINT	3/15/2012		10/9/2012		4/18/2013		10/7/2013		4/9/2014		10/13/2014		4/16/2015	
		Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)
MW-4	676.54	22.81	653.73	NM	NM	23.97	652.57	23.12	653.42	23.28	653.26	23.28	653.26	22.91	653.63
MW-7	659.08	13.55	645.53	14.17	644.91	13.53	645.55	14.36	644.72	13.71	645.37	14.61	644.47	13.23	645.85
MW-10	657.59	14.18	643.41	15.05	642.54	14.27	643.32	14.44	643.15	14.13	643.46	14.98	642.61	14.15	643.44
MW-11	657.29	12.73	644.56	13.95	643.34	13.01	644.28	13.16	644.13	12.68	644.61	13.71	643.58	12.62	644.67
MW-12	660.08	14.26	645.82	16.36	643.72	14.06	646.02	14.99	645.09	14.41	645.67	15.65	644.43	14.25	645.83
MW-13	664.89	14.98	649.91	16.12	648.77	14.18	650.71	15.08	649.81	14.84	650.05	15.53	649.36	11.34	653.55
MW-14	663.91	15.49	648.42	16.98	646.93	13.14	650.77	14.74	649.17	15.70	648.21	15.02	648.89	13.06	650.85
MW-15	661.85	16.41	645.44	17.85	644.00	16.26	645.59	17.21	644.64	16.67	645.18	17.55	644.30	15.31	646.54
MW-16	665.57	11.56	654.01	10.51	655.06	9.98	655.59	9.85	655.72	9.45	656.12	10.24	655.33	10.48	655.09
RW-1	-	-	-	17.98	-	16.21	-	15.95	-	12.32	-	17.31	-	16.84	-
GAUGE1	659.97	15.69	644.28	NM	NM	19.10	640.87	18.85	641.12	18.85	641.12	20.01	639.96	18.91	641.06

ft AMSL = Feet above mean sea level
ft TOC = Feet from top of inner casing
GW = Groundwater
NM = Not measured
NRP = No Reference Point

Table 2

Groundwater Level Measurements

Well ID	ELEVATION REFERENCE POINT	10/13/2015		4/6/2016		10/25/2016		4/26/2017		10/11/2017		4/26/2018		10/17/2018	
		Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)
MW-4	676.54	23.48	653.06	23.51	653.03	24.03	652.51	21.09	652.19	24.35	652.19	22.48	654.06	23.20	653.34
MW-7	659.08	14.61	644.47	14.19	644.89	15.00	644.08	13.62	645.46	14.83	644.25	12.85	646.23	14.40	644.68
MW-10	657.59	14.95	642.64	14.77	624.82	15.18	642.41	14.37	643.22	15.02	642.57	13.05	644.54	14.60	642.99
MW-11	657.29	-	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-12	660.08	15.62	644.46	14.95	645.13	15.82	644.26	13.55	646.53	15.62	644.46	14.00	646.08	15.10	644.98
MW-13	664.89	14.98	649.91	15.95	648.94	16.32	648.57	13.27	651.62	15.80	649.09	12.98	651.91	14.15	650.74
MW-14	663.91	13.63	650.28	16.81	647.1	16.8	647.11	13.71	650.20	15.88	648.03	13.71	650.20	13.88	650.03
MW-15	661.85	17.23	644.62	17.355	644.3	17.9	643.95	16.05	645.80	17.86	643.99	15.71	646.14	16.70	645.15
MW-16	665.57	9.61	655.96	10.79	654.78	11.11	654.46	9.02	656.55	10.43	655.14	9.52	656.05	9.88	655.69
RW-1	-	13.21	-	13.03	NRP	12.88	NRP	10.6	NRP	17.40	NRP	12.35	NRP	12.38	NRP
GAUGE1	659.97	19.91	640.06	19.76	640.21	18.40	641.57	15.70	644.27	15.46	644.51	14.55	645.42	15.70	644.27

ft AMSL = Feet above mean sea level
ft TOC = Feet from top of inner casing
GW = Groundwater
NM = Not measured
NRP = No Reference Point

Table 2

Groundwater Level Measurements

Well ID	ELEVATION REFERENCE POINT	4/18/2019		10/16/2019		5/20/2020		10/7/2020		4/14/2021		10/6/2021		4/13/2022	
		Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)
MW-4	676.54	22.60	653.94	23.47	653.07	22.11	654.43	24.21	652.33	23.46	653.08	22.99	653.55	22.55	653.99
MW-7	659.08	13.85	645.23	14.73	644.35	15.15	643.93	15.02	644.06	14.31	644.77	13.99	645.09	13.38	645.70
MW-10	657.59	14.50	643.09	15.02	642.57	15.02	642.57	15.15	642.44	14.77	642.82	14.24	643.35	14.12	643.47
MW-11	657.29	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW-12	660.08	14.40	645.68	15.54	644.54	14.62	645.46	15.85	644.23	15.29	644.79	14.81	645.27	13.68	646.40
MW-13	664.89	13.07	651.82	14.74	650.15	15.42	649.47	16.05	648.84	14.02	650.87	14.48	650.41	12.18	652.71
MW-14	663.91	13.80	650.11	13.8	650.11	14.23	649.68	16.15	647.76	13.95	649.96	14.21	649.70	13.76	650.15
MW-15	661.85	15.60	646.25	17.05	644.80	16.52	645.33	17.69	644.16	16.61	645.24	16.40	645.45	15.69	646.16
MW-16	665.57	10.39	655.18	9.78	655.79	9.81	655.76	10.93	654.64	9.94	655.63	9.81	655.76	8.84	656.73
RW-1	-	15.22	NRP	13.00	NRP	11.40	NRP	13.83	NRP	12.72	NRP	11.49	NRP	9.28	NRP
GAUGE1	659.97	15.50	644.47	16.28	643.69	16.05	643.92	16.38	643.59	16.73	643.24	16.02	643.95	15.60	644.37

ft AMSL = Feet above mean sea level
ft TOC = Feet from top of inner casing
GW = Groundwater
NM = Not measured
NRP = No Reference Point

Table 2

Groundwater Level Measurements

Well ID	ELEVATION REFERENCE POINT	10/6/2022		4/19/2023		10/11/2023	
		Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)	Depth to Water (ft TOC)	GW Elevation (ft AMSL)
MW-4	676.54	24.00	652.54	22.02	654.52	24.62	651.92
MW-7	659.08	15.08	644.00	14.05	645.03	14.78	644.30
MW-10	657.59	14.99	642.60	14.79	642.80	14.91	642.68
MW-11	657.29	NM	-	NM	-	NM	-
MW-12	660.08	15.06	645.02	14.17	645.91	15.06	645.02
MW-13	664.89	15.63	649.26	13.34	651.55	15.52	649.37
MW-14	663.91	14.15	649.76	13.95	649.96	14.73	649.18
MW-15	661.85	16.67	645.18	16.90	644.95	17.36	644.49
MW-16	665.57	10.31	655.26	9.48	656.09	10.35	655.22
RW-1	-	16.30	NRP	10.43	NRP	15.28	NRP
GAUGE1	659.97	14.65	645.32	19.31	640.66	15.63	644.34

ft AMSL = Feet above mean sea level
ft TOC = Feet from top of inner casing
GW = Groundwater
NM = Not measured
NRP = No Reference Point

Table 3

Groundwater Analytical Data
MW-4

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/14/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
BTEX Compounds																								
Benzene	µg/L	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Ethylbenzene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
m/p-Xylene	µg/L	5	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)
o-Xylene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Toluene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
PAHs																								
Acenaphthene	µg/L	20	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	0.21	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Acenaphthylene	µg/L	NC	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Anthracene	µg/L	50	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Benzo(a)anthracene	µg/L	0.002	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Benzo(a)pyrene	µg/L	0.000	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Benzo(b)fluoranthene	µg/L	0.002	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Benzo(g,h,i)perylene	µg/L	NC	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Benzo(k)fluoranthene	µg/L	0.002	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Chrysene	µg/L	0.002	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Dibenzo(a,h)anthracene	µg/L	NC	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Fluoranthene	µg/L	50	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Fluorene	µg/L	50	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Naphthalene	µg/L	10	ND (<0.49)	3.2	3.2	2.2	2.2	2.2	ND (<0.51)	0.29	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	2.4	0.17	ND (<0.10)	ND (<0.099)	0.46	0.24	0.17
Phenanthrene	µg/L	50	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Pyrene	µg/L	50	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.52)	ND (<0.52)	ND (<0.10)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.096)	ND (<0.10)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.12)
Cyanide and Lead																								
Lead	µg/L	25	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<10)	ND (<10)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<20)	ND (<10.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)

AWQS = Ambient Water Quality Standards
B = Present in Associated Blank Sample
BTEX = Benzene, Ethylbenzene, Toluene and Xylene
D = Diluted Sample
E = Result exceeded calibration range
F1 = MS and/or MSD Recovery outside acceptance limits.
F2 = MS/MSD RPD above control limits.
J = Estimated Concentration Value
mg/L = Milligrams per Liter
NC = No Criteria
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
NYSDEC = New York State Department of Environmental Conservation
PAHs = Polycyclic Aromatic Hydrocarbons
R = Rejected
µg/L = Micrograms per Liter
Bolded = values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-4

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	04/16/15	10/14/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
MNA/WQ Parameters																							
Alkalinity (as CaCO3)	mg/L	354	442	398	400	384	412	394	414	392	418	424	424	452	410	360	390	386	500	406	NS	402	436
Chloride	mg/L	275	411	304	329	295	365	304	421	377	ND (<300)	233	306	360	260	296	200	315	637	339	NS	425	266
Ethane	µg/L	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<0.025)	ND (<0.025)	ND (<0.030)	0.037J	ND (<0.16)	ND (<1.0)	0.036 J	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.00)	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Ethene	µg/L	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<0.035)	ND (<0.035)	ND (<0.10)	ND (<0.10)	ND (<0.032)	ND (<1.0)	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.00)	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Ferrous Iron	mg/L	ND (<0.1)	0.013	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	0.14	0.11	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	0.10	ND (<0.10)	ND (<0.10)	ND (<0.10)	NS	ND (<0.10)	ND (<0.10)
Manganese	mg/L	ND (<3.0)	ND (<3.0)	ND (<3.0)	ND (<3.0)	ND (<3.0)	0.019	0.0031	0.0053	ND (<0.005)	ND (<0.005)	ND (<0.005)	0.0065	ND (<0.005)	0.0318	ND (<0.005)	0.0541	ND (<0.005)	0.0621	ND (<0.005)	ND (<0.010)	ND (<0.010)	ND (<0.010)
Methane	µg/L	ND (<4.0)	ND (<4.0)	ND (<4.0)	ND (<4.0)	ND (<4.0)	ND (<4.0)	ND (<4.0)	0.32J	0.47J	0.27J	0.29J	ND (<0.30)	ND (<2.5)	ND (<2.5)	ND (<1.00)	ND (<5.00)	ND (<5.00)	3.01 J	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Nitrate	mg/L	2.4	3.5	3.6	2.7	2.9	2.9	3.4	3.2	2.2	3.2	0.69	2.1	3.9	2.7	2.8	2.2	3.9	2.2	2.6	2.2	1.8	1.8
Nitrogen	mg/L	0.31	0.31	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Sulfate	mg/L	64.7	74.7	70.7	50.8	60	60	73.9	60.8	23.0	56.7	50.0	ND (<50.0)	35.8	42.1	23.7	37.0	35.9	51.4	35.1	NS	20.1	38.1
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Table 3

Groundwater Analytical Data
MW-7

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/14/15	04/06/16	10/26/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
BTEX Compounds																								
Benzene	µg/L	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	**1.3**	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Ethylbenzene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
m/p-Xylene	µg/L	5	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)
o-Xylene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Toluene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.3	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
PAHs																									
Acenaphthene	µg/L	20	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	0.10	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	0.13	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Acenaphthylene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	0.20	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	0.10	ND (<0.10)	0.17	0.11	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Anthracene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Benzo(a)anthracene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	**0.12**	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Benzo(a)pyrene	µg/L	0.000	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	**0.11**	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Benzo(b)fluoranthene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	**0.10**	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Benzo(g,h,i)perylene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Benzo(k)fluoranthene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Chrysene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	**0.12**	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Dibenzo(a,h)anthracene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Fluoranthene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	0.16	ND (<0.10)	0.29	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Fluorene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Naphthalene	µg/L	10	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	5.2	ND (<0.49)	3.0	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	0.83	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	0.11
Phenanthrene	µg/L	50	0.49	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.10)	0.14	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Pyrene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.46)	ND (<0.46)	ND (<0.49)	ND (<0.49)	ND (<0.10)	ND (<0.097)	ND (<0.097)	ND (<0.098)	ND (<0.11)	ND (<0.11)	0.26	ND (<0.10)	0.43	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.11)	ND (<0.098)	ND (<0.11)
Cyanide and Lead																								
Lead	µg/L	25	**33**	7.1	7.1	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	5.6	ND (<5.0)	ND (<20)	ND (<10.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	**1.4**	**0.4**	0.16	0.13	0.18	0.18	0.18	0.15	0.18	0.16	0.14	0.17	0.129	0.17	ND (<0.010)	**0.35**	0.11	0.13	**0.26**	0.15	0.15	0.14

AWQS = Ambient Water Quality Standards
B = Present in Associated Blank Sample
BTEX = Benzene, Ethylbenzene, Toluene and Xylene
D = Diluted Sample
E = Result exceeded calibration range
F1 = MS and/or MSD Recovery outside acceptance limits.
F2 = MS/MSD RPD above control limits.
J = Estimated Concentration Value
mg/L = Milligrams per Liter
NC = No Criteria
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
NYSDEC = New York State Department of Environmental Conservation
PAHs = Polycyclic Aromatic Hydrocarbons
R = Rejected
µg/L = Micrograms per Liter
Bolded = values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-7

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	04/16/15	10/14/15	04/06/16	10/26/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
MNA/WQ Parameters																							
Alkalinity (as CaCO3)	mg/L	324	367	375	392	340	403	395	406	412	380	390	440	370	400	446	430	422	440	404	NS	394	406
Chloride	mg/L	114	84	79	62.8	67.7	66.7	66.2	79.4	68.9	64.6	63.6	59.4	63.9	50.9	58.1	56.5	62.6	53.4	83.3	NS	90.0	68.4
Ethane	µg/L	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	0.38J	0.86J	0.20J	0.32J	0.18J	0.13 J	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.00)	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Ethene	µg/L	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<0.035)	0.090J	ND (<0.10)	ND (<0.10)	ND (<0.032)	ND (<1.0)	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.00)	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Ferrous Iron	mg/L	ND (<0.1)	0.25	6.24	ND (<0.1)	ND (<0.1)	ND (<0.1)	0.14	0.59	3.7	3.3	2.8	3.2	2.5	2.1	4.3	2.9	0.66	2.3	0.93	NS	3.6	5.7
Manganese	mg/L	1.1	1.1	0.564	0.49	0.49	0.46	0.53	0.43	0.478	0.476	0.476	0.459	0.487	0.395	0.513	0.420	0.440	0.400	0.307	0.379	0.389	0.401
Methane	µg/L	40	23	150	82	35	96	17	160	240	120	170	150	140	160	111	30.3	ND (<5.00)	88.2	67.2	NS	19.2	61.4
Nitrate	mg/L	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	0.14	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<0.10)	ND (<0.20)	0.11	ND (<0.10)	ND (<0.10)	ND (<0.10)
Nitrogen	mg/L	4.6	1.5	0.16	2	1.1	1.5	1.6	2.2	1.8	1.3	1.7	1.2	1.6	0.11	1.6	ND (<0.10)	1.7	1.7	1.4	1.6	1.4	1.5
Sulfate	mg/L	654	518	540	457	442	533	384	476	396	394	389	331	334	259	307	298	280	321	287	NS	257	281
Sulfide	mg/L	1.4	1.4	1.4	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	2.4	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Table 3

Groundwater Analytical Data
MW-10

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/13/15	04/06/16	10/26/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
BTEX Compounds																								
Benzene	µg/L	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	**2.3**	ND (<1.0)	ND (<1.0)	**1.9**	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	**1.5**	ND (<1.0)
Ethylbenzene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
m/p-Xylene	µg/L	5	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)
o-Xylene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Toluene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	2	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
PAHs																								
Acenaphthene	µg/L	20	2.2	1.1	0.8	ND (<0.48)	0.63	ND (<0.50)	ND (<0.50)	1.4	0.72	1.6	0.53	1.7	1.4	1.8	0.52	1.9	2.0	1.6	1.5	2.2	1.9	2.2
Acenaphthylene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	0.18	0.16	0.18	0.11	0.22	0.22	0.27	ND (<0.095)	0.43	0.38	0.27	0.24	0.29	0.25	0.29
Anthracene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	ND (<0.097)	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	0.14	0.14	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)	ND (<0.11)
Benzo(a)anthracene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	**0.11**	ND (<0.099)	ND (<0.10)	ND (<0.11)	**0.13**	**0.15**	ND (<0.095)	**0.63**	**0.61**	**0.16**	**0.20**	ND (<0.10)	ND (<0.099)	ND (<0.11)
Benzo(a)pyrene	µg/L	0.002	**0.55**	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	**0.10**	ND (<0.099)	ND (<0.10)	ND (<0.11)	**0.12**	**0.15**	ND (<0.095)	**0.56**	**0.67**	**0.16**	**0.16**	ND (<0.10)	ND (<0.099)	ND (<0.11)
Benzo(b)fluoranthene	µg/L	0.002	**0.86**	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	**0.17**	ND (<0.099)	ND (<0.10)	ND (<0.11)	**0.13**	**0.15**	ND (<0.095)	**0.65**	**0.89**	**0.23**	**0.24**	ND (<0.10)	**0.11**	ND (<0.11)
Benzo(g,h,i)perylene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	ND (<0.097)	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	0.24	0.32	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)	ND (<0.11)
Benzo(k)fluoranthene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	**0.15**	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	**0.25**	**0.85**	**0.19**	**0.22**	ND (<0.10)	ND (<0.099)	ND (<0.11)
Chrysene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	**0.099**	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	**0.12**	ND (<0.095)	**0.53**	**0.51**	ND (<0.11)	0.17	ND (<0.10)	ND (<0.099)	ND (<0.11)
Dibenzo(a,h)anthracene	µg/L	NC	1.1	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	ND (<0.097)	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	ND (<0.099)	0.11	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)	ND (<0.11)
Fluoranthene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	0.10	0.16	ND (<0.099)	ND (<0.10)	ND (<0.11)	0.18	0.22	ND (<0.095)	0.78	0.78	0.18	0.24	ND (<0.10)	0.11	ND (<0.11)
Fluorene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	ND (<0.097)	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	0.21	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)	ND (<0.11)
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	ND (<0.097)	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	**0.23**	**0.30**	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)	ND (<0.11)
Naphthalene	µg/L	10	0.7	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	7.9	ND (<0.50)	0.23	ND (<0.097)	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	0.49	ND (<0.096)	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)	0.95
Phenanthrene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	ND (<0.10)	ND (<0.097)	ND (<0.099)	ND (<0.10)	ND (<0.11)	ND (<0.11)	ND (<0.096)	ND (<0.095)	0.18	0.20	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)	ND (<0.11)
Pyrene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<0.50)	0.15	0.20	ND (<0.099)	ND (<0.10)	0.13	0.22	0.27	ND (<0.095)	0.97	0.90	0.26	0.30	0.14	0.15	0.14
Cyanide and Lead																								
Lead	µg/L	25	8.4	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<5.0)	ND (<10.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	6.0	ND (<20)	ND (<10.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	0.1	0.11	0.081	0.10	0.098	0.010	0.085	0.081	0.13	0.10	0.12	0.079	0.114	0.093	0.097	0.10	0.060	0.066	0.097	0.078	0.12	0.072

AWQS = Ambient Water Quality Standards
B = Present in Associated Blank Sample
BTEX = Benzene, Ethylbenzene, Toluene and Xylene
D = Diluted Sample
E = Result exceeded calibration range
F1 = MS and/or MSD Recovery outside acceptance limits.
F2 = MS/MSD RPD above control limits.
J = Estimated Concentration Value
mg/L = Milligrams per Liter
NC = No Criteria
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
NYSDEC = New York State Department of Environmental Conservation
PAHs = Polycyclic Aromatic Hydrocarbons
R = Rejected
µg/L = Micrograms per Liter
Bolded = values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-10

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	04/16/15	10/13/15	04/06/16	10/26/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
MNA/WQ Parameters																							
Alkalinity (as CaCO3)	mg/L	584	552	566	548	512	581	586	660	628	616	606	650	550	640	624	502	524	650	612	640	586	614
Chloride	mg/L	286	265	470	664	698	1060	893	784	390	427	419	709	440	566	314	472	945	768	816	751	970	823
Ethane	µg/L	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	0.16J	0.33J	0.20J	0.24J	0.42J	0.29 J	0.34 J	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Ethene	µg/L	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<0.035)	0.12J	ND (<0.10)	ND (<0.10)	ND (<0.032)	ND (<1.0)	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Ferrous Iron	mg/L	ND (<0.10)	0.12	6.06	ND (<0.10)	ND (<0.10)	ND (<0.10)	0.11	1.0	4.2	4.7	3.2	4.8	2.6	2.2	5.3	1.2	1.1	3.2	2.0	5.9	4.3	11.5
Manganese	mg/L	1.2	0.75	1.07	1.3	1.3	1.6	1.2	1.2	1.020	1.030	0.882	0.994	0.946	1.15	0.953	0.771	1.09	1.040	1.150	1.24	1.16	1.47
Methane	µg/L	32	28	110	130	63	82	56	420	300	330	470	680	460	1300	390	451	ND (<5.00)	780	594	NS	482	63.1
Nitrate	mg/L	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	0.11	ND (<0.05)	0.12	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.50)	ND (<0.10)	ND (<0.20)	ND (<0.50)	ND (<0.10)	0.14	0.41
Nitrogen	mg/L	6.1	4.1	4.8	6.2	5.6	6.3	4	6.5	5.1	3.8	3.3	4.5	4	ND (<1.0)	2.5	1.0	4.0	4.7	3.8	3.6	3.9	4.5
Sulfate	mg/L	174	171	153	89.7	167	53.9	44.4	56.6	148	38.2	ND (<100)	23.0	59.4	20.9	55.2	23.9	7.8	9.7	12.3	4.6	12.4	5.0
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	3.4	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Table 3

Groundwater Analytical Data
MW-11

CONSTITUENT	UNITS	NYSDEC AWQS Values	03/14/12	10/09/12	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/14/15 to 04/19/23*	10/11/23
BTEX Compounds											
Benzene	µg/L	1	**7.9**	**12**	**3.5**	**8.1**	**10**	**22**	**7.3**	NS	NS
Ethylbenzene	µg/L	5	3.5	ND (<1.0)	1.2	3.8	**5.1**	**7.8**	3	NS	NS
m/p-Xylene	µg/L	5	1.4J	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	2.1	ND (<2.0)	NS	NS
o-Xylene	µg/L	5	1.2	ND (<1.0)	ND (<1.0)	1.6	2.1	2.6	1.5	NS	NS
Toluene	µg/L	5	0.69J	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.1	1.9	ND (<1.0)	NS	NS
PAHs											
Acenaphthene	µg/L	20	**100**	**140 E**	**97**	**110**	**120**	**110**	**59**	NS	NS
Acenaphthylene	µg/L	NC	210	160 E	120	170	110	150	56	NS	NS
Anthracene	µg/L	50	11	23	13	28	13	16	4.2	NS	NS
Benzo(a)anthracene	µg/L	0.002	**5.2 B**	**3.8**	ND (<0.002)	**8.3**	**3.2**	**4.8**	**1.9**	NS	NS
Benzo(a)pyrene	µg/L	0.002	**2.3J**	**2.7**	**3.3**	**8.5**	**2.8**	**4.7**	**0.84**	NS	NS
Benzo(b)fluoranthene	µg/L	0.002	**1.8J**	**1.7**	ND (<0.002)	ND (<0.002)	ND (<0.002)	**4.6**	**0.68**	NS	NS
Benzo(g,h,i)perylene	µg/L	NC	1.3J	1	1	3.4	ND (<0.002)	1.8	ND (<0.002)	NS	NS
Benzo(k)fluoranthene	µg/L	0.002	**1.2J**	**1.6**	ND (<0.002)	ND (<0.002)	ND (<0.002)	**2.1**	ND (<0.002)	NS	NS
Chrysene	µg/L	0.002	ND (<5.1)	**3.4**	**4.4**	**10**	**5.4**	**7.6**	**0.99**	NS	NS
Dibenzo(a,h)anthracene	µg/L	NC	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<5.1)	ND (<0.47)	ND (<0.47)	NS	NS
Fluoranthene	µg/L	50	12	24	14	28	12	16	5.4	NS	NS
Fluorene	µg/L	50	**62**	**92**	**62**	**70**	31	44	16	NS	NS
Indeno(1,2,3-cd)pyrene	µg/L	0.002	**0.69J**	**1.6**	ND (<0.002)	ND (<0.002)	ND (<0.002)	**1.2**	ND (<0.002)	NS	NS
Naphthalene	µg/L	10	**140**	**110**	**50**	**87**	ND (<10)	**51**	2.3	NS	NS
Phenanthrene	µg/L	50	**91**	**170**	**80**	**130**	5.8	**62**	1.5	NS	NS
Pyrene	µg/L	50	16	28	18	34	17	20	4.2	NS	NS
Cyanide and Lead											
Lead	µg/L	25	4.6J	ND (<5.0)	ND (<5.0)	5.9	ND (<5.0)	0.014	ND (<5.0)	NS	NS
Cyanide	mg/L	0.2	0.012	ND (<0.010)	ND (<0.010)	ND (<0.010)	0.018	0.021	0.012	NS	NS

AWQS	= Ambient Water Quality Standards
B	= Present in Associated Blank Sample
BTEX	= Benzene, Ethylbenzene, Toluene and Xylene
D	= Diluted Sample
E	= Result exceeded calibration range
F1	= MS and/or MSD Recovery outside acceptance limits.
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NYSDEC	= New York State Department of Environmental Conservation
PAHs	= Polycyclic Aromatic Hydrocarbons
R	= Rejected
µg/L	= Micrograms per Liter
Bolded	= values indicated exceedance of the NYSDEC AWQS

* = Monitoring well is inaccessible due to debris and was not sampled during this time period

Table 3

Groundwater Analytical Data
MW-11

CONSTITUENT	UNITS	03/14/12	10/09/12	04/18/13	10/08/13	04/09/14	10/15/14	04/16/15	10/14/15 to 04/19/23*	10/11/23
MNA/WQ Parameters										
Alkalinity (as CaCO3)	mg/L	R	623	507	573	465	457	428	NS	NS
Chloride	mg/L	321	350	202	295	454	364	314	NS	NS
Ethane	µg/L	ND (<15)	ND (<380)	ND (<380)	ND (<380)	ND (<380)	ND (<7.5)	ND (<7.5)	NS	NS
Ethene	µg/L	ND (<15)	ND (<350)	ND (<350)	ND (<350)	ND (<350)	ND (<7.0)	ND (<7.0)	NS	NS
Ferrous Iron	mg/L	ND (<0.1)	0.5	0.18	0.22	0.29	ND (<0.1)	ND (<0.1)	NS	NS
Manganese	mg/L	0.47	0.95	0.95	0.55	0.56	0.56	0.25	NS	NS
Methane	µg/L	160	520	12	25	120	180	13	NS	NS
Nitrate	mg/L	0.092	ND (<0.050)	0.79	0.32	0.32	0.059	0.28	NS	NS
Nitrogen	mg/L	1.3	1.4	0.58	0.64	0.57	1.2	0.26	NS	NS
Sulfate	mg/L	8.5 B	16.9	112	94.1	58	44.3	82.9	NS	NS
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.8	ND (<1.0)	NS	NS

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality
* = Monitoring well is inaccessible due to debris and was not sampled during this time period

Table 3

Groundwater Analytical Data
MW-12

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/14/15	04/06/16	10/26/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
BTEX Compounds																								
Benzene	µg/L	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Ethylbenzene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
m/p-Xylene	µg/L	5	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)
o-Xylene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Toluene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
PAHs																									
Acenaphthene	µg/L	20	ND (<0.2)	1.1	1.1	ND (<0.48)	ND (<0.48)	ND (<0.47)	ND (<0.51)	0.11	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<011)	ND (<0.097)	ND (<0.096)	ND (<0.11)	ND (<0.099)	0.11	ND (<0.098)	ND (<0.10)
Acenaphthylene	µg/L	NC	ND (<0.2)	ND (<0.2)	ND (<0.2)	0.63	ND (<0.2)	ND (<0.47)	ND (<0.51)	4.4	ND (<0.097)	0.30	0.39	0.62	ND (<0.11)	1.0	0.1	0.61	0.41	0.14	0.21	2.5	0.27	0.40
Anthracene	µg/L	50	ND (<0.2)	1.1	1.1	0.88	ND (<0.2)	0.73	ND (<0.51)	1.4	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	0.099	ND (<0.11)	ND (<0.097)	ND (<0.096)	ND (<0.11)	1.4	1.5	0.31	0.22
Benzo(a)anthracene	µg/L	0.002	**0.83**	**3**	**0.66**	**1.5**	ND (<0.49)	ND (<0.47)	ND (<0.51)	**2.1**	**0.11**	**0.14**	ND (<0.099)	ND (<0.11)	ND (<0.11)	**0.24**	**0.34**	ND (<0.097)	ND (<0.096)	ND (<0.11)	**0.49**	**5.4**	**0.77**	**0.67**
Benzo(a)pyrene	µg/L	0.002	**1**	**3.6**	**0.92**	**1.8**	ND (<0.49)	ND (<0.47)	ND (<0.51)	**2.8**	**0.11**	**0.16**	ND (<0.099)	ND (<0.11)	ND (<0.11)	**0.3**	**0.41**	ND (<0.097)	ND (<0.096)	ND (<0.11)	**0.46**	**6.7**	**0.97**	**0.87**
Benzo(b)fluoranthene	µg/L	0.002	**0.91**	**3.4**	**0.71**	**2.1**	ND (<0.49)	ND (<0.47)	ND (<0.51)	**2.3**	**0.13**	**0.19**	ND (<0.099)	ND (<0.11)	ND (<0.11)	**0.24**	**0.34**	ND (<0.097)	ND (<0.096)	ND (<0.11)	**0.49**	**6.8**	**0.85**	**0.8**
Benzo(g,h,i)perylene	µg/L	NC	ND (<0.49)	ND (<0.49)	0.51	0.74	ND (<0.49)	ND (<0.47)	ND (<0.51)	1.6	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	0.15	0.21	ND (<0.097)	ND (<0.096)	ND (<0.11)	0.27	3.8	0.41	0.41
Benzo(k)fluoranthene	µg/L	0.002	ND (<0.49)	**0.83**	ND (<0.49)	**0.74**	ND (<0.49)	ND (<0.47)	ND (<0.51)	**0.94**	**0.11**	**0.16**	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.11)	ND (<0.097)	ND (<0.096)	ND (<0.11)	**0.45**	**6.0**	**0.74**	**0.65**
Chrysene	µg/L	0.002	**1**	**3**	ND (<0.49)	**1.6**	ND (<0.49)	ND (<0.47)	ND (<0.51)	**1.9**	ND (<0.097)	**0.11**	ND (<0.099)	ND (<0.11)	ND (<0.11)	**0.19**	**0.22**	ND (<0.097)	ND (<0.096)	ND (<0.11)	**0.72**	**3.9**	**0.50**	**0.51**
Dibenzo(a,h)anthracene	µg/L	NC	ND (<0.52)	ND (<0.52)	ND (<0.52)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<0.51)	0.29	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	ND (<0.097)	ND (<0.11)	ND (<0.097)	ND (<0.096)	ND (<0.11)	ND (<0.099)	0.92	ND (<0.098)	ND (<0.10)
Fluoranthene	µg/L	50	1.4	4.3	0.87	2.00	ND (<0.49)	ND (<0.47)	0.52	3.9	**0.11**	**0.17**	ND (<0.099)	ND (<0.11)	ND (<0.11)	0.33	0.43	ND (<0.097)	ND (<0.096)	ND (<0.11)	0.72	6.8	0.87	0.73
Fluorene	µg/L	50	ND (<0.49)	ND (<0.49)	ND (<0.49)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<0.51)	0.51	ND (<0.097)	ND (<0.10)	ND (<0.099)	0.13	ND (<0.11)	ND (<0.097)	ND (<0.11)	0.12	ND (<0.096)	ND (<0.11)	ND (<0.099)	0.21	ND (<0.098)	ND (<0.10)
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<0.49)	**1.2**	ND (<0.49)	**0.51**	ND (<0.49)	ND (<0.47)	ND (<0.51)	**1.2**	ND (<0.097)	ND (<0.10)	ND (<0.099)	ND (<0.11)	ND (<0.11)	**0.11**	**0.17**	ND (<0.097)	ND (<0.096)	ND (<0.11)	**0.20**	**3.0**	**0.34**	**0.34**
Naphthalene	µg/L	10	2.5	0.99	ND (<0.52)	1.6	ND (<0.49)	1.9	ND (<0.51)	0.96	ND (<0.097)	0.15	ND (<0.099)	ND (<0.11)	ND (<0.11)	1.8	ND (<0.11)	0.97	ND (<0.096)	ND (<0.11)	ND (<0.099)	0.15	ND (<0.098)	0.71
Phenanthrene	µg/L	50	1.1	3.6	0.61	2	ND (<0.49)	ND (<0.47)	ND (<0.51)	3.5	ND (<0.097)	0.14	ND (<0.099)	ND (<0.11)	ND (<0.11)	0.23	0.34	0.14	ND (<0.096)	ND (<0.11)	0.62	4.7	0.64	0.57
Pyrene	µg/L	50	2.4	5.8	1.3	2.8	ND (<0.49)	ND (<0.47)	0.64	5.4	0.17	0.24	ND (<0.099)	ND (<0.11)	ND (<0.11)	0.49	0.61	ND (<0.097)	ND (<0.096)	ND (<0.11)	1.0	9.6	1.3	1.1
Cyanide and Lead																									
Lead	µg/L	25	ND (<5.0)	**29**	ND (<5.0)	0.018	ND (<0.49)	ND (<10)	ND (<10)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<0.02)	ND (<10.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	ND (<0.010)	ND (<0.010)	ND (<0.010)	0.013	ND (<0.49)	ND (<0.01)	ND (<0.01)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	0.011	0.011	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)	ND (<0.010)

AWQS = Ambient Water Quality Standards
B = Present in Associated Blank Sample
BTEX = Benzene, Ethylbenzene, Toluene and Xylene
D = Diluted Sample
E = Result exceeded calibration range
F1 = MS and/or MSD Recovery outside acceptance limits.
F2 = MS/MSD RPD above control limits.
J = Estimated Concentration Value
mg/L = Milligrams per Liter
NC = No Criteria
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
NYSDEC = New York State Department of Environmental Conservation
PAHs = Polycyclic Aromatic Hydrocarbons
R = Rejected
µg/L = Micrograms per Liter
Bolded = values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-12

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	04/16/15	10/14/15	04/06/16	10/26/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
MNA/WQ Parameters																							
Alkalinity (as CaCO3)	mg/L	391	415	329	414	368	401	415	436	466	366	456	430	416	400	380	360	430	512	356	NS	418	392
Chloride	mg/L	123	662	150	493	139	591	276	556	152	587	345	757	334	490	267	633	391	879	141	NS	805	1,250
Ethane	µg/L	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	0.47J	ND (<0.025)	ND (<0.030)	ND (<0.030)	ND (<0.16)	ND (<1.0)	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Ethene	µg/L	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<0.035)	ND (<0.035)	ND (<0.10)	ND (<0.10)	ND (<0.032)	ND (<1.0)	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Ferrous Iron	mg/L	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	0.11	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	NS	ND (<0.10)	ND (<0.10)
Manganese	mg/L	0.19	2.1	0.36	1.2	0.16	0.039	0.062	0.202	0.0201	0.0399	0.0113	0.0152	0.0153	0.0636	0.0386	0.0074	ND (<0.005)	ND (<0.015)	0.0157	0.272	0.0396	0.0385
Methane	µg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<4.0)	ND (<4.0)	ND (<4.0)	ND (<4.0)	1.95	0.24J	0.27J	1.0J	0.35J	ND (<2.5)	ND (<2.5)	ND (<0.10)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Nitrate	mg/L	2.5	4.8	1.4	3.7	1.4	2.5	3.3	2.9	5.1	3.6	0.84	5.6	4.3	ND (<0.10)	5.9	2.5	3	4.4	2.7	3.2	5.3	5.2
Nitrogen	mg/L	0.24	2.4	0.44	0.61	0.61	ND (<0.2)	ND (<0.2)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	5.1	ND (<1.0)	3.9	ND (<0.10)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Sulfate	mg/L	73.5	115	51.6	73.5	54.8	70.2	93.7	56.0	115	53.7	70.3	66.8	53.9	55.1	77.2	48.3	65.9	64.1	39.9	NS	101	54
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.6	ND (<1.0)	ND (<1.0)	1.0	ND (<1.0)

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Table 3

Groundwater Analytical Data
MW-13

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/13/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
BTEX Compounds																								
Benzene	µg/L	1	**490**	**400**	**200**	**300**	**17**	**360**	**300**	**348**	**15.5**	**363**	**11.6**	**32.8**	**16.9**	**328**	**126**	**268**	**11.7**	**187**	**7.1**	**113**	**5.9**	**171**
Ethylbenzene	µg/L	5	**600**	**320**	**200**	**340**	**17**	**190**	**270**	**366**	**7.4**	**210**	4.8	**23.3**	**12.4**	**230**	**85.6**	**193**	4.5	**164**	**5.1**	**104**	1.5	**148**
m/p-Xylene	µg/L	5	**730**	**420**	**250**	**480**	**24**	**270**	**360**	**467**	**12.1**	**257**	**8.6**	**34.8**	**16.6**	**229**	**89.5**	**179**	**8.7**	**152**	5.0	**96.2**	2.7	**122**
o-Xylene	µg/L	5	**320**	**190**	**120**	**210**	**16**	**120**	**150**	**203**	**8.4**	**117**	**9.3**	**18.6**	**9.7**	**112**	**48.6**	**90.7**	**5.5**	**74.2**	4.0	**53.6**	3.6	**60.4**
Toluene	µg/L	5	**710**	**440**	**270**	**430**	**17**	**320**	**410**	**552**	**7.6**	**332**	3.9	**25.1**	**11.1**	**288**	**95.7**	**279**	**5.8**	**158**	3.9	**84.2**	1.3	**133**
PAHs																								
Acenaphthene	µg/L	20	**130**	**77**	**71**	**130**	ND (<4.9)	**65 E**	**130**	**225**	0.34	**78.4**	0.16	4.3	6.8	**141**	4.6	**124**	0.35	**106**	5.6	**143**	ND (<0.096)	**245**
Acenaphthylene	µg/L	NC	430	350	22	450	ND (<4.9)	77 E	220	267	1.2	122	0.61	6.4	6.7	57.0	0.78	43.4	0.89	10.5	1.4	68.4	0.14	24.5
Anthracene	µg/L	50	ND (<47)	ND (<47)	6.9	14	ND (<4.9)	9.2 F1 F2	10	19.2	0.55	7.2	0.25	0.73	0.82	7.3	0.15	5.1	0.33	6.1	0.15	6.7	ND (<0.096)	6.5
Benzo(a)anthracene	µg/L	0.002	ND (<47)	ND (<47)	ND (<47)	**1.9**	ND (<0.001)	**0.59 F2**	ND (<9.7)	**6.7**	**0.93**	**1.7**	**0.30**	**0.22**	**0.14**	**0.79**	**0.18**	**0.51**	**0.38**	**0.98**	ND (<0.098)	**0.98**	ND (<0.096)	**0.56**
Benzo(a)pyrene	µg/L	0.002	ND (<47)	ND (<47)	ND (<47)	**1.6**	ND (<0.001)	ND (<0.49)	ND (<9.7)	**6.5**	**1.0**	**1.3**	**0.40**	**0.20**	ND (<0.10)	**0.58**	**0.20**	**0.31**	**0.82**	**0.87**	ND (<0.098)	**1.1**	**0.11**	**0.31**
Benzo(b)fluoranthene	µg/L	0.002	ND (<47)	ND (<47)	ND (<47)	**2.8**	ND (<0.001)	ND (<0.49)	ND (<9.7)	**6.2**	**1.2**	**1.6**	**0.47**	**0.22**	**0.12**	**0.49**	**0.17**	**0.27**	**0.83**	**0.97**	ND (<0.098)	**1.2**	**0.10**	**0.33**
Benzo(g,h,i)perylene	µg/L	NC	ND (<47)	ND (<47)	ND (<47)	0.6	ND (<0.001)	ND (<0.49)	ND (<9.7)	3.3	0.55	ND (<0.98)	0.21	ND (<0.099)	ND (<0.10)	0.23	ND (<0.10)	0.13	0.45	0.42	ND (<0.098)	0.59	ND (<0.096)	0.11
Benzo(k)fluoranthene	µg/L	0.002	ND (<47)	ND (<47)	ND (<47)	**0.53**	ND (<0.001)	ND (<0.49)	ND (<9.7)	**2.5**	**1.1**	**1.3**	**0.35**	**0.20**	**0.11**	**0.21**	ND (<0.10)	**0.11**	**0.79**	**0.84**	ND (<0.098)	**1.1**	ND (<0.096)	**0.27**
Chrysene	µg/L	0.002	ND (<47)	ND (<47)	ND (<47)	**1.8**	ND (<0.001)	**0.50 F1 F2**	ND (<9.7)	**6.1**	**0.81**	**1.3**	**0.22**	**0.20**	ND (<0.10)	**0.64**	**0.13**	**0.38**	**0.34**	**0.62**	ND (<0.098)	**0.75**	ND (<0.096)	**0.34**
Dibenzo(a,h)anthracene	µg/L	NC	ND (<47)	ND (<47)	ND (<47)	ND (<0.47)	ND (<0.001)	ND (<0.49)	ND (<9.7)	0.85	0.13	ND (<0.98)	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.098)	ND (<0.10)	ND (<0.098)	0.11	ND (<0.11)	ND (<0.098)	0.16	ND (<0.096)	ND (<0.099)
Fluoranthene	µg/L	50	ND (<47)	ND (<47)	6.1	8.2	ND (<4.9)	5.5 F2	ND (<9.7)	17.8	1.9	5.4	0.51	0.77	0.66	4.6	1.3	4.0	0.58	4.4	0.27	5.4	ND (<0.096)	4.7
Fluorene	µg/L	50	**93**	**68**	30	**94J**	ND (<4.9)	43 F1 F2	**55**	**74.8**	0.46	37.9	0.19	2.6	3.7	45.7	0.16	33.2	0.27	42.5	0.89	44.5	ND (<0.096)	50.8
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<47)	ND (<47)	ND (<47)	**0.48**	ND (<0.001)	ND (<0.49)	ND (<9.7)	**2.7**	**0.42**	ND (<0.98)	**0.17**	ND (<0.099)	ND (<0.10)	**0.19**	ND (<0.10)	**0.11**	**0.34**	**0.34**	ND (<0.098)	**0.49**	ND (<0.096)	**0.10**
Naphthalene	µg/L	10	**7100**	**3700**	ND (<10)	**4200**	ND (<4.9)	**350 E**	**170**	**5560**	0.96	**1880**	0.45	0.31	0.14	**9,700**	0.19	**2,190**	0.76	1.6	0.16	**586**	ND (<0.096)	**521**
Phenanthrene	µg/L	50	**73**	**61**	ND (<50)	**70**	ND (<4.9)	31 F1	ND (<9.7)	**78.3**	1.5	32.8	0.60	0.37	2.40	39.8	0.14	31	0.76	24.0	ND (<0.098)	17.2	ND (<0.096)	39.7
Pyrene	µg/L	50	ND (<47)	ND (<47)	7.2	9.7	ND (<4.9)	5.8 F2	ND (<9.7)	ND (<52.1)	1.7	6.0	0.54	0.78	0.63	4.8	0.86	4.1	0.71	4.6	0.13	5.6	ND (<0.096)	4.7
Cyanide and Lead																								
Lead	µg/L	25	7.8	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<4.9)	ND (<10)	ND (<10)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<20)	ND (<10.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	**0.32**	**0.26**	0.17	**0.24**	0.11	**0.22 F1**	**0.29**	**0.23**	0.070	**0.20**	0.062	0.10	0.09	0.16	0.11	0.16	0.050	0.095	0.096	0.14	0.046	0.100

AWQS = Ambient Water Quality Standards
B = Present in Associated Blank Sample
BTEX = Benzene, Ethylbenzene, Toluene and Xylene
D = Diluted Sample
E = Result exceeded calibration range
F1 = MS and/or MSD Recovery outside acceptance limits.
F2 = MS/MSD RPD above control
J = Estimated Concentration Valu
mg/L = Milligrams per Liter
NC = No Criteria
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
NYSDEC = New York State Department of Environmental Conservation
PAHs = Polycyclic Aromatic Hydrocarbons
R = Rejected
µg/L = Micrograms per Liter
Bolded = values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-13

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	10/13/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
MNA/WQ Parameters																						
Alkalinity (as CaCO3)	mg/L	218	187	176	255	283 F1	311	364	234	308	226	280	230	380	268	320	232	350	304	350	297	336
Chloride	mg/L	20.4	7.3	9.2	17.3	11.2	9.8	11.4	3.4	7.6	92.7	31.6	8.4	19.5	9.3	6.9	11.8	8.4	ND (<3.0)	6.7	15.8	8.3
Ethane	µg/L	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	1.2	ND (<0.025)	0.88J	ND (<0.030)	0.22J	0.11 J	0.74 J	ND (<1.00)	ND (<5.0)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Ethene	µg/L	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.5)	3.3	ND (<0.035)	2.3	ND (<0.10)	0.46J	0.19 J	2.1	ND (<1.00)	2.34 J	ND (<5.00)	1.26 J	ND (<1.00)	NS	ND (<1.00)	1.02
Ferrous Iron	mg/L	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<1.0)	0.18	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	0.15	ND (<0.10)	ND (<0.10)	0.13	ND (<0.10)	ND (<0.10)	ND (<0.10)	0.11
Manganese	mg/L	0.11	0.088	0.14	0.031	0.064	ND (<7.5)	0.0938	0.0417	0.0705	0.0570	0.0619	0.0298	0.0710	0.0446	0.0709	0.0601	0.0859	0.034	0.062	0.0202	0.0822
Methane	µg/L	36	15	74	ND (<4.0)	110	50	280	0.34J	190	12	73	41	250	84.7	218	ND (<5.00)	111	25.5	NS	10.9	169
Nitrate	mg/L	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	0.05	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<1.0)	ND (<1.0)	ND (<0.50)	ND (<1.0)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)
Nitrogen	mg/L	1.8	1.2	2.1	0.62	1.4	1.2	1.3	ND (<1.0)	2.1	ND (<1.0)	4.5	ND (<0.10)	ND (<0.10)	ND (<1.0)	ND (<1.0)	2.3	ND (<1.0)	ND (<100)	ND (<1.0)	ND (<1.0)	1.1
Sulfate	mg/L	82.3	15.5	15.5	ND (<5.0)	ND (<5.0)	ND (<5.0)	18.3	16.0	42.3	20.4	28.6	26.1	23.4	10.8	17.3	32.1	8.6	25.1	8.4	13.4	3.4
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.6	1.0	ND (<1.0)	ND (<1.0)	ND (<1.0)

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Table 3

Groundwater Analytical Data
MW-14

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/13/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
BTEX Compounds																								
Benzene	µg/L	1	ND (<1.0)	**1.3**	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<0.54)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Ethylbenzene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<0.54)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
m/p-Xylene	µg/L	5	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<0.54)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)	ND (<2.0)
o-Xylene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<0.54)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
Toluene	µg/L	5	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<0.54)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)
PAHs																								
Acenaphthene	µg/L	20	ND (<0.48)	2.2	0.5	2.00	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.19	ND (<0.096)	1.7	ND (<0.099)	ND (<0.099)	ND (<0.10)	0.18	0.8	0.2	ND (<0.10)	0.20	ND (<0.10)	0.23	ND (<0.099)	ND (<0.099)
Acenaphthylene	µg/L	NC	ND (<0.48)	2.5	ND (<0.48)	2.9	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.99	0.25	4.1	0.19	0.34	0.26	0.71	8.4	1.2	0.38	1.6	0.21	0.49	0.37	0.29
Anthracene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	0.5	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.25	0.096	0.29	ND (<0.099)	0.15	0.11	0.11	3.5	0.6	0.16	0.62	ND (<0.10)	0.19	0.14	0.16
Benzo(a)anthracene	µg/L	0.002	ND (<0.48)	**0.62**	**1**	**1.9**	ND (<0.47)	ND (<0.52)	ND (<0.54)	**0.28**	**0.13**	**0.26**	**0.11**	ND (<0.099)	ND (<0.10)	ND (<0.096)	**19.8**	**2.1**	**0.51**	**3.5**	ND (<0.10)	ND (<0.10)	**0.63**	**0.13**
Benzo(a)pyrene	µg/L	0.002	ND (<0.48)	**0.65**	**1.3**	**2.4**	ND (<0.47)	ND (<0.52)	ND (<0.54)	**0.32**	**0.12**	**0.29**	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.096)	**24.8**	**2.6**	**0.66**	**3.9**	ND (<0.10)	ND (<0.10)	**0.72**	**0.15**
Benzo(b)fluoranthene	µg/L	0.002	ND (<0.48)	**0.79**	**1.2**	**3.8**	ND (<0.47)	ND (<0.52)	ND (<0.54)	**0.55**	**0.21**	**0.47**	**0.14**	ND (<0.099)	**0.7**	ND (<0.096)	**26.1**	**2.8**	**0.87**	**5.4**	ND (<0.10)	ND (<0.10)	**0.91**	**0.19**
Benzo(g,h,i)perylene	µg/L	NC	ND (<0.48)	ND (<0.48)	0.95	1.3	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.29	0.11	0.24	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.096)	17.5	1.9	0.54	2.7	ND (<0.10)	ND (<0.10)	0.44	0.11
Benzo(k)fluoranthene	µg/L	0.002	ND (<0.48)	ND (<0.48)	**0.83**	**1.1**	ND (<0.47)	ND (<0.52)	ND (<0.54)	**0.47**	**0.18**	**0.40**	**0.11**	ND (<0.099)	**0.14**	ND (<0.096)	**8.5**	**1.0**	**0.84**	**4.7**	ND (<0.10)	ND (<0.10)	**0.80**	**0.16**
Chrysene	µg/L	0.002	ND (<0.48)	**0.69**	**1.2**	**2.1**	ND (<0.47)	ND (<0.52)	ND (<0.54)	**0.27**	**0.13**	**0.24**	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.096)	**17.0**	**1.9**	**0.51**	**2.7**	ND (<0.10)	ND (<0.10)	**0.45**	ND (<0.099)
Dibenzo(a,h)anthracene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<0.52)	ND (<0.54)	ND (<0.10)	ND (<0.096)	ND (<0.099)	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.096)	4.5	0.4	0.13	0.59	ND (<0.10)	ND (<0.10)	ND (<0.099)	ND (<0.099)
Fluoranthene	µg/L	50	ND (<0.48)	1.2	1.5	3.2	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.45	0.17	0.55	0.13	ND (<0.099)	0.14	0.098	29.0	3.0	0.71	4.5	ND (<0.10)	ND (<0.10)	0.77	0.18
Fluorene	µg/L	50	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.14	ND (<0.096)	0.21	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.096)	1.3	0.2	ND (<0.10)	0.26	ND (<0.10)	0.14	ND (<0.099)	ND (<0.099)
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<0.48)	ND (<0.48)	**0.63**	**0.95**	ND (<0.47)	ND (<0.52)	ND (<0.54)	**0.21**	ND (<0.096)	**0.18**	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.096)	**14.4**	**1.5**	**0.40**	**2.2**	ND (<0.10)	ND (<0.10)	**0.36**	ND (<0.099)
Naphthalene	µg/L	10	1.7	0.48	ND (<0.48)	1.1	ND (<0.47)	ND (<0.52)	ND (<0.54)	5.2	ND (<0.096)	4.2	ND (<0.099)	ND (<0.099)	ND (<0.10)	0.72	0.86	1.10	ND (<0.10)	0.18	ND (<0.10)	ND (<0.10)	ND (<0.099)	1.4
Phenanthrene	µg/L	50	ND (<0.48)	0.67	0.63	1.4	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.22	ND (<0.096)	0.17	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.096)	9.8	1.0	0.25	1.5	ND (<0.10)	ND (<0.10)	0.22	ND (<0.099)
Pyrene	µg/L	50	ND (<0.48)	1.5	2.4	5.0	ND (<0.47)	ND (<0.52)	ND (<0.54)	0.68	0.28	0.74	0.20	ND (<0.099)	0.22	0.12	47.0	5.0	1.2	7.3	ND (<0.10)	ND (<0.10)	1.2	0.27
Cyanide and Lead																								
Lead	µg/L	25	ND (<5.0)	15	ND (<5.0)	0.031	ND (<0.01)	ND (<0.01)	ND (<10)	**33.3**	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	**256**	**50.2**	7.5	90.9	ND (<10.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	0.1	0.2	**0.9**	0.2	0.091	0.120	**0.88**	**0.67**	0.079	**0.25**	0.062	0.11	0.0838	0.11	0.12	**0.42**	0.057	0.072	0.14	0.13	0.076	0.10

AWQS = Ambient Water Quality Standards
B = Present in Associated Blank Sample
BTEX = Benzene, Ethylbenzene, Toluene and Xylene
D = Diluted Sample
E = Result exceeded calibration range
F1 = MS and/or MSD Recovery outside acceptance limits.
F2 = MS/MSD RPD above control limits.
J = Estimated Concentration Value
mg/L = Milligrams per Liter
NC = No Criteria
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
NYSDEC = New York State Department of Environmental Conservation
PAHs = Polycyclic Aromatic Hydrocarbons
R = Rejected
µg/L = Micrograms per Liter
Bolded = values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-14

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	10/13/14	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
MNA/WQ Parameters																						
Alkalinity (as $CaCO_3$)	mg/L	417	456	483	372	445	507	520	380	404	392	450	384	380	342	400	364	392	392	NS	310	384
Chloride	mg/L	2	7.6	28.5	3.9	10.7	27.4	18.0	3.5	6.6	ND (<3.0)	3.2	3.5	ND (<3.0)	ND (<3.0)	6.7	6.9	4.5	ND (<3.0)	NS	3.4	5.2
Ethane	µg/L	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	ND (<7.5)	0.17J	ND (<0.025)	0.13J	ND (<0.030)	ND (<0.16)	ND (<1.0)	ND (<1.0)	1.57	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Ethene	µg/L	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.0)	ND (<7.5)	ND (<0.035)	ND (<0.035)	ND (<0.10)	ND (<0.10)	ND (<0.032)	ND (<1.0)	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Ferrous Iron	mg/L	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	0.11	0.55	0.22	0.93	0.47	0.30	0.39	0.12	1.90	2.1	0.44	1.4	0.38	NS	0.177	1.4
Manganese	mg/L	0.008	0.25	1	0.019	0.011	ND (<7.5)	0.768	0.0262	0.416	0.201	0.0121	0.0208	0.051	3.79	0.940	0.268	4.29	0.203	0.0845	1.0	0.116
Methane	µg/L	ND (<1.0)	8.6	140	ND (<4.0)	ND (<4.0)	31	140	19	120	1.7J	1.4J	ND (<2.5)	19	1,020	ND (<5.00)	6.54	4.01 J	6.99	NS	7.40	13.3
Nitrate	mg/L	0.8	ND (<0.05)	ND (<0.05)	0.87	0.16	ND (<0.05)	ND (<0.10)	0.29	ND (<0.10)	ND (<0.10)	0.59	0.4	ND (<1.0)	ND (<1.0)	ND (<0.50)	0.6	0.28	0.21	ND (<0.10)	0.36	0.21
Nitrogen	mg/L	0.54	0.68	1.5	0.22	0.72	1	1.2	ND (<1.0)	ND (<1.0)	1.0	ND (<1.0)	ND (<1.0)	ND (<1.0)	4.2	3.6	1.0	1.8	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.5
Sulfate	mg/L	ND (<5.0)	ND (<5.0)	363	ND (<5.0)	ND (<5.0)	324	153	12.5	52.4	15.2	20.3	ND (<10)	17.7	11.2	102.0	15.1	14.5	25.9	NS	10.6	17.1
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.4	1.0	ND (<1.0)	ND (<1.0)	ND (<1.0)

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Table 3

Groundwater Analytical Data
MW-15

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/13/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
BTEX Compounds																								
Benzene	µg/L	1	**410**	**390**	**210**	**300**	**16**	**350 E**	**330**	**714**	**111**	**373**	**48.7**	**108**	**41.2**	**364**	**55.8**	**271**	**92.7**	**18.7**	**149**	**324**	**91.7**	**139**
Ethylbenzene	µg/L	5	**75**	**53**	**38**	**74**	1.9	**92**	**110**	**244**	**24.5**	**124**	**10.2**	**45.2**	**15.7**	**135**	**19.4**	**99.9**	**31.0**	**7.9**	**86.7**	**133**	**40.7**	**63.1**
m/p-Xylene	µg/L	5	**19**	ND (<5.0)	ND (<5.0)	**ND (<10)**	3.2	**8.1**	ND (<8.0)	**13.7**	2.7	**9.4**	ND (<2.0)	2.8	ND (<2.0)	**17.5**	ND (<2.0)	**12.3**	ND (<2.0)	3.4	**21.6**	**10**	4.3	**11.6**
o-Xylene	µg/L	5	**19**	**16**	**8.5**	**28**	**7.5**	**23**	**21**	**31.7**	**7.3**	**22.8**	3.7	**18.8**	**8.1**	**26.2**	4.6	**23**	4.2	**15.4**	**28.1**	**24.4**	**12.4**	**15.2**
Toluene	µg/L	5	ND (<5.0)	ND (<5.0)	ND (<5.0)	**5.8**	ND (<1.0)	**7**	ND (<8.0)	**6.1**	1.1	**7.4**	ND (<1.0)	2.9	1.3	**8.5**	1.4	**6.9**	ND (<1.0)	1.1	**11.1**	**5.4**	2.3	4.0
PAHs																								
Acenaphthene	µg/L	20	**42**	**23**	18	**24**	6.7	16	**23**	**43.1**	10.1	16.3	12.4	**32.7**	12.6	**28.4**	4.7	17.2	**28.3**	**40.3**	16.6	**39.1**	**27.1**	**22**
Acenaphthylene	µg/L	NC	11	6.5	3	3.9	0.59	3.1	ND (<5.1)	2.4	1.5	2.5	1.4	3.9	1.6	1.9	0.66	1.2	2.5	3.7	1.2	1.6	2.2	1.8
Anthracene	µg/L	50	2.6	1.4	0.95	0.81	ND (<0.49)	0.57	ND (<5.1)	1.9	0.36	0.56	0.31	0.55	0.46	0.74	0.25	0.52	0.35	0.82	0.42	0.96	0.46	0.67
Benzo(a)anthracene	µg/L	0.002	**0.96**	**0.59**	ND (<0.58)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<5.1)	**0.14**	**0.13**	**0.55**	**0.14**	ND (<0.099)	**0.14**	**0.14**	**0.16**	**0.20**	**0.16**	**0.37**	**0.13**	**0.14**	**0.11**	**0.19**
Benzo(a)pyrene	µg/L	0.000	**0.96**	**0.59**	ND (<0.58)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<5.1)	ND (<0.10)	**0.10**	**0.58**	**0.11**	ND (<0.099)	**0.12**	ND (<0.097)	**0.18**	**0.20**	**0.13**	**0.37**	ND (<0.11)	ND (<0.099)	ND (<0.10)	**0.19**
Benzo(b)fluoranthene	µg/L	0.002	**0.85**	**0.62**	ND (<0.58)	**0.72**	ND (<0.49)	ND (<0.47)	ND (<5.1)	**0.11**	**0.16**	**0.81**	**0.15**	ND (<0.099)	**0.17**	**0.11**	**0.16**	**0.21**	**0.16**	**0.48**	**0.11**	**0.12**	**0.10**	**0.22**
Benzo(g,h,i)perylene	µg/L	NC	ND (<0.58)	ND (<0.58)	ND (<0.58)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<5.1)	ND (<0.10)	ND (<0.098)	0.4	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.097)	0.11	0.12	ND (<0.096)	0.21	ND (<0.11)	ND (<0.099)	ND (<0.10)	0.10
Benzo(k)fluoranthene	µg/L	0.002	**0.72**	ND (<0.58)	ND (<0.58)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<5.1)	ND (<0.10)	**0.13**	**0.69**	**0.11**	ND (<0.099)	**0.15**	**0.10**	ND (<0.10)	ND (<0.097)	**0.15**	**0.41**	ND (<0.11)	**0.11**	ND (<0.10)	**0.18**
Chrysene	µg/L	0.002	**1.2**	**0.59**	ND (<0.58)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<5.1)	**0.11**	**0.12**	**0.48**	ND (<0.099)	ND (<0.099)	**0.12**	**0.11**	**0.12**	**0.17**	**0.13**	**0.26**	ND (<0.11)	**0.10**	ND (<0.10)	**0.13**
Dibenzo(a,h)anthracene	µg/L	NC	ND (<0.58)	ND (<0.58)	ND (<0.58)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<5.1)	ND (<0.10)	ND (<0.098)	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.10)	ND (<0.097)	ND (<0.096)	ND (<0.10)	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)
Fluoranthene	µg/L	50	3.3	1.7	1.1	0.93	ND (<0.49)	0.61	ND (<5.1)	1.2	0.46	1.2	0.34	0.53	0.6	0.89	0.41	0.68	0.52	0.76	0.44	0.79	0.46	0.70
Fluorene	µg/L	50	13	6.1	4.3	5.2	1.2	4.1	5.9	11.8	1.9	4.1	2.4	5.3	3.4	6.6	1.4	4.0	4.4	3.3	2.9	7.9	5.4	5.2
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<0.58)	ND (<0.58)	ND (<0.58)	ND (<0.48)	ND (<0.49)	ND (<0.47)	ND (<5.1)	ND (<0.10)	ND (<0.098)	**0.31**	ND (<0.099)	ND (<0.099)	ND (<0.10)	ND (<0.097)	ND (<0.10)	ND (<0.097)	ND (<0.096)	**0.17**	ND (<0.11)	ND (<0.099)	ND (<0.10)	ND (<0.099)
Naphthalene	µg/L	10	**94**	**13**	**29**	**210**	1.5	**48 E**	**110**	**363**	**34.1**	**69.3**	**16.8**	**138**	**43**	**512**	1.1	**272**	**15.0**	**152**	**242**	**232**	**126**	**138**
Phenanthrene	µg/L	50	10	5.1	3.4	3.7	ND (<0.49)	2.8	ND (<5.1)	8.5	1.2	2.5	0.99	1.9	1.8	3.7	0.52	2.1	1.2	2.7	1.6	3.7	1.2	2.0
Pyrene	µg/L	50	3.7	2	1.5	1.1	ND (<0.49)	0.69	ND (<5.1)	1.4	0.58	1.6	0.45	0.59	0.73	1.0	0.54	0.83	0.71	1.0	0.57	0.92	0.57	0.84
Cyanide and Lead																								
Lead	µg/L	25	10	ND (<5.0)	ND (<5.0)	0.010	0.010	0.010	ND (<10)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<20)	ND (<10.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	**0.5**	**0.5**	**0.48**	**0.58**	**0.29**	**1**	**1.1**	**1.1**	**0.42**	**1.3**	**0.56**	**0.27**	**0.171**	**0.61**	**0.32**	**0.67**	**0.23**	0.18	**0.23**	**1.1**	**0.29**	**0.25**

AWQS = Ambient Water Quality Standards
B = Present in Associated Blank Sample
BTEX = Benzene, Ethylbenzene, Toluene and Xylene
D = Diluted Sample
E = Result exceeded calibration range
F1 = MS and/or MSD Recovery outside acceptance limits.
F2 = MS/MSD RPD above control limits.
J = Estimated Concentration Value
mg/L = Milligrams per Liter
NC = No Criteria
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
NYSDEC = New York State Department of Environmental Conservation
PAHs = Polycyclic Aromatic Hydrocarbons
R = Rejected
µg/L = Micrograms per Liter
Bolded = values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-15

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	04/16/15	10/13/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
MNA/WQ Parameters																							
Alkalinity (as CaCO3)	mg/L	527	585	482	557	480	600	601	676	562	610	616	600	478	590	446	550	534	480	478	600	492	532
Chloride	mg/L	39.4	42	44.5	44.2	14.2	49.3	55.7	65.4	25.7	58.0	15.2	15.2	43.9	38	20.3	37.4	24.6	14.0	14.9	82.6	29.1	29.2
Ethane	µg/L	ND (<380)	ND (<380)	ND (<380)	ND (<380)	ND (<380)	ND (<380)	ND (<75)	6.2	3.2	5.1	2.8	2.1	3.4	5.1	ND (<1.00)	3.53 J	ND (<5.00)	ND (<2.0)	2.02	NS	1.96 J	ND (<10.0)
Ethene	µg/L	ND (<350)	ND (<350)	ND (<350)	ND (<350)	ND (<350)	ND (<350)	ND (<75)	0.038J	0.037J	ND (<0.10)	ND (<0.10)	0.042J	ND (<1.0)	ND (<1.0)	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Ferrous Iron	mg/L	0.15	0.18	ND (<0.1)	ND (<0.1)	ND (<0.1)	0.15 HF	ND (<0.1)	8.2	3.0	5.8	3.8	9.2	2.5	3.2	4.2	6.0	8.7	14.8	3.0	7.9	10.7	9.5
Manganese	mg/L	1	1.1	0.68	1	0.68	0.7	ND (<75)	0.609	0.0639	0.735	0.484	1.56	0.775	0.952	0.312	0.685	0.894	1.27	1.03	0.508	0.724	0.818
Methane	µg/L	780	580	1,100	2,400	16	1,600	720	3,400	1,900	2,900	640	3,100	1,400	3,600	416	2,400	348	1,020	2,650	NS	1,190	3,250
Nitrate	mg/L	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	0.28	ND (<0.05)	ND (<0.5)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.50)	ND (<0.10)	ND (<0.20)	ND (<2.0)	ND (<0.50)	0.11	ND (<0.10)
Nitrogen	mg/L	3	3.1	3.2	2.9	0.81	3.9	3.4	4.7	2.0	4.4	3.1	1.9	1.4	3.1	1.9	2.0	2.2	1.8	1.9	4.5	1.7	2.6
Sulfate	mg/L	113	139	122	91.1	28.7	78.5	116	67.9	17.7	60.6	39.0	28.4	25.1	65.9	31.9	71.0	46.8	1.8	24.4	122	39.0	57.2
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.6	ND (<1.0)	ND (<1.0)	ND (<1.0)

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Table 3

Groundwater Analytical Data
MW-16

CONSTITUENT	UNITS	NYSDEC AWQS Values	04/18/13	10/08/13	04/09/14	10/20/14	04/16/15	10/13/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
BTEX Compounds																								
Benzene	µg/L	1	**200**	**150**	**8.7**	**59**	**91**	**40**	**76**	**149**	**5.9**	**143**	**80.6**	**127**	**126**	**143**	**56.6**	**130**	**15.0**	**97.6**	**9.1**	**59.3**	**12.4**	**89.6**
Ethylbenzene	µg/L	5	**150**	**92**	**6.2**	**41**	**68**	**26**	**35**	**134**	**3.1**	**124**	**60.8**	**101**	**91.5**	**118**	**38.7**	**70.4**	2.9	**65.5**	3.8	**40.8**	**5.5**	**60.6**
m/p-Xylene	µg/L	5	**41**	**23**	ND (<1.0)	ND (<10)	ND (<1.0)	4.9	5	4.9	ND (<2.0)	**9.3**	**6.6**	**8.7**	**9.5**	**9.3**	3.9	2.8	ND (<2.0)	4.1	ND (<2.0)	3.0	ND (<2.0)	**5.4**
o-Xylene	µg/L	5	**56**	**35**	ND (<1.0)	**17**	**24**	**11**	**20**	**32.1**	**1.6**	**38.0**	**21.3**	**32.8**	**31.4**	**34.6**	**12.8**	**22.3**	**6.1**	**21.5**	3.1	**12.6**	**2.2**	**20.0**
Toluene	µg/L	5	**14**	**9**	ND (<1.0)	**17**	ND (<1.0)	1.4	ND (<2.0)	**2.9**	ND (<1.0)	3.8	2.1	3.8	3.7	4.5	1.5	3.0	ND (<1.0)	2.9	1.6	2.1	ND (<1.0)	3.4
PAHs																								
Acenaphthene	µg/L	20	**30**	16	ND (<1.0)	**40**	**27**	14	**31**	**54.7**	3.0	**39.5**	**39.1**	**57.8**	**45.2**	**53.3**	14.6	**47.0**	9.9	**55.1**	10.6	**48.1**	12.7	**53.5**
Acenaphthylene	µg/L	NC	49	ND (<0.48)	ND (<0.48)	31	25	16	27	47.3	1.9	26.2	24.4	30.6	17.6	21.4	5.9	16.0	3.2	19.4	4.9	19.1	4.7	19.5
Anthracene	µg/L	50	2.8	ND (<0.48)	ND (<0.48)	2.8	1.8	1.2	ND (<2.5)	1.4	0.37	2.2	1.7	2.6	1.8	2.4	0.74	1.7	0.47	2.3	0.48	1.7	0.60	2.3
Benzo(a)anthracene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	**0.10**	**0.11**	**0.11**	**0.13**	**0.12**	**0.11**	**0.13**	ND (<0.10)	**0.23**	ND (<0.098)	**0.19**	ND (<0.098)	**0.13**	ND (<0.10)	**0.16**
Benzo(a)pyrene	µg/L	0.000	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	ND (<0.10)	**0.11**	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.11)	ND (<0.097)	ND (<0.10)	**0.21**	ND (<0.098)	ND (<0.10)	ND (<0.098)	ND (<0.10)	ND (<0.10)	ND (<0.10)
Benzo(b)fluoranthene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	ND (<0.10)	**0.17**	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.11)	0.11	ND (<0.10)	**0.21**	ND (<0.098)	**0.12**	ND (<0.098)	ND (<0.10)	ND (<0.10)	ND (<0.10)
Benzo(g,h,i)perylene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	ND (<0.10)	ND (<0.097)	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.11)	ND (<0.097)	ND (<0.10)	0.14	ND (<0.098)	ND (<0.10)	ND (<0.098)	ND (<0.10)	ND (<0.10)	ND (<0.10)
Benzo(k)fluoranthene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	ND (<0.10)	**0.15**	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.11)	**0.098**	ND (<0.10)	ND (<0.098)	ND (<0.098)	**0.11**	ND (<0.098)	ND (<0.10)	ND (<0.10)	ND (<0.10)
Chrysene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	ND (<0.10)	**0.098**	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.11)	**0.11**	ND (<0.10)	**0.19**	ND (<0.098)	**0.14**	ND (<0.098)	ND (<0.10)	ND (<0.10)	**0.11**
Dibenzo(a,h)anthracene	µg/L	NC	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	ND (<0.10)	ND (<0.097)	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.11)	ND (<0.097)	ND (<0.10)	ND (<0.098)	ND (<0.098)	ND (<0.10)	ND (<0.098)	ND (<0.10)	ND (<0.10)	ND (<0.10)
Fluoranthene	µg/L	50	2	ND (<0.48)	ND (<0.48)	2.7	1.6	1.1	ND (<2.5)	1.8	0.41	2.5	1.9	2.4	1.9	3.0	1.1	2.6	0.47	3.40	0.72	2.2	0.92	3.3
Fluorene	µg/L	50	21	9.1	ND (<0.48)	22	14	7.1	15	22.2	1.1	17.2	17.2	19.5	12.8	24.1	5.3	16.9	1.8	20.5	3.4	16.2	5.1	20.6
Indeno(1,2,3-cd)pyrene	µg/L	0.002	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.48)	ND (<0.50)	ND (<0.50)	ND (<2.5)	ND (<0.10)	ND (<0.097)	ND (<0.098)	ND (<0.099)	ND (<0.099)	ND (<0.11)	ND (<0.097)	ND (<0.10)	**0.11**	ND (<0.098)	ND (<0.10)	ND (<0.098)	ND (<0.10)	ND (<0.10)	ND (<0.10)
Naphthalene	µg/L	10	**230E**	ND (<0.48)	ND (<0.48)	1.7	4.6	5.1	7.4	4.6	0.16	5.8	**30.9**	9.8	**12.9**	**36.8**	2.2	8.0	1.4	**14.1**	8.3	**16.3**	9.0	**28.3**
Phenanthrene	µg/L	50	15	ND (<0.48)	ND (<0.48)	18	11	6.7	10	15.9	0.99	15.7	14.1	16.5	11.6	18.4	2.5	13.1	ND (<0.098)	15.4	3.5	13.0	4.1	18.2
Pyrene	µg/L	50	2	ND (<0.48)	ND (<0.48)	3	1.8	1.2	ND (<2.5)	2.0	0.50	2.7	2.1	2.5	2.1	3.3	1.2	2.9	0.54	3.8	0.80	2.30	1.0	3.7
Cyanide and Lead																								
Lead	µg/L	25	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<10)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)	6.1	ND (<5.0)	ND (<20)	ND (<10.0)	ND (<5.0)	ND (<5.0)	ND (<5.0)
Cyanide	mg/L	0.2	0.11	0.11	0.023	**0.25**	**0.24**	**0.24**	**0.25**	**0.26**	**0.21**	**0.26**	**0.23**	**0.26**	0.192	**0.23**	0.19	**0.25**	0.17	0.14	0.14	0.19	0.12	0.20

AWQS = Ambient Water Quality Standards
B = Present in Associated Blank Sample
BTEX = Benzene, Ethylbenzene, Toluene and Xylene
D = Diluted Sample
E = Result exceeded calibration range
F1 = MS and/or MSD Recovery outside acceptance limits.
F2 = MS/MSD RPD above control limits.
J = Estimated Concentration Value
mg/L = Milligrams per Liter
NC = No Criteria
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
NYSDEC = New York State Department of Environmental Conservation
PAHs = Polycyclic Aromatic Hydrocarbons
R = Rejected
µg/L = Micrograms per Liter
Bolded = values indicated exceedance of the NYSDEC AWQS

Table 3

Groundwater Analytical Data
MW-16

CONSTITUENT	UNITS	04/18/13	10/08/13	04/09/14	10/15/14	04/16/15	10/13/15	04/06/16	10/25/16	04/26/17	10/11/17	04/26/18	10/16/18	04/18/19	10/16/19	05/20/20	10/07/20	04/14/21	10/06/21	04/13/22	10/06/22	04/19/23	10/11/23
MNA/WQ Parameters																							
Alkalinity (as CaCO3)	mg/L	530	585	454	595	532	638	615	636	706	630	724	740	560	650	156	670	680	760	546	674	450	674
Chloride	mg/L	5.5	5.4	5	6.5	5.8	4.9	5.7	6.8	3.4	6.5	5.6	4.8	11.8	4.8	3.6	5.2	3.6	3.8	ND (<3.0)	5.7	ND (<3.0)	5.7
Ethane	µg/L	ND (<750)	ND (<750)	ND (<750)	ND (<750)	ND (<75)	ND (<75)	ND (<75)	1.2	0.15J	0.84J	0.82J	0.99J	0.92 J	1.1	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<1.00)	ND (<5.00)
Ethene	µg/L	ND (<700)	ND (<700)	ND (<700)	ND (<700)	ND (<70)	ND (<70)	ND (<75)	0.24J	0.036J	0.16J	0.13J	0.17J	0.15 J	0.20 J	ND (<1.00)	ND (<5.00)	ND (<5.00)	ND (<2.0)	ND (<1.00)	NS	ND (<1.00)	ND (<1.00)
Ferrous Iron	mg/L	ND (<0.1)	0.13	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	2.4	1.2	3.0	3.5	3.1	2.6	1.9	2.8	3.0	0.79	4.7	3.6	7.4	0.30	9.0
Manganese	mg/L	0.63	0.7	0.22	0.63	0.42	0.33	ND (<75)	0.601	0.522	0.599	0.551	0.592	0.603	0.658	0.373	0.650	0.373	0.646	0.275	0.553	0.125	0.634
Methane	µg/L	170	150	75	410	160	1100	110	900	180	780	820	830	850	1100	4.95 J	488	ND (<5.00)	500	173	NS	22.1	641
Nitrate	mg/L	0.1	ND (<0.05)	0.53	ND (<0.05)	ND (<0.05)	0.37	0.074	ND (<0.10)	0.33	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<0.10)	ND (<1.0)	ND (<1.0)	ND (<0.10)	ND (<1.0)	ND (<1.0)	ND (<0.50)	0.79	ND (<0.10)
Nitrogen	mg/L	3.6	2.8	2.4	3.3	2.1	1.9	2.6	5.4	2.4	3.2	2.3	3.2	3.4	3.9	2	2.8	2.4	3.9	2.2	3.7	1.0	3.9
Sulfate	mg/L	140	86	ND (<1.0)	107	38.2	22.8	13.3	145	37.8	77.7	111	75.8	79.6	67.7	39	95.7	37.5	56.8	25.9	36.2	28.5	30.2
Sulfide	mg/L	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<1.0)	1.0	ND (<1.0)	1.0	ND (<1.0)

B = Present in Associated Blank Sample
D = Diluted Sample
J = Estimated Concentration
mg/L = Milligrams per Liter
MNA = Monitored Natural Attenuation
NA = Not Analyzed
ND (<#) = Not detected above laboratory reporting limit (indicated by #)
NS = Not Sampled
R = Rejected
µg/L = Micrograms per Liter
WQ = Water Quality

Appendix A – Field Data

National Grid
109 North Market Street, Former MGP Site
Johnstown, New York

Semi-Annual GWS Event
October 26, 2022

Well ID	Sample?	Well Size?	DTW	DTP	DTB	Comments
RW-1	No	4"	15.28	—	21.50	
MW-4	Yes	2"	24.62	—	27.32	
MW-7	Yes	2"	14.78	—	22.10	
MW-10	Yes	2"	14.91	—	22.05	
MW-11	No	2"	—	—	22.90	inaccessable- debris
MW-12	Yes	2"	15.06	—	22.24	
MW-13	Yes	2"	15.52	—	22.75	MS/MSD
MW-14	Yes	2"	14.73	—	23.55	Field Duplicate
MW-15	Yes	2"	17.36	—	23.00	
MW-16	Yes	2"	10.35	—	19.45	
Gauge-1 (bridge)	No		15.43	—	19.76	

DTW *-depth to water*
DTP *-depth to product*
DTB *-depth to bottom*
All from top of casing

Unable to access MW-11. Area is on adjacent property and was full of concrete/metal and wood debris.

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: AJ
Job Number: 0603400-120950-221
Well Id. **MW-4**

Date: 10/11/23
Weather: 55°F, cloudy
Time In: 1115 Time Out:

Well Information

		TOC	Other
Depth to Water:	(feet)	27.62	
Depth to Bottom:	(feet)	27.32	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	2.70	
Volume of Water in Well:	(gal)	0.43	
Three Well Volumes:	(gal)	1.2	

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

Purging Information

Purging Method:	Bailer ☐	Peristaltic ☒	Well Wizard Dedicated Pump ☒		
Tubing/Bailer Material:	Teflon ☐	Stainless St. ☐	Polyethylene ☒	other ☐	
Sampling Method:	Bailer ☐	Peristaltic ☒	Well Wizard Dedicated Pump ☒		
Average Pumping Rate:	150 (ml/min)				
Duration of Pumping:	30 (min)				
Total Volume Removed:	1.5 (gal)				

Did well go dry? Yes ☐ No ☒

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

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

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
1125	24.24	13.31	7.41	-83	1.05	22.1	2.15	0.642
1130	24.24	13.34	7.09	41	1.67	56.1	4.40	1.06
1135	24.24	13.23	6.78	69	1.73	54.8	4.59	1.11
1140	24.24	13.19	6.70	77	1.73	31.3	4.60	1.11
1145	24.24	13.16	6.67	84	1.73	16.7	4.61	1.11
1150	24.24	13.17	6.67	89	1.73	9.4	4.58	1.11
1155	24.24	13.29	6.666	94	1.73	3.2	4.48	1.11

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

Sample ID: **MW-4-1023**
Sample Time: 1200

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

Shipped: Drop-off Albany Service Center ☐
Pace Courier ☒
Laboratory: Pace Analytical Greensburg, Pennsylvania

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: Peter Lyon
Job Number: 0603400-120950-221
Well Id. **MW-7**

Date: 10/11/23
Weather: 50° overcast
Time In: 1054 Time Out: 1130

Well Information

		TOC	Other
Depth to Water:	(feet)	14.78	
Depth to Bottom:	(feet)	22.10	
Depth to Product:	(feet)	-	
Length of Water Column:	(feet)	7.32	
Volume of Water in Well:	(gal)	1.17	
Three Well Volumes:	(gal)	3.51	

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

Purging Information

Purging Method:	Bailer ☐	Peristaltic ☐	Well Wizard Dedicated Pump ☒	
Tubing/Bailer Material:	Teflon ☐	Stainless St. ☐	Polyethylene ☒	other ☐
Sampling Method:	Bailer ☐	Peristaltic ☐	Well Wizard Dedicated Pump ☒	

Average Pumping Rate:	(ml/min)	250
Duration of Pumping:	(min)	30
Total Volume Removed:	(gal)	2

Did well go dry? Yes ☐ No ☒

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

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

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
1055	15.07	15.19	2.22	-157	2.21	36.9	3.43	1.37
1100	15.47	14.17	2.22	-151	1.38	123	1.96	0.879
1105	15.83	14.06	2.20	-139	1.25	89.0	1.15	0.796
1110	16.13	14.08	2.21	-143	1.23	51.6	0.75	0.787
1115	16.50	14.09	2.23	-153	1.23	35.9	0.40	0.791
1120	16.78	14.05	2.24	-160	1.24	36.7	0.25	0.793
1125	17.06	14.02	2.24	-163	1.24	29.7	0.18	0.797

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

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

Sample ID: **MW-7-1023** Duplicate? Yes ☐ No ☒
Sample Time: 1125 MS/MSD? Yes ☐ No ☒

Laboratory: Pace Analytical
Greensburg, Pennsylvania

Bridge: 15.63

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: Peter Lyon
Job Number: 0603400-120950-221
Well Id. **MW-10**

Date: 10/11/23
Weather: overcast 50°
Time In: 1000 Time Out: 1040

Well Information

		TOC	Other
Depth to Water:	(feet)	14.91	
Depth to Bottom:	(feet)	22.05	
Depth to Product:	(feet)	—	
Length of Water Column:	(feet)	2.14	
Volume of Water in Well:	(gal)	1.14	
Three Well Volumes:	(gal)	3.42	

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

Purging Information

Purging Method:	Bailer ☐	Peristaltic ☐	Well Wizard Dedicated Pump ☒		
Tubing/Bailer Material:	Teflon ☐	Stainless St. ☐	Polyethylene ☒	other ☐	
Sampling Method:	Bailer ☐	Peristaltic ☐	Well Wizard Dedicated Pump ☒		
Average Pumping Rate:	(ml/min)	250			
Duration of Pumping:	(min)	30			
Total Volume Removed:	(gal)	2			

Did well go dry? Yes ☐ No ☒

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

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

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
1005	15.79	15.24	7.11	-171	3.03	69.4	0.98	1.94
1010	15.94	15.30	7.13	-187	3.07	39.0	0.63	1.96
1015	16.08	15.35	7.16	-192	3.12	24.8	0.53	2.00
1020	16.30	15.33	7.18	-194	3.17	12.4	0.37	2.03
1025	16.44	15.36	7.18	-194	3.19	8.4	0.36	2.04
1030	16.62	15.40	7.18	-194	3.21	6.6	0.22	2.05
1035	16.84	15.38	7.19	-193	3.23	10.1	0.17	2.07

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

Sample ID: **MW-10-1023**
Sample Time: 1035

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

Shipped: Drop-off Albany Service Center ☐
Pace Courier ☒
Laboratory: Pace Analytical Greensburg, Pennsylvania

National Grid
109 North Market Street, Johnstown New York

Inaccessible

Sampling Personnel:
Job Number: 0603400-120950-221
Well Id. **MW-11**

Date:
Weather:
Time In: Time Out:

Well Information

		TOC	Other
Depth to Water:	(feet)		
Depth to Bottom:	(feet)	22.90	
Depth to Product:	(feet)		
Length of Water Column:	(feet)		
Volume of Water in Well:	(gal)		
Three Well Volumes:	(gal)		

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

Purging Information

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

Did well go dry? Yes [ ] No [ ]

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

Conversion Factors

	1" ID	2" ID	4" ID	6" ID
gal/ft. of water	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

Sample ID: **MW-11-1023**
Sample Time:

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

Shipped: Drop-off Albany Service Center [ ]
Pace Courier [X]
Laboratory: Pace Analytical
Greensburg, Pennsylvania

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: Peter Lyon
Job Number: 0603400-120950-221
Well Id. **MW-12**

Date: 10/11/23
Weather: 55° overcast
Time In: 1153 Time Out: 1230

Well Information

		TOC	Other
Depth to Water:	(feet)	15.06	
Depth to Bottom:	(feet)	22.24	
Depth to Product:	(feet)	-	
Length of Water Column:	(feet)	7.18	
Volume of Water in Well:	(gal)	1.14	
Three Well Volumes:	(gal)	3.44	

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

Purging Information

Purging Method:	Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]		
Tubing/Bailer Material:	Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]	
Sampling Method:	Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]		
Average Pumping Rate: (ml/min)	200				
Duration of Pumping: (min)	30				
Total Volume Removed: (gal)	2				

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

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

Conversion Factors

	1" ID	2" ID	4" ID	6" ID
gal/ft. of water	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
1155	15.14	13.73	7.19	-34	2.56	207	6.59	1.67
1200	15.10	13.43	7.22	2	3.31	340	4.21	2.13
1205	15.14	12.91	7.20	17	4.25	321	2.65	2.74
1210	15.17	12.74	7.18	26	4.46	116	2.57	2.85
1215	15.17	12.73	7.15	36	4.52	48.8	2.51	2.90
1220	15.19	12.72	7.14	41	4.55	32.8	2.47	2.91
1225	15.19	12.73	7.12	47	4.56	47.5	2.48	2.92

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

Sample ID: **MW-12-1023**
Sample Time: 1225

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

Shipped: Drop-off Albany Service Center [ ]
Pace Courier [X]
Laboratory: Pace Analytical
Greensburg, Pennsylvania

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: AS
Job Number: 0603400-120950-221
Well Id. **MW-13**

Date: 12/11/23
Weather: 51°F, cloudy
Time In: 1000 Time Out: 1110

Well Information

		TOC	Other
Depth to Water:	(feet)	15.52	
Depth to Bottom:	(feet)	22.75	
Depth to Product:	(feet)	–	
Length of Water Column:	(feet)	7.23	
Volume of Water in Well:	(gal)	1.15	
Three Well Volumes:	(gal)	3.47	

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

Purging Information

Purging Method:	Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]	
Tubing/Bailer Material:	Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:	Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]	

Average Pumping Rate:	200	(ml/min)
Duration of Pumping:	30	(min)
Total Volume Removed:	2.5	(gal)

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

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

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

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
1005	15.90	13.70	7.53	-70	0.671	24.2	2.43	0.423
1010	16.12	13.63	7.54	-115	0.633	13.1	0.93	0.405
1015	16.41	13.62	7.54	-122	0.623	9.9	0.81	0.399
1020	16.60	13.56	7.55	-138	0.622	5.5	0.61	0.397
1025	16.69	13.47	7.54	-150	0.646	3.6	0.52	0.413
1030	16.81	13.36	7.54	-160	0.675	3.6	0.48	0.431
1035	16.90	13.27	7.51	-168	0.694	3.0	0.44	0.443

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H_2SO_4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO_3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO_2	RSK-175

MW-13-MS-1023 and MW-13-MSD-1023

Sample ID: **MW-13-1023** Duplicate? Yes [ ] No [X]
Sample Time: 1040 MS/MSD? Yes [X] No [ ]

Shipped: Drop-off Albany Service Center [ ]
Pace Courier [X]
Laboratory: Pace Analytical Greensburg, Pennsylvania

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: G. ERNST
Job Number: 0603400-120950-221
Well Id. **MW-14**

Date: 10/11/23
Weather: cloudy 50°s
Time In: 1045 Time Out: 1140

Well Information

		TOC	Other
Depth to Water:	(feet)	14.73	
Depth to Bottom:	(feet)	23.55	
Depth to Product:	(feet)	NP	
Length of Water Column:	(feet)	8.82	
Volume of Water in Well:	(gal)	1.41	
Three Well Volumes:	(gal)	4.23	

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

Purging Information

Purging Method:	Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]		
Tubing/Bailer Material:	Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]	
Sampling Method:	Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]		
Average Pumping Rate: (ml/min)	200				
Duration of Pumping: (min)	30				
Total Volume Removed: (gal)	2				

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

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

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

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
1050	14.88	12.98	4.29	150	0.000	130	10.88	0.000
1055	15.31	13.37	4.58	284	0.664	0.0	5.16	0.424
1100	15.49	13.27	4.43	356	0.669	0.0	9.93	0.428
1105	15.62	13.22	5.02	325	0.667	704	9.59	0.428
1110	15.98	13.04	5.26	299	0.668	226	9.47	0.428
1115	16.11	13.02	5.61	254	0.671	73.8	8.83	0.429
1120	16.21	13.00	5.76	178	0.672	42.6	9.35	0.431

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

Field Duplicate-1023

Sample ID: **MW-14-1023**
Sample Time: 1125

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

Shipped: Drop-off Albany Service Center [ ]
Pace Courier [X]
Laboratory: Pace Analytical
Greensburg, Pennsylvania

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: G. ERNST
Job Number: 0603400-120950-221
Well Id. **MW-15**

Date: 10/11/23
Weather: cloudy 50°s
Time In: 1140 Time Out:

Well Information

		TOC	Other
Depth to Water:	(feet)	17.36	
Depth to Bottom:	(feet)	23.00	
Depth to Product:	(feet)	NP	
Length of Water Column:	(feet)	5.64	
Volume of Water in Well:	(gal)	0.90	
Three Well Volumes:	(gal)	2.71	

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

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]	
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:		Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]	
Average Pumping Rate:	(ml/min)	200			
Duration of Pumping:	(min)	30			
Total Volume Removed:	(gal)	2			

Did well go dry? Yes [ ] No [ ]

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

Conversion Factors

	1" ID	2" ID	4" ID	6" ID
gal/ft. of water	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
1150	17.60	13.89	4.24	74	0.897	92.0	3.07	0.583
1155	17.63	13.99	4.89	35	0.915	28.1	2.68	0.590
1200	17.90	14.04	4.17	43	0.895	16.4	1.21	0.573
1205	18.09	13.97	6.91	-117	0.941	11.5	1.00	0.602
1210	18.24	13.85	7.33	-140	0.937	8.4	0.84	0.600
1215	18.37	13.85	7.49	-152	0.933	6.0	0.77	0.597
1220	18.42	13.88	7.49	-155	0.954	4.3	0.63	0.611

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

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

Sample ID: **MW-15-1023**
Sample Time: 1225

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

Laboratory: Pace Analytical
Greensburg, Pennsylvania

National Grid
109 North Market Street, Johnstown New York

Sampling Personnel: G. ERNST
Job Number: 0603400-120950-221
Well Id. **MW-16**

Date: 10/11/23
Weather: Cloudy 50°s
Time In: 0950 Time Out: 1045

Well Information

		TOC	Other
Depth to Water:	(feet)	10.35	
Depth to Bottom:	(feet)	19.45	
Depth to Product:	(feet)	NP	
Length of Water Column:	(feet)	9.10	
Volume of Water in Well:	(gal)	1.46	
Three Well Volumes:	(gal)	4.4	

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

Purging Information

Purging Method:		Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]	
Tubing/Bailer Material:		Teflon [ ]	Stainless St. [ ]	Polyethylene [X]	other [ ]
Sampling Method:		Bailer [ ]	Peristaltic [ ]	Well Wizard Dedicated Pump [X]	
Average Pumping Rate:	(ml/min)	200			
Duration of Pumping:	(min)	30			
Total Volume Removed:	(gal)	2			

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

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

Conversion Factors

	1" ID	2" ID	4" ID	6" ID
gal/ft. of water	0.04	0.16	0.66	1.47

1 gallon=3.785L=3785mL=1337cu. feet

Time	DTW (feet)	Temp (°C)	pH (S.U.)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	TDS (g/L)
1005	10.39	13.38	4.75	213	0.913	24.1	8.55	0.633
1010	10.60	13.01	4.69	36	0.993	24.4	11.13	0.638
1015	10.91	12.55	4.83	-11	1.13	20.1	11.13	0.722
1020	11.28	12.82	4.75	15	1.10	12.4	9.91	0.702
1025	11.67	13.05	4.65	38	1.09	6.5	10.33	0.695
1030	12.12	13.10	4.69	8	1.11	~~8.82~~ 2	9.29	0.708
1035	12.43	13.04	4.78	-14	1.13	1.3	10.02	0.721

Sampling Information:

Quantity	Size	Material	Preservative	Compounds analyzed	Method
2	100 mL	Glass	Unpreserved	SVOC PAH's	EPA SW-846 Method 8270
1	250 mL	Plastic	Unpreserved	Ferrous Iron	SM 3500 FE D
				Chloride	SM 4500 Cl E
				Total Alkalinity	EPA Method 310.2
1	250 mL	Plastic	H2SO4	Nitrogen	EPA Method 351.2
1	250 mL	Plastic	HNO3	Lead & Manganese	EPA Method 6010
3	40 mL	Glass	HCl	VOC's & BTEX	EPA SW-846 Method 8260
1	250 mL	Plastic	NaOH	Total Cyanide	EPA Method 9012B
1	250 mL	Plastic	NaOH & Zinc Acetate	Nitrate & Nitrite	EPA Method 353.2
				Sulfide	EPA Method 376.1
				Sulfate	EPA Method 375.4
2	40 mL	Glass	Benzalkonium Chloride	Methane/Ethane/ Ethene/CO2	RSK-175

Sample ID: **MW-16-1023**
Sample Time: 1040

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

Shipped: Drop-off Albany Service Center [ ]
Pace Courier [X]
Laboratory: Pace Analytical Greensburg, Pennsylvania

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:

Company: GES - Syracuse
Address: 6780 Northern Blvd. Suite 100
East Syracuse, New York 13057
Email To: dshay@gesonline.com
Phone: 800.220.3069x4052 Fax: None
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Devin Shay (GES) dshay@gesonline.com
Report To: Tim Beaumont (GES) tbeaumont@gesonline.com
Purchase Order No.:
Project Name: National Grid - 109 North Market Street, Johnstown NY
Project Number: 0603400-120950-221-1106

Section C Invoice Information:

Attention: Accounts Payable via email at ges-invoices@ges
Company Name: Groundwater & Environmental Services, Inc
Address: 6780 Northern Blvd, Suite 100, East Syracuse, NY 13057
Pace Quote Reference: CAT-B Deliverable
Pace Project Manager: Justin Horn

Semi-Annual GWS

REGULATORY AGENCY: NPDES GROUND WATER DRINKING WATER; UST RCRA OTHER_____

SITE LOCATION: GA IL IN MI NC; OH SC WI OTHER___

Section D Required Client Information

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

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

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	NaOH and Zn Acetate	Benzylkonium Chloride	Requested Analysis: Methane/Ethane/Ethene/Carbon Dioxide by RSK-175	SVOC's PAH's by Method 8270	Total Kjeldahl Nitrogen by EPA Method 351.2 (Low Level)	Metals (Lead and Manganese) by EPA Method 6010	VOC's BTEX by Method 8260C	Ferrous Iron by SM 3500 Fe D.	Total Alkalinity by EPA Method 310.2	Chloride by SM 4500 Cl E	Total Cyanide by EPA Method 9012B	Nitrate and Nitrite by EPA Method 353.2.	Sulfide by EPA Method 376.1 and Sulfate by EPA Method 375.4	Pace Project Number / Lab I.D.
1	MW-4-1023	WT	G			10/1/23	1200		12	3	1	1	5	1		1		2	2	1	1	3	1	1	1		
2	MW-7-1023	WT	G				1125		12	3	1	1	5	1		1		2	2	1	1	3	1	1	1		
3	MW-10-1023	WT	G				1035		12	3	1	1	5	1		1		2	2	1	1	3	1	1	1		
4	~~MW-11-1023~~	~~WT~~	~~G~~						~~12~~	~~3~~	~~1~~	~~1~~	~~5~~	~~1~~		~~1~~		~~2~~	~~2~~	~~1~~	~~1~~	~~3~~	~~1~~	~~1~~	~~1~~		
5	MW-12-1023	WT	G				1225		12	3	1	1	5	1		1		2	2	1	1	3	1	1	1		
6	MW-13-1023	WT	G				1040		12	3	1	1	5	1		1		2	2	1	1	3	1	1	1		
7	MW-13-MS-1023	WT	G				1040		12	3	1	1	5	1		1		2	2	1	1	3	1	1	1		
8	MW-13-MSD-1023	WT	G				1040		12	3	1	1	5	1		1		2	2	1	1	3	1	1	1		
9	MW-14-1023	WT	G				1125		12	3	1	1	5	1		1		2	2	1	1	3	1	1	1		
10	MW-15-1023	WT	G				1225		12	3	1	1	5	1		1		2	2	1	1	3	1	1	1		
11	MW-16-1023	WT	G				1040		12	3	1	1	5	1		1		2	2	1	1	3	1	1	1		
12	Field Duplicate - 1023	WT	G						12	3	1	1	5	1		1		2	2	1	1	3	1	1	1		
13	Trip Blank	WT	Lab						2				2														

Additional Comments:

SAMPLES WILL ARRIVE IN # 3 COOLERS.

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

SPECIFIC EDD NAME:

NGJohnstown-labnumber.28351.EQEDD.zip

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
GES	10/1/23	1500			

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Allison Jordan
SIGNATURE of SAMPLER:
DATE Signed (MM / DD / YY):

SAMPLE CONDITIONS

Temp in °C	Received on Ice Y/N	Custody Sealed Cooler Y/N	Samples Intact Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

Appendix B – Data Usability Summary Report

Groundwater & Environmental Services, Inc.
708 North Main Street, Suite 201
Blacksburg, VA 24060
T. 800.662.5067

December 14, 2023

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

RE: Data Usability Summary Report for National Grid: Johnstown, NY Site Data Package
Pace Analytical Job No. 30630241

Groundwater & Environmental Services, Inc. (GES) reviewed one data package (Laboratory Project Number 30630241) from Pace Analytical Services, Inc., for the analysis of groundwater samples collected on October 11, 2023 from monitoring wells located at the National Grid: Johnstown, NY Site. Eight aqueous samples and a field duplicate were analyzed for dissolved gases, PAHs, Nitrogen, Metals, Alkalinity, Chloride, Ferrous Iron, Cyanide, Sulfide and Sulfate. Methodologies utilized were, ASTM D516-11, EPA 351.2, EPA 6010C, SM 4500NO3F-2016, SM4500CIE-2011, SM 4500S2F-2011, SM 3500-FeB-2011, SM 2320B-2011, and the USEPA SW846 methods 8260C/8270DSIM/9012B, with additional QC requirements of the NYSDEC ASP. Dissolved gases analyses were subcontracted to Microbac Laboratories, 158 Starlite Drive, Marietta, OH.

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

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

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

In summary, sample results were usable as reported, with exceptions due to poor precision or BS/BSD and MS/MSD recoveries.

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	Microbac ID	Sample ID	Date Collected	Date Received
30630241001	M3J1036-01	MW-4-1023	10/11/23 12:00	10/12/23 09:35
30630241002	M3J1036-02	MW-7-1023	10/11/23 11:25	10/12/23 09:35
30630241003	M3J1036-03	MW-10-1023	10/11/23 10:35	10/12/23 09:35
30630241004	M3J1036-04	MW-12-1023	10/11/23 12:25	10/12/23 09:35
30630241005	M3J1036-05	MW-13-1023	10/11/23 10:40	10/12/23 09:35
30630241006		MW-13-MS-1023	10/11/23 10:40	10/12/23 09:35
30630241007		MW-13-MSD-1023	10/11/23 10:40	10/12/23 09:35
30630241008	M3J1036-06	MW-14-1023	10/11/23 11:25	10/12/23 09:35
30630241009	M3J1036-07	MW-15-1023	10/11/23 12:25	10/12/23 09:35
30630241010	M3J1036-08	MW-16-1023	10/11/23 10:40	10/12/23 09:35
30630241011	M3J1036-09	Field Duplicate-1023	10/11/23 00:00	10/12/23 09:35
30630241001	M3J1036-01	MW-4-1023	10/11/23 12:00	10/12/23 09:35

Table 2. Validation Qualifiers

Sample ID	*Qualifier*	*Analyte*	*Reason for qualification*
MW-4 MW-7 MW-10 MW-12 MW-14	U at 0.17 ug/L U at 0.11 ug/L U at 0.95 ug/L U at 0.71 ug/L J+	Naphthalene	Method blank detection
MW-13 MW-15 MW-16	J+	Naphthalene	High recovery LCS/LCSD
MW-13	J+	Chloride	High MS/MSD recovery
	J_	Cyanide	Low MS/MSD recovery
All Samples	J	Ferrous Iron	Analyzed outside hold time

In summary, sample results were usable as reported.

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

BTEX and TCL Volatiles by EPA 8260C/NYSDEC ASP

Sample holding times were met and instrumental tune fragmentations were within acceptance ranges. Surrogate and internal standard recoveries were within required limits. Laboratory and field-generated blanks reported no detections above reporting limit. Calibration standards

show acceptable responses within analytical protocol and validation action limits. The MS/MSD and BS/BSD recoveries were within criteria. Precision calculations showed that the recoveries were consistent, as RPDs were within expected ranges. Precision calculations for LCS/LCSD indicate good reproducibility. Surrogate recovery was within bounds, and LCS recoveries were compliant, and used to determine method efficacy.

The field duplicate correlations were not calculated as neither sample had above reporting limit detections.

PAHs by EPA8270D/NYSDEC ASP

Holding times were met. Instrumental tune fragmentations were within acceptance ranges. Surrogate recoveries were within analytical and validation guidelines.

Blanks show no contamination with the exception of a 1.0 ug/L detection of naphthalene in the method blank. Naphthalene concentrations reported below the blank concentration are qualified as non-detect at the reported concentration. Naphthalene concentrations greater than, but within 5x the blank concentration are qualified as estimated with a possible high bias. Concentrations greater than 5x the blank concentration are not impacted, and require no qualification. Data qualifiers are listed in Table 2.

Calibration standards, both initial and continuing, show acceptable responses within analytical method protocols and validation guidelines.

LC/LCSD recovered high for both dibenz(a,h)anthracene and naphthalene. There were no detections of dibenz(a,h) anthracene, so no qualifiers were required. Naphthalene concentrations not previously qualified due to blank detection are qualified as estimated, with a possible high bias.

The MS/MSD analyzed with the data is not associated with the site.

Field precision calculations indicate good reproducibility. Surrogate recovery was within bounds.

Lead and Manganese by EPA 6010/NYDESC ASP

The matrix spike, post digestion spike, and serial dilutions were performed on samples not associated with the project. Blank samples show no contamination above the reporting limit.

LCS/LCSD recovered within specification. There were no qualifiers required.

Wet Chemistry Tests and Total Cyanide by 9012B/ NYSDEC ASP

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

- Ferrous iron has a 15-minute hold time, as such, all laboratory data is derived past hold time.
- Cyanide recovery in MW-13 was low in the MS/MSD. The concentration reported is qualified as possibly biased low.
- Cyanide recovery in the MS/MSD was high in the duplicate associated with MW-13. The concentrations reported in the duplicate and original samples are qualified as possibly biased high.

Calibration standard responses were compliant. Blanks show no detections above the reporting limits.

Ferrous Iron by S<3500-FeD-00/ NYSDEC ASP

Review was conducted for method compliance, holding times, transcription, calculations, standard and blank acceptability, and accuracy and precision. Samples were prepared outside of hold time, and all sample data is qualified as estimated with an indeterminate bias. All other compliance data were found acceptable for the validated samples.

Calibration standard responses were compliant. Blanks show no detections above the reporting limits.

Total Kjeldahl Nitrogen, Nitrogen as Nitrate/Nitrite by EPA 351.2 & 353.2/NYDESC ASP

Review was conducted for method compliance, holding times, transcription, calculations, standard and blank acceptability, accuracy and precision, etc., as applicable to each procedure. All were found acceptable for the validated samples. Calibration standard responses were compliant. Blanks show no detections above the reporting limits. The MS/MSD recoveries and variance were within specification for associated samples.

Dissolved Gases by EPA 5021/RSK-175

Holding times were met. Instrumental tune fragmentations were within acceptance ranges. Surrogate recoveries were within analytical and validation guidelines. Blanks show no contamination. The case narrative stated the samples were received in improper containers, but the implications for the data were not noted.

The blank spike/blank spike duplicate recovery was high for ethene. There were no positive detections in the sample, so no qualifications were required.

Carbon dioxide recovered high in the MS/MSD. Carbon dioxide in MW-13 is qualified as estimated with a possible high bias.

All other criteria were found acceptable for the validated samples. Calibration standard responses were compliant. Blanks show no detections above the reporting limits.

Field duplicate correlations for methane were outside project objectives and the data were qualified as estimated.

Data Precision

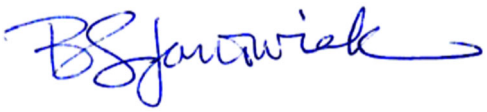
Field Identification	Analyte	Sample Result (µg/L)	Duplicate Result (µg/L)	RPD (%)	Qualified
MW-14/FIELD DUP	Alkalinity	384	368	4.3	A
	Nitrogen, NO2 Plus NO3	0.21	0.2	4.9	A
	Nitrogen, Kjeldahl	1.5	1.1	NC	A
	Sulfate	17.1	17.6	2.9	A
	Iron, Ferrous	1.4	1.6	13.3	A
	Chloride	5.2	5.1	1.9	A
	Cyanide	0.10	0.1	0.0	A
	Manganese	116	127	9.1	A
	Carbon Dioxide	161000	186000	14.4	A
	Methane	13.3	13.5	1.5	A
	Acenaphthylene	0.29	0.27	7.1	A
	Anthracene	0.16	0.16	0.0	A
	Benzo(a)anthracene	0.13	0.13	0.0	A
	Benzo(a)pyrene	0.15	0.14	6.9	A
	Benzo(b)fluoranthene	0.19	0.20	5.1	A
	Benzo(g,h,i)perylene	0.11	0.11	0.0	A
	Benzo(k)fluoranthene	0.16	0.16	0.0	A
	Chrysene		0.098	NC	A
	Fluoranthene	0.18	0.18	0.0	A
	Pyrene	0.27	0.28	3.6	A

A: Acceptable
NC: Not calculated

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., N.R.C.C.
Principal Environmental 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

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

SAMPLE SUMMARY

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30630241001	**MW-4-1023**	Water	10/11/23 12:00	10/12/23 09:35
30630241002	**MW-7-1023**	Water	10/11/23 11:25	10/12/23 09:35
30630241003	**MW-10-1023**	Water	10/11/23 10:35	10/12/23 09:35
30630241004	**MW-12-1023**	Water	10/11/23 12:25	10/12/23 09:35
30630241005	**MW-13-1023**	Water	10/11/23 10:40	10/12/23 09:35
30630241006	**MW-13-MS-1023**	Water	10/11/23 10:40	10/12/23 09:35
30630241007	**MW-13-MSD-1023**	Water	10/11/23 10:40	10/12/23 09:35
30630241008	**MW-14-1023**	Water	10/11/23 11:25	10/12/23 09:35
30630241009	**MW-15-1023**	Water	10/11/23 12:25	10/12/23 09:35
30630241010	**MW-16-1023**	Water	10/11/23 10:40	10/12/23 09:35
30630241011	**Field Duplicate-1023**	Water	10/11/23 00:00	10/12/23 09:35

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30630241001	**MW-4-1023**	EPA 6010C	JWT	2	PASI-MV
		EPA 8270D by SIM	DSC	19	PASI-PA
		EPA 8260C	JEW	10	PASI-PA
		SM 2320B-2011	CMT	1	PASI-PA
		SM 3500-FeB-2011	PAS	1	PASI-PA
		SM 4500-S2-F-2011	PAS	1	PASI-PA
		300.0 Rev.2.1, 1993	JLM	1	PASI-PA
		EPA 351.2	AK1	1	PASI-PA
		SM 4500-Cl-E-2011	AK1	1	PASI-PA
		SM 4500NO3-F-2016	AK1	1	PASI-PA
		EPA 9012B	CMT	1	PASI-PA
30630241002	**MW-7-1023**	EPA 6010C	JWT	2	PASI-MV
		EPA 8270D by SIM	DSC	19	PASI-PA
		EPA 8260C	JEW	10	PASI-PA
		SM 2320B-2011	CMT	1	PASI-PA
		SM 3500-FeB-2011	PAS	1	PASI-PA
		SM 4500-S2-F-2011	PAS	1	PASI-PA
		300.0 Rev.2.1, 1993	JLM	1	PASI-PA
		EPA 351.2	AK1	1	PASI-PA
		SM 4500-Cl-E-2011	AK1	1	PASI-PA
		SM 4500NO3-F-2016	AK1	1	PASI-PA
		EPA 9012B	CMT	1	PASI-PA
30630241003	**MW-10-1023**	EPA 6010C	JWT	2	PASI-MV
		EPA 8270D by SIM	DSC	19	PASI-PA
		EPA 8260C	JEW	10	PASI-PA
		SM 2320B-2011	CMT	1	PASI-PA
		SM 3500-FeB-2011	PAS	1	PASI-PA
		SM 4500-S2-F-2011	PAS	1	PASI-PA
		300.0 Rev.2.1, 1993	JLM	1	PASI-PA
		EPA 351.2	AK1	1	PASI-PA
		SM 4500-Cl-E-2011	AK1	1	PASI-PA
		SM 4500NO3-F-2016	AK1	1	PASI-PA
		EPA 9012B	CMT	1	PASI-PA
30630241004	**MW-12-1023**	EPA 6010C	JWT	2	PASI-MV
		EPA 8270D by SIM	DSC	19	PASI-PA
		EPA 8260C	JEW	10	PASI-PA
		SM 2320B-2011	CMT	1	PASI-PA

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 3500-FeB-2011	PAS	1	PASI-PA
		SM 4500-S2-F-2011	PAS	1	PASI-PA
		300.0 Rev.2.1, 1993	JLM	1	PASI-PA
		EPA 351.2	AK1	1	PASI-PA
		SM 4500-Cl-E-2011	AK1	1	PASI-PA
		SM 4500NO3-F-2016	AK1	1	PASI-PA
		EPA 9012B	CMT	1	PASI-PA
30630241005	**MW-13-1023**	EPA 6010C	JWT	2	PASI-MV
		EPA 8270D by SIM	DSC	19	PASI-PA
		EPA 8260C	JEW	10	PASI-PA
		SM 2320B-2011	CMT	1	PASI-PA
		SM 3500-FeB-2011	PAS	1	PASI-PA
		SM 4500-S2-F-2011	PAS	1	PASI-PA
		300.0 Rev.2.1, 1993	JLM	1	PASI-PA
		EPA 351.2	AK1	1	PASI-PA
		SM 4500-Cl-E-2011	AK1	1	PASI-PA
		SM 4500NO3-F-2016	AK1	1	PASI-PA
		EPA 9012B	CMT	1	PASI-PA
30630241006	**MW-13-MS-1023**	EPA 6010C	JWT	2	PASI-MV
		EPA 8270D by SIM	DSC	19	PASI-PA
		EPA 8260C	JEW	10	PASI-PA
		SM 2320B-2011	CMT	1	PASI-PA
		SM 3500-FeB-2011	PAS	1	PASI-PA
		SM 4500-S2-F-2011	PAS	1	PASI-PA
		300.0 Rev.2.1, 1993	JLM	1	PASI-PA
		EPA 351.2	AK1	1	PASI-PA
		SM 4500-Cl-E-2011	AK1	1	PASI-PA
		SM 4500NO3-F-2016	AK1	1	PASI-PA
		EPA 9012B	CMT	1	PASI-PA
30630241007	**MW-13-MSD-1023**	EPA 6010C	JWT	2	PASI-MV
		EPA 8270D by SIM	DSC	19	PASI-PA
		EPA 8260C	JEW	10	PASI-PA
		SM 2320B-2011	CMT	1	PASI-PA
		SM 3500-FeB-2011	PAS	1	PASI-PA
		SM 4500-S2-F-2011	PAS	1	PASI-PA
		300.0 Rev.2.1, 1993	JLM	1	PASI-PA
		EPA 351.2	AK1	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 4500-Cl-E-2011	AK1	1	PASI-PA
		SM 4500NO3-F-2016	AK1	1	PASI-PA
		EPA 9012B	CMT	1	PASI-PA
30630241008	**MW-14-1023**	EPA 6010C	JWT	2	PASI-MV
		EPA 8270D by SIM	DSC	19	PASI-PA
		EPA 8260C	JEW	10	PASI-PA
		SM 2320B-2011	CMT	1	PASI-PA
		SM 3500-FeB-2011	PAS	1	PASI-PA
		SM 4500-S2-F-2011	PAS	1	PASI-PA
		300.0 Rev.2.1, 1993	JLM	1	PASI-PA
		EPA 351.2	AK1	1	PASI-PA
		SM 4500-Cl-E-2011	AK1	1	PASI-PA
		SM 4500NO3-F-2016	AK1	1	PASI-PA
		EPA 9012B	CMT	1	PASI-PA
30630241009	**MW-15-1023**	EPA 6010C	JWT	2	PASI-MV
		EPA 8270D by SIM	DSC	19	PASI-PA
		EPA 8260C	JEW	10	PASI-PA
		SM 2320B-2011	CMT	1	PASI-PA
		SM 3500-FeB-2011	PAS	1	PASI-PA
		SM 4500-S2-F-2011	PAS	1	PASI-PA
		300.0 Rev.2.1, 1993	JLM	1	PASI-PA
		EPA 351.2	AK1	1	PASI-PA
		SM 4500-Cl-E-2011	AK1	1	PASI-PA
		SM 4500NO3-F-2016	AK1	1	PASI-PA
		EPA 9012B	CMT	1	PASI-PA
30630241010	**MW-16-1023**	EPA 6010C	JWT	2	PASI-MV
		EPA 8270D by SIM	DSC	19	PASI-PA
		EPA 8260C	JEW	10	PASI-PA
		SM 2320B-2011	CMT	1	PASI-PA
		SM 3500-FeB-2011	PAS	1	PASI-PA
		SM 4500-S2-F-2011	PAS	1	PASI-PA
		300.0 Rev.2.1, 1993	JLM	1	PASI-PA
		EPA 351.2	AK1	1	PASI-PA
		SM 4500-Cl-E-2011	AK1	1	PASI-PA
		SM 4500NO3-F-2016	AK1	1	PASI-PA
		EPA 9012B	CMT	1	PASI-PA
30630241011	**Field Duplicate-1023**	EPA 6010C	JWT	2	PASI-MV

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SAMPLE ANALYTE COUNT

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8270D by SIM	DSC	19	PASI-PA
		EPA 8260C	JEW	10	PASI-PA
		SM 2320B-2011	CMT	1	PASI-PA
		SM 3500-FeB-2011	PAS	1	PASI-PA
		SM 4500-S2-F-2011	PAS	1	PASI-PA
		300.0 Rev.2.1, 1993	JLM	1	PASI-PA
		EPA 351.2	AK1	1	PASI-PA
		SM 4500-Cl-E-2011	AK1	1	PASI-PA
		SM 4500NO3-F-2016	AK1	1	PASI-PA
		EPA 9012B	CMT	1	PASI-PA

PASI-MV = Pace Analytical Services - Long Island
PASI-PA = Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Date: October 31, 2023

The samples were subcontracted to Microbac Laboratories, 158 Starlite Drive, Marietta, OH 45750, for Dissolved Gases analysis.
The results of this analysis are reported on the Microbac data tables attached.

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PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Method: **EPA 6010C**
Description: 6010 MET ICP
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 31, 2023

General Information:
11 samples were analyzed for EPA 6010C 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3005A 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.

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:

Batch Comments:

The post digestion spike for sample 70273431001 (PDS 1657394) did not meet acceptance criteria for Aluminum, Boron, Calcium, Chromium, Magnesium, Manganese, and Silver.
- QC Batch: 324545

The post digestion spike for sample 70274286001 (PDS 1657396) did not meet acceptance criteria for Silver, Calcium, and Sodium.
- QC Batch: 324546

The serial dilution for sample 70274286001 (SD 1657397) did not meet acceptance criteria for Boron, Calcium, Copper, Iron, Potassium, Magnesium, Manganese, Sodium, Nickel, and Zinc.
- QC Batch: 324546

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PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Method: **EPA 6010C**
Description: 6010 MET ICP
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 31, 2023

Analyte Comments:

QC Batch: 324511

1c: The post digestion spike for sample 70273431001 (PDS 1657394) did not meet acceptance criteria for Aluminum, Boron, Calcium, Chromium, Magnesium, Manganese, and Silver.

- BLANK (Lab ID: 1657252)
  - Manganese
  - Lead
- DUP (Lab ID: 1657254)
  - Manganese
  - Lead
- LCS (Lab ID: 1657253)
  - Manganese
  - Lead
- MS (Lab ID: 1657255)
  - Manganese
  - Lead
- MW-10-1023 (Lab ID: 30630241003)
  - Manganese
  - Lead
- MW-12-1023 (Lab ID: 30630241004)
  - Manganese
  - Lead
- MW-13-1023 (Lab ID: 30630241005)
  - Manganese
  - Lead
- MW-13-MS-1023 (Lab ID: 30630241006)
  - Manganese
  - Lead
- MW-13-MSD-1023 (Lab ID: 30630241007)
  - Manganese
  - Lead
- MW-14-1023 (Lab ID: 30630241008)
  - Manganese
  - Lead
- MW-15-1023 (Lab ID: 30630241009)
  - Manganese
  - Lead
- MW-4-1023 (Lab ID: 30630241001)
  - Manganese
  - Lead
- MW-7-1023 (Lab ID: 30630241002)
  - Manganese
  - Lead

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PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Method: **EPA 6010C**
Description: 6010 MET ICP
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 31, 2023

Analyte Comments:

QC Batch: 324512

2c: The post digestion spike for sample 70274286001 (PDS 1657396) did not meet acceptance criteria for Silver, Calcium, and Sodium.

- BLANK (Lab ID: 1657256)
  - Manganese
  - Lead
- DUP (Lab ID: 1657380)
  - Manganese
  - Lead
- Field Duplicate-1023 (Lab ID: 30630241011)
  - Manganese
  - Lead
- LCS (Lab ID: 1657257)
  - Manganese
  - Lead
- MS (Lab ID: 1657381)
  - Manganese
  - Lead
- MW-16-1023 (Lab ID: 30630241010)
  - Manganese
  - Lead

3c: The serial dilution for sample 70274286001 (SD 1657397) did not meet acceptance criteria for Boron, Calcium, Copper, Iron, Potassium, Magnesium, Manganese, Sodium, Nickel, and Zinc.

- BLANK (Lab ID: 1657256)
  - Manganese
  - Lead
- DUP (Lab ID: 1657380)
  - Manganese
  - Lead
- Field Duplicate-1023 (Lab ID: 30630241011)
  - Manganese
  - Lead
- LCS (Lab ID: 1657257)
  - Manganese
  - Lead
- MS (Lab ID: 1657381)
  - Manganese
  - Lead
- MW-16-1023 (Lab ID: 30630241010)
  - Manganese
  - Lead

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PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Method: **EPA 8270D by SIM**
Description: 8270D PAH SIM Reduced Volume
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 31, 2023

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

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

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

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

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

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

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

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

QC Batch: 622659

B: Analyte was detected in the associated method blank.
- BLANK for HBN 622659 [OEXT/510 (Lab ID: 3035218)
  - Naphthalene

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

QC Batch: 622659

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
- LCS (Lab ID: 3035219)
  - Dibenz(a,h)anthracene
  - Naphthalene

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

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PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Method: **EPA 8270D by SIM**
Description: 8270D PAH SIM Reduced Volume
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 31, 2023

QC Batch: 622659

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30630241005,30630653003

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

- MS (Lab ID: 3035220)
  - 2-Methylnaphthalene
  - Dibenz(a,h)anthracene
  - Naphthalene
- MS (Lab ID: 3035222)
  - Dibenz(a,h)anthracene
- MSD (Lab ID: 3035223)
  - Dibenz(a,h)anthracene

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

- MS (Lab ID: 3035220)
  - Acenaphthene
- MSD (Lab ID: 3035221)
  - 2-Methylnaphthalene
  - Acenaphthene
  - Acenaphthylene
  - Fluorene
  - Naphthalene
  - Phenanthrene

R1: RPD value was outside control limits.

- MSD (Lab ID: 3035223)
  - Anthracene
  - Benzo(a)anthracene
  - Benzo(a)pyrene
  - Benzo(b)fluoranthene
  - Benzo(g,h,i)perylene
  - Benzo(k)fluoranthene
  - Chrysene
  - Dibenz(a,h)anthracene
  - Fluoranthene
  - Fluorene
  - Indeno(1,2,3-cd)pyrene
  - Naphthalene
  - Phenanthrene
  - Pyrene

Additional Comments:

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PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Method: **EPA 8260C**
Description: 8260C MSV
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 31, 2023

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

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

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

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

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

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

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

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

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

QC Batch: 623510

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30630241005

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

- MS (Lab ID: 3039465)
  - Ethylbenzene

Additional Comments:

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PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Method: **SM 2320B-2011**
Description: 2320B Alkalinity
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 31, 2023

General Information:
11 samples were analyzed for SM 2320B-2011 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

Additional Comments:

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Greensburg, PA 15601
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PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Method: **SM 3500-FeB-2011**
Description: Iron, Ferrous
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 31, 2023

General Information:
11 samples were analyzed for SM 3500-FeB-2011 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

H1: Analysis conducted outside the EPA method holding time.
- MW-10-1023 (Lab ID: 30630241003)
- MW-12-1023 (Lab ID: 30630241004)
- MW-13-1023 (Lab ID: 30630241005)
- MW-13-MS-1023 (Lab ID: 30630241006)
- MW-13-MSD-1023 (Lab ID: 30630241007)
- MW-14-1023 (Lab ID: 30630241008)
- MW-15-1023 (Lab ID: 30630241009)
- MW-16-1023 (Lab ID: 30630241010)
- MW-4-1023 (Lab ID: 30630241001)
- MW-7-1023 (Lab ID: 30630241002)

H3: Sample was received or analysis requested beyond the recognized method holding time.
- Field Duplicate-1023 (Lab ID: 30630241011)

H6: Analysis initiated outside of the 15 minute EPA required holding time.
- Field Duplicate-1023 (Lab ID: 30630241011)
- MW-10-1023 (Lab ID: 30630241003)
- MW-12-1023 (Lab ID: 30630241004)
- MW-13-1023 (Lab ID: 30630241005)
- MW-13-MS-1023 (Lab ID: 30630241006)
- MW-13-MSD-1023 (Lab ID: 30630241007)
- MW-14-1023 (Lab ID: 30630241008)
- MW-15-1023 (Lab ID: 30630241009)
- MW-16-1023 (Lab ID: 30630241010)
- MW-4-1023 (Lab ID: 30630241001)
- MW-7-1023 (Lab ID: 30630241002)

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

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

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

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Method: **SM 4500-S2-F-2011**
Description: 4500-S2-F Sulfide, Iodometric
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 31, 2023

General Information:
11 samples were analyzed for SM 4500-S2-F-2011 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Method: **300.0 Rev.2.1, 1993**
Description: 300.0 IC Anions 28 Days
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 31, 2023

General Information:
11 samples were analyzed for 300.0 Rev.2.1, 1993 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Method: **EPA 351.2**
Description: 351.2 Total Kjeldahl Nitrogen
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 31, 2023

General Information:
11 samples were analyzed for EPA 351.2 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

Sample Preparation:
The samples were prepared in accordance with EPA 351.2 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: 622131

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30627484002,30628489002

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

- MSD (Lab ID: 3032474)
  - Nitrogen, Kjeldahl, Total

QC Batch: 622133

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30628150001,30630241005

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

- MS (Lab ID: 3032487)
  - Nitrogen, Kjeldahl, Total

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Method: **SM 4500-Cl-E-2011**
Description: 4500 Chloride
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 31, 2023

General Information:
11 samples were analyzed for SM 4500-Cl-E-2011 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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: 622139

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30630241005

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

- MSD (Lab ID: 3032518)
  - Chloride

Additional Comments:

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PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Method: **SM 4500NO3-F-2016**
Description: SM4500NO3-F, NO3-NO2
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 31, 2023

General Information:
11 samples were analyzed for SM 4500NO3-F-2016 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

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

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

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

Additional Comments:

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: National Grid-Johnstown, NY
Pace Project No.: 30630241

Method: **EPA 9012B**
Description: 9012B Cyanide, Total
Client: Groundwater & Environmental Services, Inc. (Syracuse)
Date: October 31, 2023

General Information:
11 samples were analyzed for EPA 9012B by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

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

Sample Preparation:
The samples were prepared in accordance with EPA 9012B with any exceptions noted below.

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

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

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

QC Batch: 623160

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30630241005,30630653003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 3037447)
  - Cyanide

Additional Comments:

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