

**REPORT ON
AUGUST 2021 GROUNDWATER MONITORING REPORT
OWEGO FORMER MGP SITE
OWEGO, NEW YORK**



by
Haley & Aldrich of New York
Rochester, New York

for
New York State Department of Environmental Conservation
Albany, New York

File No. 134371-003
October 2021





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27 October 2021
File No. 134371-003

New York State Department of Environmental Conservation
Division of Environmental Remediation, 11th Floor
625 Broadway
Albany, New York 12223

Attention: Mr. Scott Deyette

Subject: August 2021 Groundwater Monitoring Report
Owego Former MGP Site
Owego, New York

Dear Mr. Deyette:

On behalf of our client, New York State Electric & Gas Corporation (NYSEG), Haley & Aldrich of New York (Haley & Aldrich) has prepared this Groundwater Monitoring Report to document the field activities associated with groundwater quality sampling and monitoring at NYSEG's Owego Former Manufactured Gas Plant (MGP) Site (the "Site") located in Owego, New York (Figure 1). The work was performed in accordance the monitoring plan described in the *Work Plan for Groundwater Monitoring at the Owego Former MGP Site* prepared by Ish, Inc. and dated February 2003 (the "Work Plan"). The analyte of interest for this groundwater monitoring program includes MGP-related total cyanide.

The Site monitoring program sampling requirements were modified in a letter from the New York State Department of Environmental Conservation (NYSDEC) dated 10 July 2019, which reduced the groundwater sampling and analysis requirement to total cyanide at two locations (MW-4 and PZ-2) once every two years and benzene at one location (PZ-8) once every four years.

Field Activities

On 24 August 2021, Haley & Aldrich staff completed static water level measurements and monitoring for the presence of non-aqueous phase liquid (NAPL) at two monitoring wells (MW-1 and MW-4) and three piezometers (PZ-2, PZ-6, and PZ-8) as shown on Figure 2. Haley & Aldrich staff also collected groundwater quality samples from one monitoring well (MW-4) and one piezometer (PZ-2). The methods used for groundwater level measurements, NAPL gauging, and groundwater sample collection for this monitoring event were consistent with the methods described in the 2003 Work Plan.

During the August 2021 gauging event, light NAPL (LNAPL) and dense NAPL (DNAPL) were not observed in any of the groundwater monitoring wells or piezometers. The measured depths to water in monitoring wells and resulting groundwater elevations are provided in Table I. The groundwater elevations are also shown on Figure 2. The groundwater elevations varied between 797.42 feet at PZ-8

located on the former MGP site to 794.89 feet at PZ-6 located on John Street, indicating an approximately north to south hydraulic gradient which is consistent with previous observations.

After the completion of water level gauging, groundwater samples were collected from MW-4 and PZ-2 using low-flow methodology and were analyzed for total cyanide. Field sampling sheets are included as Appendix A. All purge water was collected and properly staged at an on-site location pending future disposal by NYSEG.

In addition to the collection of monitoring well and piezometer groundwater samples, a duplicate sample was collected for field quality control purposes. One blind field duplicate sample was collected from monitoring well MW-4. One equipment rinse blank sample was collected at the time of field work. A trip blank accompanied the samples to the laboratory during the August 2021 sampling event.

Groundwater Sampling Results

The groundwater sampling results for total cyanide are presented in Table II. The groundwater analytical data for total cyanide are presented with a comparison to NYSDEC Class GA groundwater quality standards. The concentration of total cyanide exceeded the Class GA groundwater quality standard (200 micrograms per liter [$\mu\text{g/L}$]) in the groundwater samples collected from the on-site monitoring well MW-4 (2,400 $\mu\text{g/L}$) and on-site piezometer PZ-2 (2,500 $\mu\text{g/L}$). These concentrations are consistent with previous monitoring results over the past five years of reporting.

Quality Assurance/Quality Control

Eurofins TestAmerica Laboratories, Inc. of Amherst, New York (Test America) performed the quality analysis/quality control (QA/QC) procedures required for a NYSDEC Analytical Service Protocol (ASP) Category B deliverable package. Data usability evaluations were performed on the analytical data package, and the data were judged suitable for their intended purpose. The analytical results from TestAmerica are provided in Appendix B along with the Data Usability Summary Report.

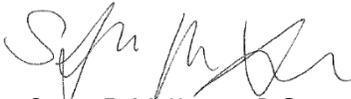
Recommendations

The next monitoring event is scheduled for 2023 with samples to be collected from MW-4 and PZ-2 for total cyanide analysis and benzene analysis at PZ-8. Monitoring wells and piezometers that are not included in the current sampling program will be decommissioned in accordance with the July 2019 correspondence. Well decommissioning activities will be completed in October 2021.

Please do not hesitate to call Doug Allen (603.391.3320) if you have any questions or comments.

Sincerely yours,

HALEY & ALDRICH OF NEW YORK



Santa E. McKenna, P.G.
Assistant Project Manager



Douglas C. Allen, P.G.
Associate

Enclosures:

Table I: Groundwater Elevations and NAPL Measurements

Table II: Summary of Groundwater Analytical Results

Figure 1: Project Locus

Figure 2: Site Plan with Groundwater Elevations

Appendix A: Low-Flow Groundwater Sampling Field Forms

Appendix B: Data Usability Summary Report and Laboratory Report

c: NYSEG; Attn: Tracy L. Blazicek, CHMM, PMP

\\haleyaldrich\share\CF\Projects\134371\2021 Reporting\report.754008.2021-10-29.August2021GWReport.docx

TABLES

TABLE I
GROUNDWATER ELEVATIONS AND NAPL MEASUREMENTS
 NEW YORK STATE ELECTRIC & GAS
 OWEGO FORMER MGP SITE
 OWEGO, NEW YORK

Well ID	Top of Casing Elevation (ft-msl)	Date of Measurement	Depth to Water (ft)	Water Level Elevation (ft-msl)	LNAPL Thickness (ft)	DNAPL Thickness (ft)
MW-1	811.48	4/22/2003	11.80	799.68	NP	NP
		10/22/2003	NM	-	-	-
		4/14/2004	NM	-	-	-
		10/27/2004	NM	-	-	-
		4/5/2005	NM	-	-	-
		10/3/2005	NM	-	-	-
		2/13/2006	13.72	797.76	NP	NP
		10/2/2006	NM	-	-	-
		10/22/2007	NM	-	-	-
		10/27/2008	NM	-	-	-
		10/26/2009	NM	-	-	-
		10/25/2010	NM	-	-	-
		10/24/2011	11.81	799.67	NP	NP
		10/15/2012	18.90	792.58	NP	NP
		7/11/2014	Could not locate	-	-	-
		4/21/2015	Could not locate	-	-	-
		5/26/2016	16.48	795.00	NP	NP
		1/13/2020	15.30	796.18	NP	NP
8/24/2021	15.64	795.84	NP	NP		
MW-4	816.57	4/22/2003	17.41	799.16	NP	NP
		10/22/2003	21.13	795.44	NP	NP
		4/14/2004	19.59	796.98	NP	NP
		10/27/2004	19.92	796.65	NP	NP
		4/5/2005	14.39	802.18	NP	NP
		10/3/2005	23.40	793.17	NP	NP
		2/13/2006	18.97	797.60	NP	NP
		10/2/2006	20.37	796.20	NP	NP
		10/22/2007	23.96	792.61	NP	NP
		10/27/2008	24.34	792.23	NP	NP
		10/26/2009	23.22	793.35	NP	NP
		10/25/2010	22.17	794.40	NP	NP
		10/24/2011	17.52	799.05	NP	NP
		10/15/2012	23.95	792.62	NP	NP
		7/11/2014	21.07	795.50	NP	NP
		4/21/2015	20.08	796.49	NP	NP
		5/26/2016	21.80	794.77	NP	NP
		1/13/2020	20.58	795.99	NP	NP
8/24/2021	21.16	795.41	NP	NP		
PZ-2	816.58	4/22/2003	17.58	799.00	NP	NP
		10/22/2003	21.32	795.26	NP	NP
		4/14/2004	19.90	796.68	NP	NP
		10/27/2004	20.13	796.45	NP	NP
		4/5/2005	14.28	802.30	NP	NP
		10/3/2005	23.94	792.64	NP	NP
		2/13/2006	19.35	797.23	NP	NP
		10/2/2006	20.78	795.80	NP	NP
		10/22/2007	24.40	792.18	NP	NP
		10/27/2008	24.67	791.91	NP	NP
		10/26/2009	23.75	792.83	NP	NP
		10/25/2010	22.47	794.11	NP	NP
		10/24/2011	17.78	798.80	NP	NP
		10/15/2012	24.30	792.28	NP	NP
		7/11/2014	21.41	795.17	NP	NP
		4/21/2015	20.57	796.01	NP	NP
		5/26/2016	22.15	794.43	NP	NP
		1/13/2020	19.96	796.62	NP	NP
8/24/2021	21.60	794.98	NP	NP		

TABLE I
GROUNDWATER ELEVATIONS AND NAPL MEASUREMENTS
 NEW YORK STATE ELECTRIC & GAS
 OWEGO FORMER MGP SITE
 OWEGO, NEW YORK

Well ID	Top of Casing Elevation (ft-msl)	Date of Measurement	Depth to Water (ft)	Water Level Elevation (ft-msl)	LNAPL Thickness (ft)	DNAPL Thickness (ft)
PZ-6	817.54	4/22/2003	19.10	798.44	NP	NP
		10/22/2003	NM	-	-	-
		4/14/2004	NM	-	-	-
		10/27/2004	NM	-	-	-
		4/5/2005	NM	-	-	-
		10/3/2005	NM	-	-	-
		2/13/2006	20.47	797.07	NP	NP
		10/2/2006	22.30	795.24	NP	NP
		10/22/2007	25.32	792.22	NP	NP
		10/27/2008	25.69	791.85	NP	NP
		10/26/2009	24.35	793.19	NP	NP
		10/25/2010	23.30	794.24	NP	NP
		10/24/2011	19.41	798.13	NP	NP
		10/15/2012	25.35	792.19	NP	NP
		7/11/2014	22.71	794.83	NP	NP
		4/21/2015	20.62	796.92	NP	NP
		5/26/2016	23.24	794.30	NP	NP
1/13/2020	21.90	795.64	NP	NP		
8/24/2021	22.65	794.89	NP	NP		
PZ-8	815.38	4/22/2003	15.83	799.55	NP	NP
		10/22/2003	NM	-	-	-
		4/14/2004	NM	-	-	-
		10/27/2004	NM	-	-	-
		4/5/2005	NM	-	-	-
		10/3/2005	NM	-	-	-
		2/13/2006	17.47	797.91	NP	NP
		10/2/2006	18.67	796.71	NP	NP
		10/22/2007	22.08	793.30	NP	NP
		10/27/2008	20.66	794.72	NP	NP
		10/26/2009	20.83	794.55	NP	NP
		10/25/2010	20.74	794.64	NP	NP
		10/24/2011	15.32	800.06	NP	NP
		10/15/2012	22.44	792.94	NP	NP
		7/11/2014	19.29	796.09	NP	NP
		4/21/2015	16.61	798.77	NP	NP
		5/26/2016	20.14	795.24	NP	NP
1/13/2020	18.04	797.34	NP	NP		
8/24/2021	17.96	797.42	NP	NP		

Notes and Abbreviations:

1. Water level measurements collected prior to July 2014 were obtained by Ish Inc.
2. ft-msl: feet above mean sea level
3. NM: Not measured
4. NP: Indicates NAPL not present

TABLE II
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
 NEW YORK STATE ELECTRIC & GAS
 OWEGO FORMER MGP SITE
 OWEGO, NEW YORK

	NYSDEC TOGS 1.1.1 Class GA Water Quality Standards		Chemical Name	Cyanide, Total	Benzene
	Sample Type	Sample Name	Units	200 µg/L	1 µg/L
MW-4					
08/28/1995	N	MW-4-082895		797	< 5
10/16/1995	N	MW-4-101695		996	< 5
01/24/1996	N	MW-4-012496		797	< 5
04/15/1996	N	MW-4-041596		1190	< 5
07/25/1996	N	MW-4-072596		3900	< 5
10/15/1996	N	MW-4-101596		1380	< 5
01/20/1997	N	MW-4-012097		757	< 10
04/29/1997	N	MW-4-042997		4180	< 10
04/29/1998	N	MW-4-042998		1600	-
10/19/1998	N	MW-4-101998		998	-
04/16/1999	N	MW-4-041699		630	-
12/14/1999	N	MW-4-121499		330	-
04/26/2000	N	MW-4-042600		570	-
09/28/2000	N	MW-4-092800		620	-
01/24/2001	N	MW-4-012401		725	-
06/20/2001	N	MW-4-062001		2240	-
04/22/2003	N	MW-4-042203		-	< 0.1
04/23/2003	N	MW-4-042303		2010	-
10/22/2003	N	MW-4-102203		1150	< 0.1
04/14/2004	N	MW-4-041404		1010	< 0.1
10/29/2004	N	MW-4-102904		1690	< 0.1
04/08/2005	N	MW-4-040805		744	< 0.2
10/04/2005	N	MW-4-100405		404	270
02/14/2006	N	MW-4-021406		-	1.7
10/03/2006	N	MW-4-100306		2240	1.3
10/23/2007	N	MW-4-102307		234	< 0.2
10/28/2008	N	MW-4-102808		90.4	< 1
10/26/2009	N	MW-4-102609		145	0.64
10/26/2009	FD	MW-4-102609-DUP		211	0.45
10/26/2010	N	MW-4-102610		180	< 1
10/26/2010	FD	MW-4-102610-DUP		207	< 1
10/25/2011	N	MW-4-102511		2700	< 1
10/25/2011	FD	MW-4-102511-DUP		2900	< 1
03/12/2012	N	MW-4-031212		810	-
03/12/2012	FD	MW-4-031212-DUP		990	-
10/16/2012	N	MW-4-101612		610	0.7
10/16/2012	FD	MW-4-101612-DUP		650	0.47
07/11/2014	N	2293-071114-1355		1700	-
04/21/2015	N	MW04-042115-1135		400	-
05/26/2016	N	MW04-052616-1325		3300 J	-
08/23/2017	N	MW04-082317-1245		5700	-
01/13/2020	N	MW4-011320-1345		2000	-
01/13/2020	FD	4125-011320-0002		1800	-
08/24/2021	N	MW4-082421-1205		2400	-
08/24/2021	FD	4125-082421-0001		2700	-
PZ-2					
12/15/1999	N	PZ-2-121599		241	-
06/19/2000	N	PZ-2-061900		9800	-
09/28/2000	N	PZ-2-092800		1550	-
01/24/2001	N	PZ-2-012401		1320	-
06/20/2001	N	PZ-2-062001		1540	-
06/20/2001	FD	PZ-2-062001-DUP		1650	-
04/22/2003	N	PZ-2-042203		-	< 0.1
04/23/2003	N	PZ-2-042303		3230	-
10/22/2003	N	PZ-2-102203		1860	-

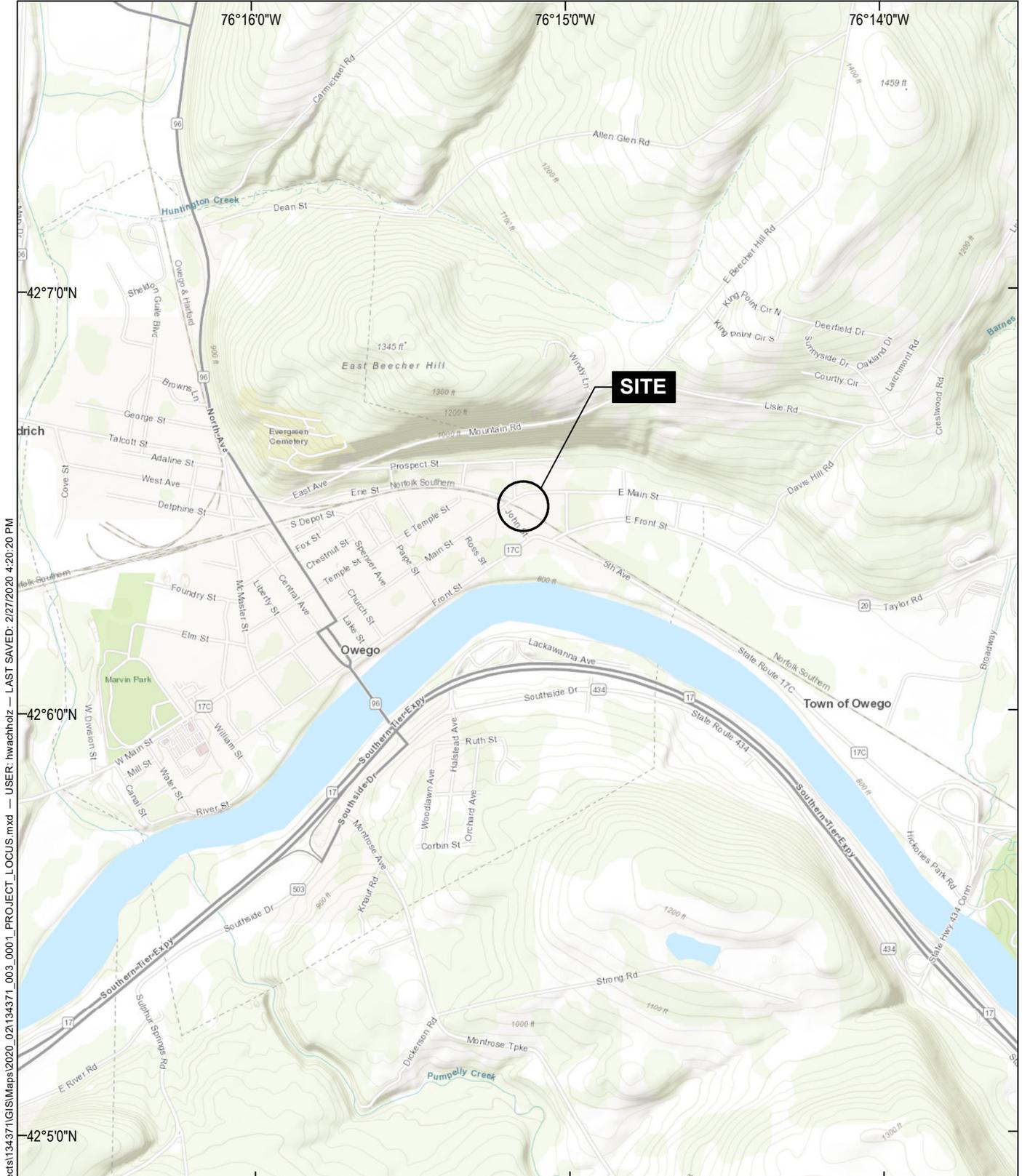
TABLE II
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
 NEW YORK STATE ELECTRIC & GAS
 OWEGO FORMER MGP SITE
 OWEGO, NEW YORK

	NYSDEC TOGS 1.1.1 Class GA Water Quality Standards	Chemical Name	Cyanide, Total	Benzene
		Units	200 µg/L	1 µg/L
	Sample Type	Sample Name		
PZ-2 (Continued)				
04/14/2004	N	PZ-2-041404	1470	-
08/03/2004	N	PZ-2-080304	804	-
10/29/2004	N	PZ-2-102904	1410	-
04/08/2005	N	PZ-2-040805	1020	-
10/04/2005	N	PZ-2-100405	535	-
10/03/2006	N	PZ-2-100306	989	-
10/23/2007	N	PZ-2-102307	352	-
10/28/2008	N	PZ-2-102808	242	-
10/26/2009	N	PZ-2-102609	< 10	-
10/26/2010	N	PZ-2-102610	262	-
10/25/2011	N	PZ-2-102511	270	-
03/12/2012	N	PZ-2-031212	730	-
10/16/2012	N	PZ-2-101612	460	-
07/11/2014	N	3159-071114-1520	2900 J	-
04/21/2015	N	PZ02-042115-1155	580	-
05/26/2016	N	PZ02-052616-1635	2700 J	-
08/23/2017	N	PZ02-082317-1430	3600	-
01/13/2020	N	PZ2-011320-1810	1900	-
08/24/2021	N	PZ2-082421-1110	2500	-

Notes and Abbreviations:

- Results were compared to TOGS Water Quality Standards, Table 1, Class GA (June 1998). Exceedances are shaded.
- <: Result is not detected above the indicated reporting limit.
J: Estimated result.
R: Rejected during validation.
- Results in **bold** are detected.
- Sample type codes: N - Normal, FD - Field Duplicate.
- Samples collected prior to July 2014 were obtained from Ish Inc.
- µg/L = micrograms per liter

FIGURES



GIS FILE PATH: \\haleyaldrich\share\CF\Projects\134371\GIS\Maps\2020_02\134371_003_0001_PROJECT_LOCUS.mxd — USER: hwachodz — LAST SAVED: 2/27/2020 4:20:20 PM



MAP SOURCE: ESRI
 SITE COORDINATES: 42°06'29"N, 76°15'09"W

**HALEY
 ALDRICH**

OWEGO FORMER MGP SITE
 NEW YORK STATE ELECTRIC & GAS
 OWEGO, NEW YORK

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
 OCTOBER 2021

FIGURE 1

GIS FILE PATH: \\haleyaldrich.com\share\CRP\Projects\134371\GIS\Maps\2021_10\134371_003_0002_SITE_PLAN_WITH_GW_ELEVATIONS.mxd — USER: hwachholz — LAST SAVED: 10/6/2021 10:16:19 AM



LEGEND

-  MONITORING WELL WITH GROUNDWATER ELEVATIONS INDICATED IN FEET
-  PIEZOMETER

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.
2. GROUNDWATER ELEVATIONS WERE MEASURED ON 24 AUGUST 2021.
3. AERIAL IMAGERY SOURCE: ESRI



OWEGO FORMER MGP SITE
NEW YORK STATE ELECTRIC & GAS
OWEGO, NEW YORK

**SITE PLAN WITH
GROUNDWATER ELEVATIONS**

OCTOBER 2021

FIGURE 2

APPENDIX A

Low-Flow Groundwater Sampling Field Forms

PROJECT _____
 LOCATION Onege, NY
 CLIENT _____
 CONTRACTOR _____

H&A FILE NO. _____
 PROJECT MGR. _____
 FIELD REP. R. Lydeil
 DATE INSTALLED _____

Sampling Data:

Well ID: MW-4 Well Depth: 30.46 ft Initial Depth To Water: 21.16 ft Purging Device: Peristaltic
 Start time: 11:30 Depth To Top Of Screen: _____ ft Depth Of Pump Intake: _____ ft Tubing Present In Well: Yes No
 Finish Time: _____ Depth To Bottom Of Screen _____ ft Tubing Type: LDPE

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature ("F) or ("C) +/- 10%	pH +/- 0.1	Conductivity (us/cm) +/- 3%	Dissolved Oxygen (mg/L) +/- 10%	Turbidity (NTU) <50	ORP/eH (mv) +/- 10 mv	Comments
0	21.16		300		16.4	6.34	0.521	1.65	37.7	284.2	
5	21.23		100		13.5	6.05	0.492	0.70	21.2	328.8	
10	21.23		100		13.7	6.13	0.485	0.43	13.5	302.4	
15	21.23		100		13.8	6.17	0.478	0.42	10.89	318.1	
20	21.23		100		13.5	6.19	0.471	0.78	9.91	324.8	
25	21.23		100		13.8	6.17	0.469	0.81	8.33	325.0	
30	21.23		100		13.7	6.18	0.464	0.83	9.52	323.9	
											Sample ID:
											MW4-082421-1205
											FD.
											4125-082421-0001
											E.B.
											4125-082421-0002

APPENDIX B

Data Usability Summary Report and Laboratory Report

Data Usability Summary Report

Project Name: Owego Former MGP

Project Description: Groundwater Samples

Sample Date(s): 24 August 2021

Analytical Laboratory: Eurofins TestAmerica Laboratories, Inc. – Amherst, NY

Validation Performed by: Santa McKenna

Validation Reviewed by: Katherine Miller

Validation Date: 17 September 2021

Haley & Aldrich, Inc. prepared this Data Usability Summary Report (DUSR) to summarize the review and validation of the samples described above. The analytical results for Sample Delivery Group(s) (SDG) listed below were reviewed to determine the data's usability:

1. Sample Delivery Group Number 480-188728-1 (TestAmerica)
2. Precision and Accuracy [for SDG(s) above]

This data validation and usability assessment was performed per the guidance and requirements established by the U.S. Environmental Protection Agency's (USEPA) *National Functional Guidelines (NFG) for Inorganic Data Review* and the project-specific Work Plan (WP), herein referred to as the specified limits (see references section). Data in this report has been reviewed against the most recent NFG.

Data reported in this sampling event were reported to the laboratory reporting limit (RL).

Sample data were qualified in accordance with laboratory's standard operating procedures (SOP). The results presented in each laboratory report were found to be compliant with the data quality objectives for the project and therefore usable; any exceptions are noted in the following pages.

For more detailed quality control (QC) information see Explanations section.

1. Sample Delivery Group Number 480-188728-1 (TestAmerica)

1.1 SAMPLE MANAGEMENT

This DUSR summarizes the review of SDG number 480-188728-1, dated 31 August 2021. Samples were collected, preserved, and shipped following standard chain of custody (COC) protocol. Samples were also received appropriately, identified correctly, and analyzed according to the COC.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
PZ2-082421-1110	N	480-188728-1	3/15/2017	GW	Cyanide EPA 9012B	14 days
MW4-082421-1205	N	480-188728-2	3/15/2017	GW	Cyanide EPA 9012B	14 days
4125-082421-0001	FD	480-188728-3	3/15/2017	GW	Cyanide EPA 9012B	14 days
4125-082421-0002	EB	480-188728-4	3/15/2017	WQ	Cyanide EPA 9012B	14 days

1.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

Cooler(s) temperature on arrival to the laboratory was: 3.5 degrees Celsius.

1.3 REPORTING LIMITS AND SAMPLE DILUTIONS

All dilutions were reviewed and found to be justified. Only detected analytes were reported from a dilution.

1.4 LABORATORY CONTROL SAMPLES

[Refer to section E 1.3.](#) Compounds associated with the laboratory control samples/laboratory control sample duplicates (LCS) analyses exhibited recoveries.

1.5 MATRIX SPIKE SAMPLES

[Refer to section E 1.4.](#) The sample(s) below were used for matrix spike/matrix spike duplicate (MS/MSD):

Lab Sample Number	Matrix Spike/ Matrix Spike Duplicate Sample Client ID	Method(s)
PZ2-082421-1110	480-188728-1 MS/MSD	EPA 9012B

The MS/MSD recoveries and the RPD between the MS and MSD results were within the specified limits. with the following exceptions:

Sample Type	Method	Parent Sample Number	Analyte	%R	Qualifier	Affected Samples
MS/MSD	9012BUSEPA 200.7	PZ2-082421- 1110	Total Cyanide	70%/60%	NA	None, native sample > 4x the spike added

1.6 BLANK SAMPLE ANALYSIS

[Refer to section E 1.5.](#) Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

The analysis of the blank samples for field quality control was free of target compounds.

1.7 DUPLICATE SAMPLE ANALYSIS

[Refer to section E 1.6.](#) The laboratory did not analyze any laboratory duplicates in this SDG as per the method or laboratory SOP.

The following sample(s) were used for field duplicate analysis. The RPD comparison for detections in either the parent or duplicate sample(s) is shown below. RPDs were all below 35 percent for water.

Primary Sample ID	Duplicate Sample ID	Method(s)
MW4-082421-1205	4125-082421-0001	EPA 9012B

1.8 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by the analytical method. Based on the review of this report, the data are useable and acceptable as no data was rejected. No qualifiers were applied to any data in this report.

2. Precision and Accuracy [for SDG(s) above]

[Refer to section E 1.7.](#) Some measurement of analytical accuracy and precision was reported for each method with the site samples, with the following exceptions:

- No precision was reported for EPA 9012B.
- No accuracy was reported for EPA 9012B.

Explanations

The following explanations include more detailed information regarding each of the sections in the DUSR above. Not all sections in the Explanations are represented:

- E 1.3 Laboratory Control Samples
 - The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses are used to assess the precision and accuracy of the analytical method independent of matrix interferences.
- E 1.4 Matrix Spike Samples
 - Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effects of the sample matrix on the sample preparation procedures and measurement methodologies.
 - For inorganic methods, when a matrix spike recovery falls outside of the control limits and the sample result is less than four times the spike added, a post digestion spike (PDS) is performed.
- E 1.5 Blank Sample Analysis
 - Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination.
 - Field blanks are prepared to identify contamination that may have been introduced during field activity. Equipment blanks are prepared to identify contamination that may have been introduced while decontaminating sampling equipment. Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport.
- E 1.6 Laboratory and Field Duplicate Sample Analysis
 - The laboratory duplicate sample analysis is used by the laboratory at the time of the analysis to demonstrate acceptable method precision. The RPD or absolute difference was evaluated for each duplicate sample pair to monitor the reproducibility of the data.
 - The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. The RPD or absolute difference was evaluated for each duplicate sample pair to monitor the reproducibility of the data.
- E 1.7 Precision and Accuracy
 - Precision measures the reproducibility of repetitive measurements. In a laboratory environment, this will be measured by determining the relative percent difference (%RPD) found between a primary and a duplicate sample. This can be an LCS/LCSD pair, a MS/MSD pair, a laboratory duplicate performed on a site sample, or a field duplicate collected and analyzed concurrently with a site sample.
 - Accuracy is a statistical measurement of the correctness of a measured value and includes components of random error (variability caused by imprecision) and systematic error. In a laboratory environment, this will be measured by determining the percent recovery (%Rec) of certain spiked compounds. This can be assessed using LCS, BS, MS, and/or surrogate recoveries.

Glossary

Not all of the following symbols, acronyms, or qualifiers occur in this document.

- Sample Types:
 - EB Equipment Blank Sample
 - FB Field Blank Sample
 - FD Field Duplicate Sample
 - N Primary Sample
 - TB Trip Blank Sample
- Units:
 - $\mu\text{g}/\text{kg}$ microgram per kilogram
 - $\mu\text{g}/\text{L}$ microgram per liter
 - $\mu\text{g}/\text{m}^3$ microgram per cubic meter
 - mg/kg milligram per kilogram
 - mg/L milligram per liter
 - ppb v/v parts per billion volume/volume
 - pCi/L picocuries per liter
- Matrices:
 - AA Ambient Air
 - GS Soil Gas
 - GW/WG Groundwater
 - QW Water Quality
 - IA Indoor Air
 - SE Sediment
 - SO Soil
 - WQ Water Quality control matrix
- Table Footnotes
 - NA Not applicable
 - ND Non-detect
 - NR Not reported
- Abbreviations
 - %D Percent Difference
 - %R Percent Recovery
 - %RSD Percent Relative Standard Deviation
 - Abs Diff Absolute Difference
 - VOC Volatile Organic Compounds
 - SVOC Semi-Volatile Organic Compounds
 - BPJ Best Professional Judgement
 - CCB Continuing Calibration Blank
 - CCV Continuing Calibration Verification
 - CCVL Continuing Calibration Verification Low
 - COC Chain of Custody
 - CRI Collision Reaction Interface
 - DUSR Data Usability Summary Report
 - EMPC Estimated Maximum Possible Concentration
 - GC Gas Chromatograph

- GPC	Gel Permeation Chromatography
- ICAL	Initial Calibration
- ICB	Initial Calibration Blank
- ICP/MS	Inductively Coupled Plasma/ Mass Spectrometry
- ICV	Initial Calibration Verification
- ICVL	Initial Calibration Verification Low
- IPA	Isopropyl Alcohol
- LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
- MDL	Laboratory Method Detection Limit
- MS/MSD	Matrix Spike/Matrix Spike Duplicate
- ND	Non-Detect
- NFG	National Functional Guidelines
- GC/MS	Gas Chromatography/Mass Spectrometry
- BS	Blank Spike
- TIC	Tentatively Identified Compound
- PCB	Polychlorinated Biphenyl
- PDS	Post Digestion Spike
- PEM	Performance Evaluation Mixture
- PFAS	Per- and Polyfluoroalkyl Substances
- QAPP	Quality Assurance Project Plan
- QC	Quality Control
- Ra-226	Radium-226
- Ra-228	Radium-228
- RL	Laboratory Reporting Limit
- RPD	Relative Percent Difference
- TPU	Total Propagated Uncertainty
- RT	Retention Time
- RRF	Relative Response Factors
- SDG	Sample Delivery Group
- SOP	Laboratory Standard Operating Procedures
- SPE	Solid Phase Extraction
- USEPA	U.S. Environmental Protection Agency

Qualifiers

The qualifiers below are from the USEPA National Functional Guidelines and the data in the DUSR may contain these qualifiers:

- Concentration (C) Qualifiers:
 - U The compound was analyzed for but not detected. The associated value is either the compound quantitation limit if not detected by the analytical instrument or could be the reported or blank concentration if qualified by blank contamination. This can also be displayed as less than the associated compound quantitation limit (<RL or <MDL), or “ND”.
 - B The compound was found in the sample and its associated blank. Its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers:
 - E The compound was quantitated above the calibration range.
 - D The concentration is based on a diluted sample analysis.
- Validation Qualifiers:
 - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
 - J+ The result is an estimated quantity, but the result may be biased high.
 - J- The result is an estimated quantity, but the result may be biased low.
 - UJ The compound was not detected above the reported sample quantitation limit; however, the reported limit is estimated and may or may not represent the actual limit of quantitation.
 - NJ The analysis indicated the presence of a compound for which there is presumptive evidence to make a tentative identification; the associated numerical value is an estimated concentration only.
 - R The sample results were rejected as unusable; the compound may or may not be present in the sample.
 - S Result is suspect. See DUSR for details.

References

1. United States Environmental Protection Agency, 2020a. National Functional Guidelines for Inorganic Superfund Methods Data Review. EPA-542-R-20-006. November.
2. Ish, Inc, 2003. Work Plan for Groundwater Monitoring at the Owego Former MGP Site. February.

ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-188728-1
Client Project/Site: Owego Former MGP Site

For:

Haley & Aldrich, Inc.
3 Bedford Farms Drive
Bedford, New Hampshire 03110

Attn: Douglas C. Allen



Authorized for release by:
8/31/2021 4:05:59 PM

Rebecca Jones, Project Management Assistant I
Rebecca.Jones@Eurofinset.com

Designee for

Steve Hartmann, Project Manager I
(413)572-4000
Steve.Hartmann@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

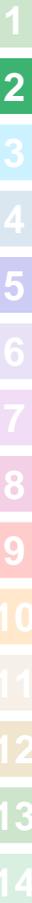


Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
QC Sample Results	7
QC Association Summary	8
Lab Chronicle	9
Certification Summary	10
Method Summary	11
Sample Summary	12
Chain of Custody	13
Receipt Checklists	14

Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: Owego Former MGP Site

Job ID: 480-188728-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: Owego Former MGP Site

Job ID: 480-188728-1

Job ID: 480-188728-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

**Job Narrative
480-188728-1**

Comments

No additional comments.

Receipt

The samples were received on 8/25/2021 12:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.5° C.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

- 1
- 2
- 3
- 4
- 5
- 6
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- 10
- 11
- 12
- 13
- 14

Detection Summary

Client: Haley & Aldrich, Inc.
Project/Site: Owego Former MGP Site

Job ID: 480-188728-1

Client Sample ID: PZ2-082421-1110

Lab Sample ID: 480-188728-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	2.5		0.10	0.050	mg/L	10		9012B	Total/NA

Client Sample ID: MW4-082421-1205

Lab Sample ID: 480-188728-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	2.4		0.10	0.050	mg/L	10		9012B	Total/NA

Client Sample ID: 4125-082421-0001

Lab Sample ID: 480-188728-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	2.7		0.10	0.050	mg/L	10		9012B	Total/NA

Client Sample ID: 4125-082421-0002

Lab Sample ID: 480-188728-4

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: Owego Former MGP Site

Job ID: 480-188728-1

Client Sample ID: PZ2-082421-1110

Lab Sample ID: 480-188728-1

Date Collected: 08/24/21 11:10

Matrix: Water

Date Received: 08/25/21 12:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	2.5		0.10	0.050	mg/L		08/30/21 13:08	08/30/21 18:24	10

Client Sample ID: MW4-082421-1205

Lab Sample ID: 480-188728-2

Date Collected: 08/24/21 12:05

Matrix: Water

Date Received: 08/25/21 12:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	2.4		0.10	0.050	mg/L		08/30/21 13:08	08/30/21 18:29	10

Client Sample ID: 4125-082421-0001

Lab Sample ID: 480-188728-3

Date Collected: 08/24/21 00:00

Matrix: Water

Date Received: 08/25/21 12:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	2.7		0.10	0.050	mg/L		08/30/21 13:08	08/30/21 18:30	10

Client Sample ID: 4125-082421-0002

Lab Sample ID: 480-188728-4

Date Collected: 08/24/21 00:00

Matrix: Water

Date Received: 08/25/21 12:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		08/30/21 13:08	08/30/21 17:58	1

QC Sample Results

Client: Haley & Aldrich, Inc.
 Project/Site: Owego Former MGP Site

Job ID: 480-188728-1

Method: 9012B - Cyanide, Total and/or Amenable

Lab Sample ID: MB 480-594610/1-A
Matrix: Water
Analysis Batch: 594679

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 594610

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cyanide, Total	0.010	U	0.010	0.0050	mg/L		08/30/21 13:08	08/30/21 17:47	1

Lab Sample ID: LCS 480-594610/2-A
Matrix: Water
Analysis Batch: 594679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 594610

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

Lab Sample ID: 480-188728-1 MS
Matrix: Water
Analysis Batch: 594679

Client Sample ID: PZ2-082421-1110
Prep Type: Total/NA
Prep Batch: 594610

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits

Lab Sample ID: 480-188728-1 MSD
Matrix: Water
Analysis Batch: 594679

Client Sample ID: PZ2-082421-1110
Prep Type: Total/NA
Prep Batch: 594610

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
										RPD	Limit
Cyanide, Total	2.5		0.100	2.53	4	mg/L		60	90 - 110	0	15

QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: Owego Former MGP Site

Job ID: 480-188728-1

General Chemistry

Prep Batch: 594610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188728-1	PZ2-082421-1110	Total/NA	Water	9012B	
480-188728-2	MW4-082421-1205	Total/NA	Water	9012B	
480-188728-3	4125-082421-0001	Total/NA	Water	9012B	
480-188728-4	4125-082421-0002	Total/NA	Water	9012B	
MB 480-594610/1-A	Method Blank	Total/NA	Water	9012B	
LCS 480-594610/2-A	Lab Control Sample	Total/NA	Water	9012B	
480-188728-1 MS	PZ2-082421-1110	Total/NA	Water	9012B	
480-188728-1 MSD	PZ2-082421-1110	Total/NA	Water	9012B	

Analysis Batch: 594679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188728-1	PZ2-082421-1110	Total/NA	Water	9012B	594610
480-188728-2	MW4-082421-1205	Total/NA	Water	9012B	594610
480-188728-3	4125-082421-0001	Total/NA	Water	9012B	594610
480-188728-4	4125-082421-0002	Total/NA	Water	9012B	594610
MB 480-594610/1-A	Method Blank	Total/NA	Water	9012B	594610
LCS 480-594610/2-A	Lab Control Sample	Total/NA	Water	9012B	594610
480-188728-1 MS	PZ2-082421-1110	Total/NA	Water	9012B	594610
480-188728-1 MSD	PZ2-082421-1110	Total/NA	Water	9012B	594610

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: Owego Former MGP Site

Job ID: 480-188728-1

Client Sample ID: PZ2-082421-1110

Lab Sample ID: 480-188728-1

Date Collected: 08/24/21 11:10

Matrix: Water

Date Received: 08/25/21 12:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			594610	08/30/21 13:08	JPS	TAL BUF
Total/NA	Analysis	9012B		10	594679	08/30/21 18:24	ALT	TAL BUF

Client Sample ID: MW4-082421-1205

Lab Sample ID: 480-188728-2

Date Collected: 08/24/21 12:05

Matrix: Water

Date Received: 08/25/21 12:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			594610	08/30/21 13:08	JPS	TAL BUF
Total/NA	Analysis	9012B		10	594679	08/30/21 18:29	ALT	TAL BUF

Client Sample ID: 4125-082421-0001

Lab Sample ID: 480-188728-3

Date Collected: 08/24/21 00:00

Matrix: Water

Date Received: 08/25/21 12:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			594610	08/30/21 13:08	JPS	TAL BUF
Total/NA	Analysis	9012B		10	594679	08/30/21 18:30	ALT	TAL BUF

Client Sample ID: 4125-082421-0002

Lab Sample ID: 480-188728-4

Date Collected: 08/24/21 00:00

Matrix: Water

Date Received: 08/25/21 12:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012B			594610	08/30/21 13:08	JPS	TAL BUF
Total/NA	Analysis	9012B		1	594679	08/30/21 17:58	ALT	TAL BUF

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: Owego Former MGP Site

Job ID: 480-188728-1

Laboratory: Eurofins TestAmerica, Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-22

- 1
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Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: Owego Former MGP Site

Job ID: 480-188728-1

Method	Method Description	Protocol	Laboratory
9012B	Cyanide, Total and/or Amenable	SW846	TAL BUF
9012B	Cyanide, Total and/or Amenable, Distillation	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600



Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: Owego Former MGP Site

Job ID: 480-188728-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-188728-1	PZ2-082421-1110	Water	08/24/21 11:10	08/25/21 12:30
480-188728-2	MW4-082421-1205	Water	08/24/21 12:05	08/25/21 12:30
480-188728-3	4125-082421-0001	Water	08/24/21 00:00	08/25/21 12:30
480-188728-4	4125-082421-0002	Water	08/24/21 00:00	08/25/21 12:30

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Chain of Custody Record

Client Information		Sample ID: Robert Lydell	Lab PM: Hartmann, Steve	Carrier Tracking No(s): 480-164473-36105 1	COC No: 480-164473-36105 1				
Client Contact: Santa McKenna		Phone: 614-564-7088	E-Mail: Steve.Hartmann@Eurofinset.com	State of Origin:	Page: Page 1 of 1				
Company: Haley & Aldrich, Inc.		PWSID		Job #:					
Address: 200 Town Centre Drive #2		Due Date Requested:		Analysis Requested					
City: Rochester		TAT Requested (days):							
State, Zip: NY, 14623-4264		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No							
Phone: 585-484-6839(Tel)		PO #: 134371-003							
Email: SMcKenna@haleyaldrich.com		WO #: 134371-002							
Project Name: Owego Former MGP Site		Project #: 48021440							
Site:		SSOW#:							
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Solid, O=Material, B=Trace, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9012B - Cyanide, Total	Total Number of Containers	Special Instructions/Note:
PZ2-082421-1110	8/24/21	11:10	G	Water	NY X	X			MS/MSD
MW4-082421-1205		12:05	G	Water	NN X				
4125-082421-0001			G	Water	NN X				
4125-082421-0002			G	Water	NN X				
				Water					
				Water					
 480-188728 Chain of Custody									
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological									
Deliverable Requested: I, II, III, IV, Other (specify)									
Empty Kit Relinquished by:									
Relinquished by: <i>Robert Lydell</i> Date: 8/24/21 Time: 16:00 Company: HEA									
Relinquished by: <i>Tom Kolb</i> Date/Time: 8/25/21 12:00 Company: TA									
Relinquished by: Date/Time: Company:									
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No									
Custody Seal No.:									
Relinquished by: Date/Time: Company:									
Relinquished by: Date/Time: Company:									
Relinquished by: Date/Time: Company:									
Cooler Temperature(s) °C and Other Remarks:									
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months									
Special Instructions/QC Requirements:									



Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 480-188728-1

Login Number: 188728

List Number: 1

Creator: Stopa, Erik S

List Source: Eurofins TestAmerica, Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	H+A
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

