March 6th, 2024

Ms. Sherrel Henry
Remedial Project Manager
U.S. Environmental Protection Agency
290 Broadway – 20th Floor
New York, New York 10007-1866

Re: Peter Cooper Markhams Site, Dayton, NY
December 2023 Post-Remedial Groundwater Monitoring Event (Revised April 12, 2024)

Dear Ms. Henry:

On behalf of the cooperating Potentially Responsible Parties (cPRPs) for the above-referenced site, Roux Environmental Engineering and Geology, D.P.C. ("Roux") (Formally Benchmark Civil/Environmental Engineering & Geology, PLLC) has prepared this letter report to transmit the results of the December 2023 post-remedial groundwater monitoring event at the Peter Cooper Markhams Site in Dayton, New York (see Figure 1). A site maintenance summary is also included in this report. The work was performed in accordance with the approved (June 2009) Post-Remedial Operation, Maintenance and Monitoring (OM&M) Plan. Groundwater and surface water monitoring requirements are presented on Table 1.

Field Sampling Procedure

On December 21st, 2023, Roux staff collected a round of static water level measurements from the seven monitoring wells shown on Figure 2; measurements and groundwater elevations are summarized on Table 2. Groundwater samples were collected from on-site monitoring wells MW-5S, MW-7S, MW-8S, MW-9S and a surface water sample from Wetland F.

The monitoring wells were sampled using a Mini-Typhoon® submersible pump and dedicated PVC tubing in accordance with low-flow groundwater purging procedures. Field measurements for pH, Eh, specific conductance, temperature, turbidity, and visual/ olfactory observations were recorded and monitored for stabilization. Purging was considered complete when pH, specific conductivity, and temperature stabilized, and the turbidity measured below or stabilized above 50 NTU. Stability is defined as the variation between field measurements of 10 percent or less with no overall upward or downward trend in the measurements. Once the field parameters stabilized, groundwater samples were collected and analyzed for the parameters presented on Table 1. The submersible pump was decontaminated using Alconox and water following sample collection activities at each well. The Wetland F sample was obtained by dipping a laboratory-provided unpreserved sample container into the surface water column.

Attachment 1 includes sample collection logs. All water samples were transferred to laboratory supplied, pre-preserved sample containers and transported under chain-of-custody command to Eurofins Test America Laboratories for analysis in accordance with Table 1.

Analytical Results

Attachment 2 includes the laboratory analytical data for the December 21st, 2023, sampling event. Routine parameters detected above method detection limits are shown on Table 3 with their associated sample concentrations. NYSDEC Groundwater Quality Standards and Guidance Values (GWQS/GV; TOGS 1.1.1, June 1998) are presented for comparison. Concentrations exceeding the GWQS/GVs are highlighted. As indicated on Table 3, sample concentrations were reported as non-detect or below GWQS/GV at all the monitored locations with the exceptions of: total manganese at MW-5S and MW-8S, ammonia at MW-5S; total and dissolved iron at MW-7S and total iron at Wetland F.

Historical Comparisons

Table 3 includes routine groundwater monitoring results for past monitoring events. Charts showing trending of the monitored parameters (excluding arsenic, hexavalent chromium, and sulfide, which are consistently reported as non-detect or only sporadically at all locations) are presented in Attachment 3. In general, the data indicate similar concentrations for the monitored parameters at each of the sampling locations, with no apparent trending except for an increase in ammonia at MW-5S. Although, ammonia concentrations at MW-5S did show a significant decrease from the September 2022 monitoring event, concentrations remain elevated above GWQS. No other parameters have shown similar trending at MW-5S, which is in a topographically low area where significant leaf accumulation/decay has been observed and the groundwater elevation is within a few inches of ground surface.

Data Quality

Site-specific quality control (QC) sampling during each event included the collection of one blind duplicate sample (collected from MW-5S) and one matrix spike/matrix spike duplicate (MS/MSD) sample (collected from MW-9S) for total metal analysis only. Recoveries for the MS/MSDs were within the acceptable ranges with good reproducibility. Blind duplicate results correlated well with MW-5S results.

Groundwater Elevation Data

Groundwater monitoring includes a round of static water level measurements from seven monitoring wells across the site. Table 2 includes groundwater elevation data for the 2023 monitoring year. An isopotential map representing the shallow groundwater was prepared from the December 21st, 2023, depth-to-groundwater measurements and is presented as Figure 2. Based on those measurements, the inferred groundwater flow directions indicate that shallow groundwater migrates to the west towards Wetland F, which is consistent with observations recorded during the site Remedial Investigation.

Annual Maintenance Summary Report

Post remedial site inspections have been performed during each groundwater monitoring event since June 2009. The December 2023 site inspection indicated no irregularities or changes to the property access or security. The final cover system appears in good condition, with the gas vent monitoring system intact and operational. Overgrown vegetation near and along access paths to the monitoring well locations were cut on ~~September 30th, 2022~~ March 21st, 2023. A copy of the Field Inspection Form including a photolog is provided in Attachment 4.

Conclusions

The groundwater monitoring data and site inspection yielded no evidence of significant impact from leaching from the containment cell area into the water table. In addition, no toxic metals (arsenic, chromium, hexavalent chromium) were detected above their representative GWQS/GVs at any of the sample locations. Accordingly, the data indicate that the implemented remedy at the Site remains protective of public health and the environment.

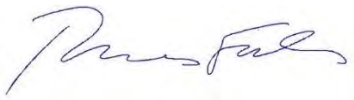
More specifically, the 2023 groundwater monitoring data compared to prior events indicate that there have been no significant changes in groundwater flow or groundwater quality attributable to the landfill. Although groundwater at MW-5S indicates levels of ammonia slightly above the GWQS/GVs standard since 2015, no other monitored parameters have shown similar trending. It is noted that groundwater elevations at MW-5S are close to grade, and the elevated ammonia levels detected in MW-5S may be attributed to the decaying of organic matter from surrounding trees and leaf debris.

The electronic data delivery (EDD) format is currently being uploaded to NYSDEC's EQuIS database. The next sampling event is in March of 2025.

Please contact us if you have any questions or require additional information.

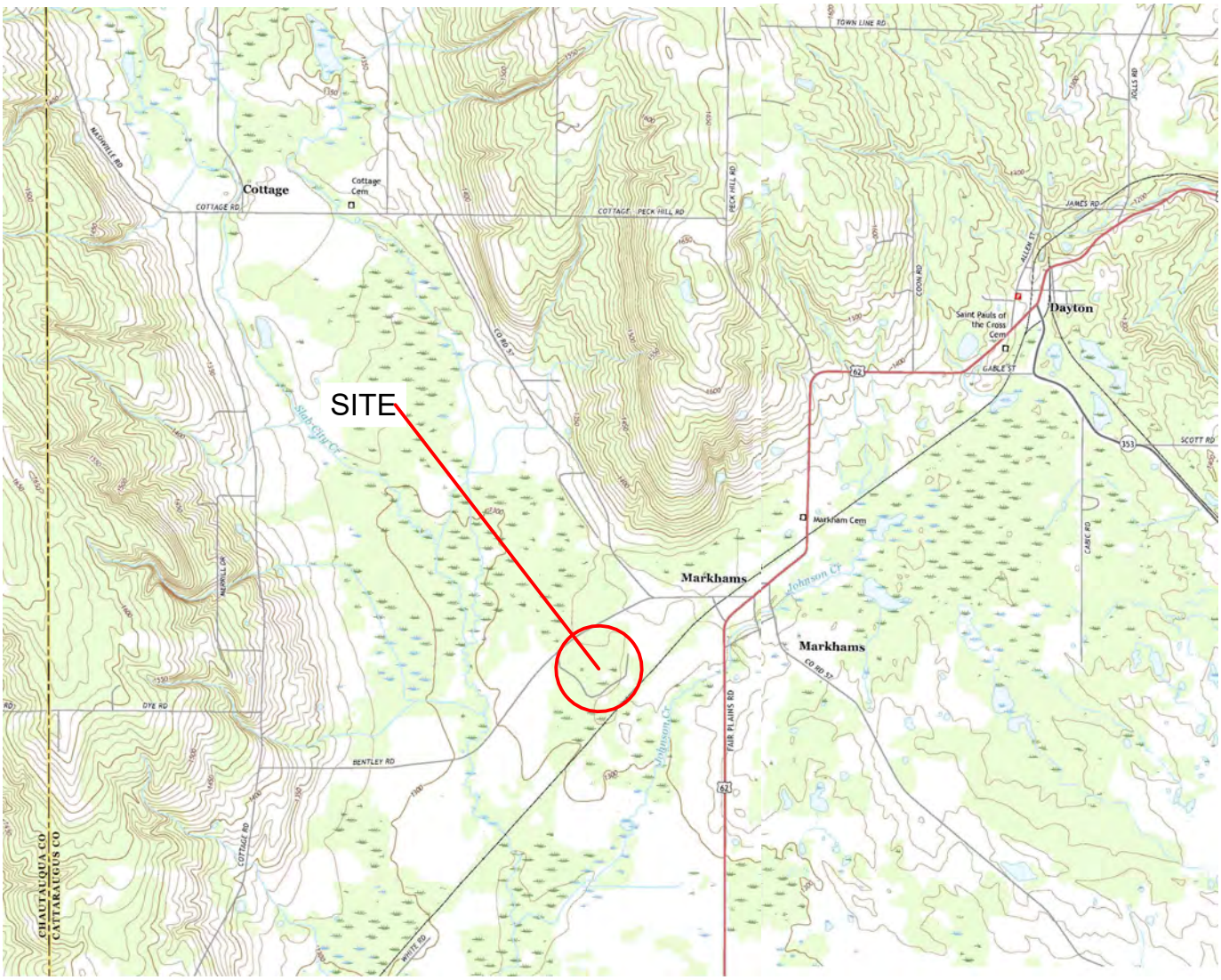
Sincerely,

ROUX ENVIRONMENTAL ENGINEERING AND GEOLOGY, D.P.C

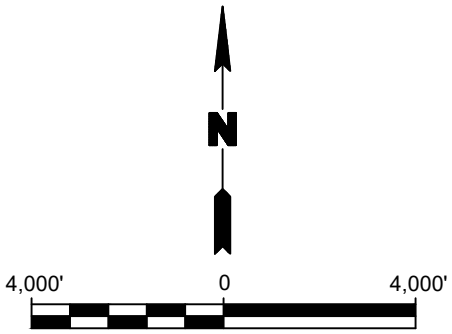


Thomas H. Forbes, P.E.
Principal Engineer, Vice President
Enclosure

FIGURES



BASE MAP USGS PERRYSBURG AND DAYTON, NEW YORK QUADRANGLES, 2016



Title: **SITE LOCATION AND VICINITY MAP**

POST-REMEDIAL MONITORING

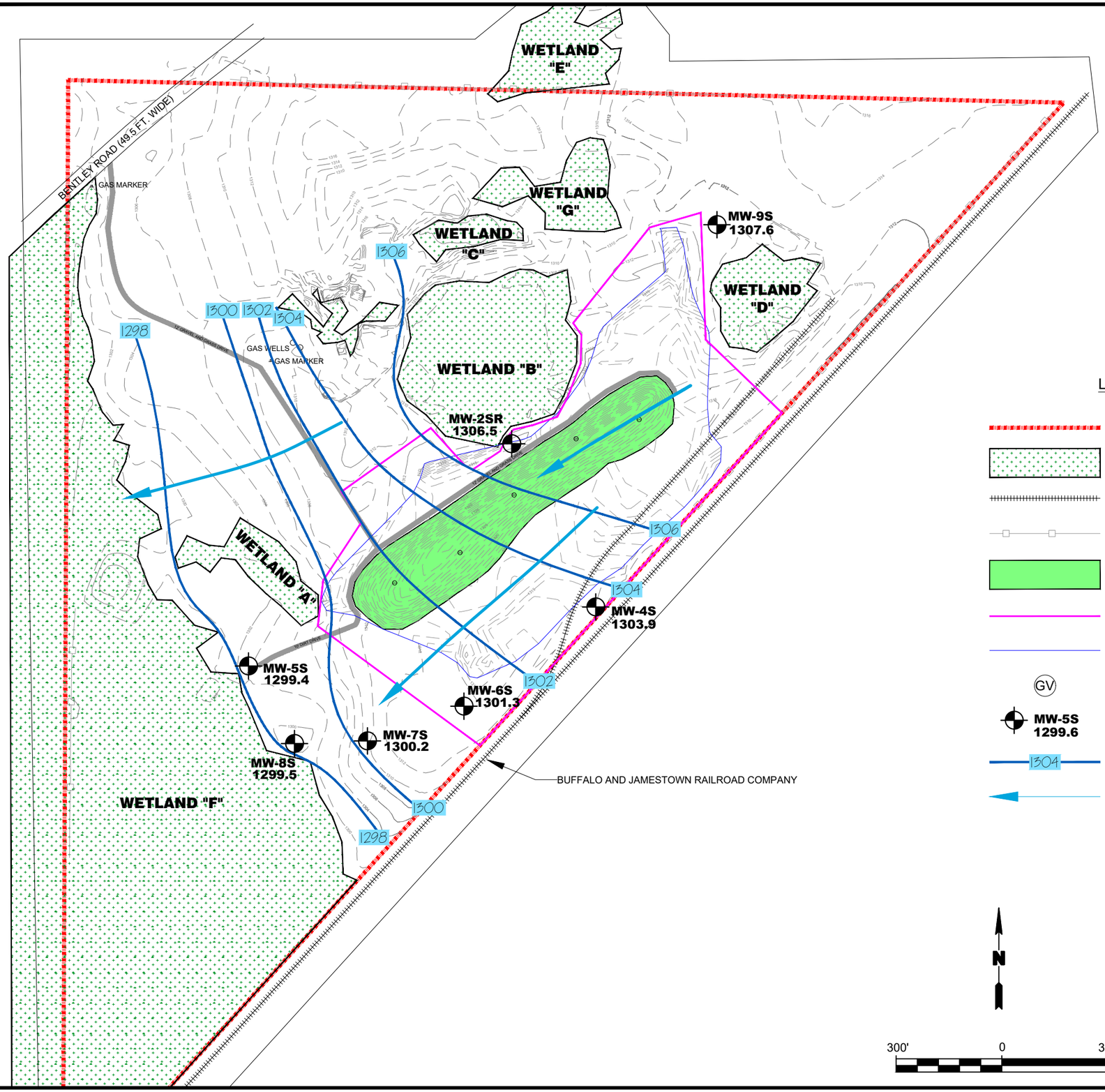
PETER COOPER MARKHAMS SUPERFUND SITE
DAYTON, NEW YORK

Prepared for:
CPRPs FOR PETER COOPER MARKHAMS SITE

ROUX

Compiled by:	Date: JANUARY 2024	FIGURE
Prepared by: CMC	Scale: AS SHOWN	
Project Mgr: THF	Project:	1
File: FIGURE 1; SITE LOC AND VICINITY MARKHAMS.DWG		

F:\CAD\BENCHMARK\COLLIER SHANNON\MARKHAMS SITE\2019 - EMERGING CONTAMINANT SAMPLING PLAN\FIGURE 1; SITE LOC AND VICINITY MARKHAMS.DWG



LEGEND:

- PROPERTY BOUNDARY
- WETLAND AREA
- RAILROAD TRACKS
- FENCE LINE
- CONTAINMENT CELL
- REMEDIAL WORK LIMIT
- SURVEY LIMITS
- GV — CONTAINMENT CELL GAS VENT
- MW-5S 1299.6 — MONITORING WELL WITH GROUNDWATER ELEVATION (12/21/2023)
- 1304 — ISOPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION

N

300' 0 300'

Title:

SITE PLAN & ISOPOTENTIAL MAP FOR DECEMBER 21, 2023

POST-REMEDIAL MONITORING

PETER COOPER MARKHAMS SUPERFUND SITE
DAYTON, NEW YORK

Prepared for:
CPRPs FOR PETER COOPER MARKHAMS

ROUX

Compiled by:	Date: JANUARY 2024	FIGURE
Prepared by: CMC	Scale: AS SHOWN	2
Project Mgr: THF	Project:	
File: FIGURE 2; SITE PLAN & ISOPOTENTIAL MAP 2023.DWG		

F:\CAD\BENCHMARK\COLLIER SHANNON\MARKHAMS SITE\POST-REMEDIAL MONITORING\2023\FIGURE 2; SITE PLAN & ISOPOTENTIAL MAP 2023.DWG

TABLES

TABLE 1

MONITORING PROGRAM REQUIREMENTS

December 2023 Monitoring Event
Peter Cooper Markhams Site
Dayton, New York

Sample Location	Frequency	Parameters										
		DTW	Field [1]	Total Metals [2]					Water Quality			
				As	Cr	Hex. Cr.	Mn	Fe	Ammonia	Nitrate	Alkalinity	T. Sulfide
Groundwater												
MW-2SR (cross-gradient)	15-month	X										
MW-4S		X										
MW-5S		X	X	X	X	X	X	X	X	X	X	X
MW-6S		X										
MW-7S		X	X	X	X	X	X	X	X	X	X	X
MW-8S		X	X	X	X	X	X	X	X	X	X	X
MW-9S (upgradient)		X	X	X	X	X	X	X	X	X	X	X
Surface Water												
Wetland F (surface water)	15-month		X	X	X	X	X	X	X	X	X	X
QA/QC Samples [3]												
Blind Duplicate	15-month			X	X	X	X	X				
Matrix Spike				X	X	X	X	X				
Matrix Spike Duplicate				X	X	X	X	X				

Notes:

1. Field measurements include: pH, temperature, specific conductance, turbidity, Eh
2. If field measured turbidity is greater than 50 NTU, dissolved metals will also be collected.
3. QA/QC samples will be collected at a frequency of 1 per 20 for each matrix.
4. DTW = depth to water

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TABLE 2

SUMMARY OF GROUNDWATER ELEVATIONS
12/21/23
Monitoring Event
Peter Cooper Markhams Site
Dayton, New York

Location	TOR Elevation (fmsl)	DTW (fbTOR)	GWE (fmsl)
MW-2SR	1313.33	6.83	1306.50
MW-4S	1313.11	9.18	1303.93
MW-5S	1302.70	3.26	1299.44
MW-6S	1315.47	14.15	1301.32
MW-7S	1312.82	12.61	1300.21
MW-8S	1304.10	4.58	1299.52
MW-9S	1314.13	6.50	1307.63

Notes:

1. DTW = depth to water
2. fbTOR = feet below top of riser
3. fmsl = feet above mean sea level
4. GWE = groundwater elevation
5. TOR = top of riser

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TABLE 3

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS [1,2]

December 2023 Monitoring Event
Peter Cooper Markhams Site
Dayton, New York

Parameter	Monitoring Location and Sample Collection Date																														GWQS [4]
	MW-5S																														
	04/25/02		06/19/09		12/30/09		05/28/10		06/22/11		06/26/12		06/24/13		06/24/14		10/27/15		10/26/16		10/20/17		10/19/18		02/05/20		06/23/21		09/30/22		12/21/23		
Field Measurements [3]:																															
Sample No.	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	--
pH (units)	--	6.81	6.75	6.78	6.58	6.68	6.80	6.86	6.90	7.00	6.88	6.88	6.89	6.92	7.12	7.13	6.92	6.92	6.69	6.70	6.91	6.88	6.89	7.12	6.94	6.92	6.86	6.98	6.75	6.78	6.80	6.79	**6.5 - 8.5**
Temperature (°C)	--	7.14	11.4	11.7	6.3	6.2	14.3	14.9	14.2	14.5	12.8	13.2	12.9	13.3	12.8	13.6	12.3	12.3	12.7	12.7	13.8	13.7	13.2	12.1	4.4	4.3	12.1	13.1	13.2	13.2	7.9	7.8	**NA**
Sp. Conductance (mS)	--	822	1004	993	1099	1090	985	966	1035	1029	1005	1008	955	941	986	974	1041	1048	1050	1062	947	949	1207	1234	879	908	992	978	1092	1111	1019	1026	**NA**
Turbidity (NTU)	--	2	4.6	2.4	2.9	2.9	37	5.47	4.29	3.11	4.04	3.42	9.82	5.32	8.77	6.79	5.53	5.53	4.39	2.77	1.96	1.53	10	6	31.5	25	8.91	1.4	7.84	7.8	8.03	9.01	**NA**
Eh (mV)	--	67.3	69	70	-29	-20	-38	21	-9	15	15	30	105	100	150	130	59	82	108	100	155	154	70	88	135	130	230	286	232	232	107	108	**NA**
Wet Chemistry (mg/L):																															
Alkalinity, Total	NA		538 D		470 D		471 D		478		473		474		489		518		486		511		517		453 B		469		614		492		**NA**
Ammonia	ND		ND		0.047		ND		ND		0.2		0.13		0.4		1.2		**3.5**		**3.6**		**6.5**		**12.9**		**17.2 B**		**20.4**		**8.3**		**2**
Nitrate (as Nitrogen)	2.8		0.271		0.347		0.443 CF6		ND		0.23		1.2		ND		1.4		**14.1**		1.2		0.43		**12.7**		1.9		0.12		7.2		**10**
Total Inorganic Compounds (mg/L):																															
Chromium	ND		0.0056		ND		ND		0.0064		0.005		0.0051		0.0047		0.0042		0.0054		ND		0.004		0.004		0.0042		0.0044		0.004		**0.05**
Hexavalent Chromium	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		0.012		**0.05**
Manganese	NA		**1.61**		**1.45**		**1.50**		**1.80**		**1.6**		**1.7**		**2.6**		**2.3**		**2.2**		**1.9**		**2.2**		**4.5**		**2.5 B**		**2.3 B**		**2.3**		**0.3**
Iron	NA		**0.408**		0.128		**0.508**		**0.560**		0.2		0.053		**0.41**		**0.49**		0.17		0.091		0.16		**1.2**		**0.59**		0.02 J		0.12		**0.3**
Soluble Inorganic Compounds (mg/L):																															
Chromium	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.004		NA		NA		NA		NA		**0.05**
Manganese	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		**1.6**		NA		NA		NA		NA		**0.3**

Notes:

1. Only those compounds detected above the method detection limit at a minimum of one sample event are reported in this table.
2. Shaded and bolded values represent an exceedance of the GWQS/GV.
3. Field measurements were collected immediately before and after groundwater sample collection.
4. NYSDEC Class "GA" Groundwater Quality Standards (GWQS) per 6 NYCRR Part 703.

Definitions:

B = Compound was found in the blank and sample.
J = Estimated value
NA = Not analyzed
ND = Parameter was not detected above laboratory reporting limit.
D = Dilution required due to high concentration of target analyte(s).
P = Sample filtered in the laboratory
CF6 = Results confirmed by reanalysis.

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TABLE 3 (continued)

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS [1,2]

December 2023 Monitoring Event
Peter Cooper Markhams Site
Dayton, New York

Parameter	Monitoring Location and Sample Collection Date																														GWQS [4]
	MW-7S																														
	04/24/02		06/19/09		12/30/09		05/28/10		06/22/11		06/26/12		06/24/13		06/24/14		10/27/15		10/26/16		10/20/17		10/19/18		02/05/20		06/23/21		09/30/22		12/21/23		
Field Measurements [3]:																															
Sample No.	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	--
pH (units)	--	6.80	6.74	6.79	6.77	6.82	6.79	6.78	6.31	6.41	6.80	6.78	--	7.23	7.06	7.05	7.02	7.03	6.91	7.00	7.05	7.07	7.04	(5)	7.03	7.01	6.95	6.96	6.92	6.93	6.96	6.96	**6.5 - 8.5**
Temperature (°C)	--	8.77	9.6	10.1	5.4	7.7	15.0	15.1	13.7	13.4	9.8	9.7	--	12.8	13.10	12.9	11.00	11.1	10.60	10.5	11.70	12.7	11.00	(5)	7.4	7.6	14.8	13.9	11.4	11.3	9.7	9.7	**NA**
Sp. Conductance (mS)	--	1959	1753	1754	1804	1799	1687	1785	1771	1660	1786	1776	--	1632	1648	1621	1612	1619	1595	1603	1498	1492	1715	(5)	1349	1375	1327	1340	1331	1330	1312	1313	**NA**
Turbidity (NTU)	--	12.4	>1000	180	405	537	190	27	96.8	40.4	47.6	49.4	--	32.3	443	80	120	40.1	778	351	16.9	8.12	586	(5)	365	205	71	70	38.6	33.7	64.3	45.3	**NA**
Eh (mV)	--	170	-56	-62	-62	-64	-83	-114	-86	-92	-63	-66	--	-26	-25	-41	-60	-60	-36	-36	-84	-92	-61	(5)	-9	-10	-40	-38	50	43	-49	-51	**NA**
Wet Chemistry (mg/L):																															
Alkalinity, Total	NA		519 D		586 D		446 D		438		437		410		448		431		434		439		391		438 B		398 B		432		420		**NA**
Ammonia	ND		0.063		0.119		0.039 C		ND		ND		0.031		0.069		0.02		0.033		ND		0.2		0.2		0.018 JB		0.015 J		ND		**2**
Nitrate (as Nitrogen)	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		0.03 J		0.03 J		0.2		0.037 J		**10**
Total Inorganic Compounds (mg/L):																															
Chromium	ND		0.0055		0.0050		0.0046		0.0056		0.0057		0.0053		ND		ND		0.0051		ND		0.0082		0.0082		0.0034 J		0.0031 J		0.003 J		**0.05**
Hexavalent Chromium	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		0.006 J		0.01		**0.05**
Manganese	NA		0.264		**0.428**		0.213		0.200		0.2100		0.19		0.24		0.19		0.23		0.18		**0.39**		0.26		0.21 B		0.17 B		0.19		**0.3**
Iron	NA		**104**		**83.3**		**17.8**		**25.0**		**17.8**		**14.1**		**129**		**17**		**61.1**		**10.3**		**237**		**25**		**32**		**10.9**		**11.1 ^2**		**0.3**
Soluble Inorganic Compounds (mg/L):																															
Chromium	NA		0.005 P		0.005 P		0.0043		0.0056		NA		NA		0.0044		ND		ND		NA		ND		0.003 J		ND		NA		0.0028 J		**0.05**
Manganese	NA		0.206 P		0.186 P		0.193		0.2		NA		NA		0.19		0.17		0.2		NA		0.17		0.2		NA		NA		0.15 B		**0.3**
Iron	NA		ND		ND		**10.8 CF6**		**10.2**		NA		NA		9.8		**8.3**		**10**		NA		**7.5**		0.43		NA		NA		**6.5**		**0.3**

Notes:

1. Only those compounds detected above the method detection limit at a minimum of one sample event are reported in this table.
2. Shaded and bolded values represent an exceedance of the GWQS/GV.
3. Field measurements were collected immediately before and after groundwater sample collection.
4. NYSDEC Class "GA" Groundwater Quality Standards (GWQS) per 6 NYCRR Part 703.
5. Surface water was more turbid at time of metals collection.

Definitions:

J = Estimated value
B = Compound was found in the blank and sample.
NA = Not analyzed
ND = Parameter was not detected above laboratory reporting limit.
D = Dilution required due to high concentration of target analyte(s).
P = Sample filtered in the laboratory
CF6 = Results confirmed by reanalysis.
^2 = Calibration Blank (ICB and/or CCB) is outside acceptance limits.
F1 = MS and/or MSD recovery exceeds control limits.

TABLE 3 (continued)

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS [1,2]

December 2023 Monitoring Event
Peter Cooper Markhams Site
Dayton, New York

Parameter	Monitoring Location and Sample Collection Date																														GWQS [4]
	MW-8S																														
	04/23/02		06/19/09		12/30/09		05/28/10		06/22/11		06/26/12		06/24/13		06/24/14		10/27/15		10/26/16		10/20/17		10/19/18		02/20/20		06/23/21		09/30/22		12/21/23		
Field Measurements [3]:																															
Sample No.	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	--
pH (units)	--	6.90	6.90	6.92	6.65	6.70	7.04	**6.25**	6.67	6.72	6.89	6.97	7.01	7.01	7.27	7.17	6.96	6.95	6.82	6.73	7.00	6.97	6.88	7.32	7.27	7.14	7.04	7.12	6.90	6.90	6.96	6.95	**6.5 - 8.5**
Temperature (°C)	--	7.6	11.5	12.2	6.9	6.9	16.1	12.7	13.5	14.3	12.0	12.8	13.9	14.3	13.0	14.0	12.9	13.2	12.4	12.5	14.1	14.5	13.4	12.7	4.8	5.2	11.3	11.8	13.9	15.1	8.3	8.3	**NA**
Sp. Conductance (mS)	--	755	754	764	767	767	653	635	886	879	822	809	700	691	781	766	811.5	817.4	894.0	892.0	759.3	773.6	811.0	823.0	575.7	593.5	627.0	595.0	698.8	692.1	594.3	615.3	**NA**
Turbidity (NTU)	--	17	32	22	30	19	63	5.38	34.6	20	11.3	7.96	8.52	4.88	12.3	5.97	9.17	10.8	6.81	4.96	4.85	6.11	9	9	52.1	27.8	2.92	2.22	12.4	11.6	16.1	12.6	**NA**
Eh (mV)	--	4.6	80	81	7	15	21	41	48	59	4	72	92	84	162	183	81	102	108	106	133	124	68	77	104	96	241	218	211	198	107	106	**NA**
Wet Chemistry (mg/L):																															
Alkalinity, Total	NA		291 D		285 D		300 D		355		372		266		286		385		426		396		348		303 B		284		367		330		**NA**
Ammonia	0.34		0.038		0.04		0.042		0.028		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		**2**
Nitrate (as Nitrogen)	**14.6**		9.48 D		0.543		1.98		2.3		3.8		6.4		7		4		ND		0.54		0.82		6.9		8.8		0.16		0.81		**10**
Total Inorganic Compounds (mg/L):																															
Chromium	ND		ND		ND		ND		0.0093		0.0044		ND		ND		ND		0.0042		ND		ND		0.0026 J		0.0016 J		0.0023 J		0.0017 J		**0.05**
Hexavalent Chromium	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		0.0059 J		ND		ND		0.012		**0.05**
Manganese	NA		**19.6**		**1.54**		**2.34**		**14.30**		**6**		**1.4**		**1.7**		**1.5**		**1.9**		**0.64**		**0.61**		**0.37**		0.28 B		**1.1 B**		**0.49**		**0.3**
Iron	NA		**1.93**		ND		0.088		**0.61**		0.15		ND		0.15		0.11		0.097		ND		0.12		**0.91**		0.047 J		0.079		0.035 J		**0.3**

Notes:

1. Only those compounds detected above the method detection limit at a minimum of one sample event are reported in this table.
2. Shaded and bolded values represent an exceedance of the GWQS/GV.
3. Field measurements were collected immediately before and after groundwater sample collection.
4. NYSDEC Class "GA" Groundwater Quality Standards (GWQS) per 6 NYCRR Part 703.

Definitions:

B = Compound was found in the blank and sample.
J = Estimated value
NA = Not analyzed
ND = Parameter was not detected above laboratory reporting limit.
D = Dilution required due to high concentration of target analyte(s).
P = Sample filtered in the laboratory
CF6 = Results confirmed by reanalysis.

TABLE 3 (continued)

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS [1,2]

December 2023 Monitoring Event
Peter Cooper Markhams Site
Dayton, New York

Parameter	Monitoring Location and Sample Collection Date																														GWQS [4]
	MW-9S [5]																														
	04/23/02		06/19/09		12/30/09		05/28/10		06/22/11		06/26/12		06/24/13		06/24/14		10/27/15		10/26/16		10/20/17		10/19/18		02/05/20		06/23/21		09/30/22		12/21/23		
Field Measurements [3]:																															
Sample No.	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	*Initial*	*Final*	--
pH (units)	--	7.36	**6.48**	6.52	6.84	6.79	7.71	6.78	**6.31**	**6.38**	6.88	7.11	7.72	7.74	7.83	7.65	7.12	7.06	7.73	7.56	7.31	7.27	7.35	7.10	6.58	6.79	6.78	6.73	6.65	6.70	7.30	7.20	**6.5 - 8.5**
Temperature (°C)	--	6.02	12.2	12.6	6.5	5.4	12.2	12.4	15.7	16.1	13.0	13.4	14.6	15.3	12.8	14.0	12.6	12.7	12.9	12.9	13.0	13.2	12.7	12.4	4.6	4.6	11.8	11.9	14.6	14.6	8.9	8.7	**NA**
Sp. Conductance (mS)	--	540	337	337	369	369	402	299	266	280	297	274	320	301	381	417	364.7	342.9	402	400	423.4	416.8	368.0	386.0	322.8	341.2	339.0	335.0	303.4	305.5	413.6	406.1	**NA**
Turbidity (NTU)	--	11.2	6.2	4	2.43	2.02	18.6	2.98	7.26	9.45	9.51	5.84	12.5	10.4	24	14	1.66	2.38	0.7	0.23	0.96	0.89	13	10	23	20.9	2.99	2.99	6.05	8.39	1.5	1.56	**NA**
Eh (mV)	--	1.8	93	90	52	56	4	50	54	80	48	23	503	132	149	155	134	131	73	71	116	114	125	115	148	142	208	241	243	245	113	113	**NA**
Wet Chemistry (mg/L):																																	
Alkalinity, Total	NA		98.4 D		98.8 D		73.5 C		39.1		82.4		92.2		90.5		116		129		137		106		104 B		81.4 B		106 B		126		**NA**
Ammonia	ND < 10		ND		0.029		ND		ND		ND		ND		ND		ND		ND		ND		ND		0.014 J		ND		ND		ND		**2**
Nitrate (as Nitrogen)	9.3		7.19 D		**11.1 D**		**12.1 D**		**13.8**		5.8		6.1		**13.7**		8.6		5.5		5.4		8.1		**12.7 H**		**12.9**		0.31		5.5		**10**
Total Inorganic Compounds (mg/L):																																	
Chromium	ND		0.0051		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		0.0018 J		ND		ND		ND		**0.05**
Hexavalent Chromium	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		0.0091 J		**0.05**
Manganese	NA		**1.54**		0.005		0.004		0.008		0.0046		0.018		0.021		0.0037		0.0037		0.0076		0.007		0.11		0.0023 JB		0.00055 JB		0.0029 J		**0.3**
Iron	NA		**0.322**		ND		0.076		0.077		0.057		0.13		0.31		0.053		ND		0.1		0.069		**1.9**		0.031 J		ND		0.037 J		**0.3**

Notes:

1. Only those compounds detected above the method detection limit at a minimum of one sample event are reported in this table.
2. Shaded and bolded values represent an exceedance of the GWQS/GV.
3. Field measurements were collected immediately before and after groundwater sample collection.
4. NYSDEC Class "GA" Groundwater Quality Standards (GWQS) per 6 NYCRR Part 703.
5. Surface water was more turbid at time of metals collection.

Definitions:

H = Sample was prepped or analyzed beyond the specified holding time.
B = Compound was found in the blank and sample.
J = Estimated value
NA = Not analyzed
ND = Parameter was not detected above laboratory reporting limit.
D = Dilution required due to high concentration of target analyte(s).
P = Sample filtered in the laboratory
CF6 = Results confirmed by reanalysis.

ROUX

TABLE 3 (continued)

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS [1,2]

December 2023 Monitoring Event
Peter Cooper Markhams Site
Dayton, New York

Parameter	Wetland-F																GWQS [4]
	06/19/09		12/30/09	05/28/10	06/22/11	06/26/12	06/24/13		06/24/14	10/27/15	10/26/16	10/20/17	10/19/18	02/05/20	06/23/21	09/30/22	12/21/23	
Field Measurements [3]:																		
Sample No.	*Initial*	*Final*	*Initial*	*Initial*	*Initial*	*Initial*	*Initial*	*Final*	*Initial*	*Initial*	*Initial*	*Initial*	*Initial*	*Initial*	*Initial*	*Initial*	*Initial*	--
pH (units)	7.24	7.24	**6.04**	7.45	7.27	(6)	7.70	7.70	7.13	7.42	(6)	7.18	7.34	6.94	(6)	7.37	7.20	**6.5 - 8.5**
Temperature (°C)	16.7	16.9	2.00	22.00	20.90	(6)	27.8	27.7	20.00	9.40	(6)	11.4	6	0.8	(6)	9.40	2.3	**NA**
Sp. Conductance (mS)	416	426	571.8	469.0	385.0	(6)	752.8	748.0	484.0	299.4	(6)	268.8	638	611	(6)	420.5	395.4	**NA**
Turbidity (NTU)	1.2	250	588	6.79	7.83	(6)	--	--	21.3	2.97 [5]	(6)	250	8	203	(6)	857	21.6	**NA**
Eh (mV)	3	-42	-39	530	-1	(6)	97	89	86	11.8	(6)	112	-49	9	(6)	216	50	**NA**
Wet Chemistry (mg/L):																		
Alkalinity, Total	228 D		274 D	243 D	204	(6)	325		260	110	(6)	120	253	260 B	(6)	179	91.2	**NA**
Ammonia	0.065		0.167	0.088	0.2	(6)	0.20		0.090	.020	(6)	.070	0.034	0.37	(6)	0.080	ND	**2**
Nitrate (as Nitrogen)	7.9 D		ND	ND	3.8	(6)	ND		ND	ND	(6)	.27	ND	1.7	(6)	0.021 J	0.67	**10**
Sulfide, Total	**0.173**		ND	ND	ND	(6)	ND		ND	ND	(6)	ND	ND	**1.2**	(6)	ND	ND	**0.05**
Total Inorganic Compounds (mg/L):																		
Chromium	ND		0.006	ND	ND	(6)	0.0045		0.0084	ND	(6)	.0041	ND	0.0049	(6)	0.0022 J	0.0022 J	**0.05**
Hexavalent Chromium	ND		ND	ND	ND	(6)	ND		ND	ND	(6)	ND	ND	ND	(6)	0.0072 J	0.02 F1	**0.05**
Manganese	**0.676**		**0.305**	**0.392**	**0.51**	(6)	**2.9**		**0.76**	**2.5**	(6)	**1.0**	**0.86**	**0.84**	(6)	**1.8 B**	0.13	**0.3**
Iron	**0.647**		**6.14**	**0.715**	**0.94**	(6)	0.22		**8.8**	**2.9**	(6)	**1.0**	**3.5**	**2.6**	(6)	**1.3**	**0.57 ^2**	**0.3**
Soluble Inorganic Compounds (mg/L):																		
Chromium	ND		ND	NA	ND	(6)	NA		ND	ND	(6)	ND	ND	ND	(6)	0.0017 J	NA	**0.05**
Hexavalent Chromium	NA		NA	NA	NA	(6)	NA		NA	NA	(6)	NA	NA	NA	(6)	0.0072 J	NA	**0.05**
Manganese	0.0116 P		0.0272 P	NA	ND	(6)	NA		0.0043	**0.60**	(6)	0.21	0.018	**0.45**	(6)	0.00087 J	NA	**0.3**
Iron	0.104 P		0.089 P	NA	0.07	(6)	NA		0.057	**1.0**	(6)	.0084	**1.9**	0.18	(6)	0.059	NA	**0.3**

Notes:

1. Only those compounds detected above the method detection limit at a minimum of one sample event are reported in this table.
2. Shaded and bolded values represent an exceedance of the GWQS/GV.
3. Field measurements were collected immediately before and after groundwater sample collection.
4. NYSDEC Class "GA" Groundwater Quality Standards (GWQS) per 6 NYCRR Part 703.
5. Surface water was more turbid at time of metals collection.
6. Sample location was dry

Definitions:

J = Estimated value
B = Compound was found in the blank and sample.
NA = Not analyzed
ND = Parameter was not detected above laboratory reporting limit.
D = Dilution required due to high concentration of target analyte(s).
P = Sample filtered in the laboratory
CF6 = Results confirmed by reanalysis.
^2 = Calibration Blank (ICB and/or CCB) is outside acceptance limits.
F1 = MS and/or MSD recovery exceeds control limits.

ATTACHMENT 1

SAMPLE COLLECTION LOGS

ROUX

TABLE 2

SUMMARY OF GROUNDWATER ELEVATIONS

12/21/23

Monitoring Event
Peter Cooper Markhams Site
Dayton, New York

Location	TOR Elevation (fmsl)	DTW (fbTOR)	GWE (fmsl)
MW-2SR	1313.33	6.83	1313.33
MW-4S	1313.11	9.18	1313.11
MW-5S	1302.70	3.26	1302.70
MW-6S	1315.47	14.15	1315.47
MW-7S	1312.82	12.61	1312.82
MW-8S	1304.10	4.58	1304.10
MW-9S	1314.13	6.50	1314.13

Notes:

1. DTW = depth to water
2. fbTOR = feet below top of riser
3. fmsl = feet above mean sea level
4. GWE = groundwater elevation
5. TOR = top of riser

ROUX

EQUIPMENT CALIBRATION LOG

PROJECT INFORMATION:
Project Name: Marlchaven GWM
Project No.:
Client:

Date: 12/21/23

Instrument Source: ☐ BM ☐ Rental

METER TYPE	UNITS	TIME	MAKE/MODEL	SERIAL NUMBER	CAL. BY	STANDARD	POST CAL. READING	SETTINGS
☒ pH meter	units	730	Myron L Company Ultra Meter 6P	6213516 ☐ 6243084 ☐ 6212375 ☒ 6243003 ☐ 6223973 ☐	DAB	4.00 7.00 10.01	3.98 7.02 10.01	4 7 10
☒ Turbidity meter	NTU	730	Hach 2100P or 2100Q Turbidimeter	06120C020523 (P) ☐ 13120C030432 (Q) ☒ 17110C062619 (Q) ☐	DAB	10 NTU verification <0.4 20 100 800	10.4 	L
☒ Sp. Cond. meter	uS mS	730	Myron L Company Ultra Meter 6P	6213516 ☐ 6243084 ☐ 6212375 ☒ 6243003 ☐ 6223973 ☐	DAB	7000 mS @ 25 °C	6,957	7,000
☐ PID	ppm		MinRAE 2000			open air zero ____ ppm Iso. Gas		MIBK response factor = 1.0
☒ Dissolved Oxygen	ppm	730	HACH Model HQ30d	171932597009 ☐ 100500041867 ☒ 22293299821 ☐	DAB	100% Satuartion	L	94.1%
☐ Particulate meter	mg/m^3					zero air		
☐ Radiation Meter	uR/H					background area		

ADDITIONAL REMARKS:

PREPARED BY: DAB **DATE:** 12/21/23

ROUX

GROUNDWATER FIELD FORM

Project Name: Matthews GWM Date: 12/21/23

Location: Project No.: Field Team: TAB

Well No. WETLAND F			Diameter (inches):			Sample Date / Time:			
Product Depth (fbTOR):			Water Column (ft):			DTW when sampled:			
DTW (static) (fbTOR):			One Well Volume (gal):			Purpose: ☐ Development ☐ Sample ☐ Purge & Sample			
Total Depth (fbTOR):			Total Volume Purged (gal):			Purge Method:			

Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
	0 Initial								
10:42	1 –	–	7.20	2.3	515.4	21.6	–	50	clear No odor
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
	S1								
	S2								

Well No. MW 8 S			Diameter (inches): 2"			Sample Date / Time: 12/21/23 1126			
Product Depth (fbTOR): –			Water Column (ft): 7.99			DTW when sampled: 4.53			
DTW (static) (fbTOR): 4.58			One Well Volume (gal): 1.30			Purpose: ☐ Development ☐ Sample ☒ Purge & Sample			
Total Depth (fbTOR): 12.57			Total Volume Purged (gal): 1.5			Purge Method: Low Flow			

Time	Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
11:18	0 Initial	0	7.01	7.2	498.4	179	–	104	clear no odor
11:21	1 4.83	.5	7.01	8.1	524.3	51.6	—	107	" "
11:22	2 4.53	1	6.99	8.1	554.0	35.2	—	107	" "
11:23	3 4.52	1.25	6.97	8.2	577.2	21.1	—	108	" "
11:25	4 4.83	1.5	6.97	8.3	595.5	17.5		107	" "
	5								
	6								
	7								
	8								
	9								
	10								
Sample Information:									
11:24	S1 4.83	1.75	6.96	8.3	599.3	16.1	—	107	" "
11:27	S2 4.83	2.00	6.99	8.3	615.3	12.6	—	106	" "

REMARKS:

Note: All water level measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

PREPARED BY: TAB

ROUX

GROUNDWATER FIELD FORM

Project Name: Markhams GWM
Location:
Project No.:
Date: 12/21/23
Field Team: TMD

Well No. MW-93

Product Depth (fbTOR): -	Diameter (inches): 2"	Sample Date / Time: 12/21/23 950	
DTW (static) (fbTOR): 6.56	Water Column (ft): 6.95	DTW when sampled: 6.81	
Total Depth (fbTOR): 13.51	One Well Volume (gal): 1.13	Purpose: ☐ Development ☐ Sample ☒ Purge & Sample	
	Total Volume Purged (gal): 5.5	Purge Method: Low Flow	

Time		Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
933	0	Initial	0	8.13	8.0	477.4	51.1			
935	1	6.79	1.0	7.88	8.6	471.3	17.5	-	79	sl Turbid N.
936	2	6.79	1.5	7.74	8.7	449.6	8.64	-	86	clear "
938	3	6.80	2.5	7.62	8.0	449.9	7.00	-	97	" "
940	4	6.79	3.0	7.55	8.5	444.9	4.42	-	105	" "
941	5	6.78	3.5	7.48	8.6	431.1	2.73	-	107	" "
943	6	6.78	4.0	7.40	8.7	427.1	3.31	-	109	" "
945	7	6.78	5.0	7.35	8.9	419.7	3.32	-	110	" "
947	8	6.82	5.5	7.33	8.9	415.3	4.31	-	112	" "
	9							-	111	
	10									

Sample Information: MS/MSD collected

Time		Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
950	S1	6.81	6.0	7.30	8.9	413.6	1.50	-	113	" "
955	S2	6.71	7.0	7.20	8.7	406.1	1.56	-	113	" "

Well No. MW55

Product Depth (fbTOR): —	Diameter (inches): 2"	Sample Date / Time: 12/21/23 1031	
DTW (static) (fbTOR): 3.26	Water Column (ft): 9.31	DTW when sampled: 3.64	
Total Depth (fbTOR): 12.57	One Well Volume (gal): 1.51	Purpose: ☐ Development ☐ Sample ☒ Purge & Sample	
	Total Volume Purged (gal): 3.25	Purge Method: Low Flow	

Time		Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
10:24	0	Initial	0	7.05	7.1	1061	74.0	—	124	
10:26	1	3.49	1.25	6.91	7.7	1058	20.2	—	118	
10:27	2	3.51	1.75	6.85	7.8	1056	15.3	—	112	
10:28	3	3.64	2.25	6.83	7.8	1048	13.6	—	109	
10:29	4	3.64	3.25	6.82	7.8	1026	10.1	—	106	
	5									
	6									
	7									
	8									
	9									
	10									

Sample Information:

Time		Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
10:31	S1	3.64	3.75	6.80	7.9	1019	8.03	—	107	
10:35	S2	3.63	4.00	6.79	7.8	1026	9.01	—	108	

REMARKS: MW-55 Blind Dup collected

Note: All water level measurements are in feet, distance from top of riser.

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

Groundwater Field Form-Roux.xls
GWFF - BM

PREPARED BY: TMD

ROUX

GROUNDWATER FIELD FORM

Project Name: Markham CWM
Location: Project No.: Date: 12/21/23
Field Team: TMD

Well No. MW-75 | Diameter (inches): 2" | Sample Date / Time: 1154 12/21/23

Product Depth (fbTOR): — | Water Column (ft): 6.11 | DTW when sampled: 13.31

DTW (static) (fbTOR): 12.61 | One Well Volume (gal): 0.99 | Purpose: ☐ Development ☐ Sample ☐ Purge & Sample

Total Depth (fbTOR): 18.72 | Total Volume Purged (gal): 1.25 | Purge Method: Low Flow

Time		Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
11:42	0	Initial	0	7.13	8.5	13.49	604	—	-23	Orange tint
11:44	1	13.20	.5	6.95	9.5	13.43	240	—	-35	" "
11:46	2	13.34	.75	6.94	9.6	1326	203		-40	" "
11:48	3	13.33	1	6.95	9.5	1318	121	—	-42	" "
11:50	4	13.33	1.25	6.94	9.6	1315	103	—	-46	" "
	5									
	6									
	7									
	8									
	9									
	10									
Sample Information:										
11:54	S1	13.31	1.5	6.96	9.7	1312	64.3	—	-49	Slight orange tint
11:57	S2	13.65	2.0	6.96	9.7	1313	45.3	—	-51	" "

duplicate

Well No. MW-45 | Diameter (inches): | Sample Date / Time:

Product Depth (fbTOR): | Water Column (ft): | DTW when sampled:

DTW (static) (fbTOR): 9.18 | One Well Volume (gal): | Purpose: ☐ Development ☐ Sample ☐ Purge & Sample

Total Depth (fbTOR): | Total Volume Purged (gal): | Purge Method:

Time		Water Level (fbTOR)	Acc. Volume (gallons)	pH (units)	Temp. (deg. C)	SC (uS)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
	0	Initial								
	1									
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
	10									
Sample Information:										
	S1									
	S2									

REMARKS: MW-75 → collected dissolved metals

Volume Calculation

Diam.	Vol. (g/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	± 0.1 unit
SC	± 3%
Turbidity	± 10%
DO	± 0.3 mg/L
ORP	± 10 mV

Note: All water level measurements are in feet, distance from top of riser.

PREPARED BY:

ATTACHMENT 2
ANALYTICAL DATA PACKAGE

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Tom Forbes
Roux Environmental Engineering and Geology DPC
2558 Hamburg Turnpike
Suite 300
Lackawanna, New York 14218

Generated 1/2/2024 3:48:18 PM

JOB DESCRIPTION

Roux-Peter Cooper sites
Annual sampling

JOB NUMBER

480-215961-1

Eurofins Buffalo
10 Hazelwood Drive
Amherst NY 14228-2298

See page two for job notes and contact information.

myEOL

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

Authorization

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1/2/2024 3:48:18 PM

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Table of Contents

Definitions/Glossary

Client: Roux Environmental Engineering and Geology DPC
Job ID: 480-215961-1
Project/Site: Roux-Peter Cooper sites

Qualifiers

Metals

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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

Job ID: 480-215961-1 Eurofins Buffalo

Job Narrative
480-215961-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 12/21/2023 2:44 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 time was 3.6°C

Metals
Method 6010C: The continuing calibration blank (CCB) for analytical batch 480-696598 contained total Iron above the reporting limit (RL). All reported samples associated with this CCB contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

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

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

Detection Summary

Client: Roux Environmental Engineering and Geology DPC
Job ID: 480-215961-1
Project/Site: Roux-Peter Cooper sites

Client Sample ID: Blind Duplicate — Lab Sample ID: 480-215961-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.0038	J	0.0040	0.0010	mg/L	1		6010C	Total/NA
Iron	0.16		0.050	0.019	mg/L	1		6010C	Total/NA
Manganese	2.4		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chromium (hexavalent)	0.013		0.010	0.0050	mg/L	1		7196A	Total/NA

Client Sample ID: MW-5S — Lab Sample ID: 480-215961-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.0040		0.0040	0.0010	mg/L	1		6010C	Total/NA
Iron	0.12		0.050	0.019	mg/L	1		6010C	Total/NA
Manganese	2.3		0.0030	0.00040	mg/L	1		6010C	Total/NA
Alkalinity, Total	492		240	96.0	mg/L	24		310.2	Total/NA
Ammonia (as N)	8.3		0.10	0.045	mg/L	5		350.1	Total/NA
Nitrate as N	7.2		0.050	0.020	mg/L	1		353.2	Total/NA
Chromium (hexavalent)	0.012		0.010	0.0050	mg/L	1		7196A	Total/NA

Client Sample ID: MW-7S — Lab Sample ID: 480-215961-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.0030	J	0.0040	0.0010	mg/L	1		6010C	Total/NA
Iron	11.1	^2	0.050	0.019	mg/L	1		6010C	Total/NA
Manganese	0.19		0.0030	0.00040	mg/L	1		6010C	Total/NA
Chromium, Dissolved	0.0028	J	0.0040	0.0010	mg/L	1		6010C	Dissolved
Iron, Dissolved	6.5		0.050	0.019	mg/L	1		6010C	Dissolved
Manganese, Dissolved	0.15	B	0.0030	0.00040	mg/L	1		6010C	Dissolved
Alkalinity, Total	420		50.0	20.0	mg/L	5		310.2	Total/NA
Nitrate as N	0.037	J	0.050	0.020	mg/L	1		353.2	Total/NA
Chromium (hexavalent)	0.010		0.010	0.0050	mg/L	1		7196A	Total/NA

Client Sample ID: MW-8S — Lab Sample ID: 480-215961-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.0017	J	0.0040	0.0010	mg/L	1		6010C	Total/NA
Iron	0.035	J	0.050	0.019	mg/L	1		6010C	Total/NA
Manganese	0.49		0.0030	0.00040	mg/L	1		6010C	Total/NA
Alkalinity, Total	330		50.0	20.0	mg/L	5		310.2	Total/NA
Nitrate as N	0.81		0.050	0.020	mg/L	1		353.2	Total/NA
Chromium (hexavalent)	0.012		0.010	0.0050	mg/L	1		7196A	Total/NA

Client Sample ID: MW-9S — Lab Sample ID: 480-215961-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.037	J	0.050	0.019	mg/L	1		6010C	Total/NA
Manganese	0.0029	J	0.0030	0.00040	mg/L	1		6010C	Total/NA
Alkalinity, Total	126		50.0	20.0	mg/L	5		310.2	Total/NA
Nitrate as N	5.5		0.050	0.020	mg/L	1		353.2	Total/NA
Chromium (hexavalent)	0.0091	J	0.010	0.0050	mg/L	1		7196A	Total/NA

Client Sample ID: WETLAND F — Lab Sample ID: 480-215961-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.0022	J	0.0040	0.0010	mg/L	1		6010C	Total/NA
Iron	0.57	^2	0.050	0.019	mg/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample ID: WETLAND F (Continued)
Lab Sample ID: 480-215961-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	0.13		0.0030	0.00040	mg/L	1		6010C	Total/NA
Alkalinity, Total	91.2		10.0	4.0	mg/L	1		310.2	Total/NA
Nitrate as N	0.67		0.050	0.020	mg/L	1		353.2	Total/NA
Chromium (hexavalent)	0.020	F1	0.010	0.0050	mg/L	1		7196A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Roux Environmental Engineering and Geology DPC
Job ID: 480-215961-1
Project/Site: Roux-Peter Cooper sites

Client Sample ID: Blind Duplicate
Lab Sample ID: 480-215961-1
Date Collected: 12/21/23 12:00
Matrix: Water
Date Received: 12/21/23 14:44

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		12/27/23 08:34	12/27/23 23:45	1
Chromium	**0.0038**	**J**	0.0040	0.0010	mg/L		12/27/23 08:34	12/27/23 23:45	1
Iron	**0.16**		0.050	0.019	mg/L		12/27/23 08:34	12/29/23 14:47	1
Manganese	**2.4**		0.0030	0.00040	mg/L		12/27/23 08:34	12/27/23 23:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium (hexavalent) (SW846 7196A)	**0.013**		0.010	0.0050	mg/L			12/21/23 16:02	1

Client Sample Results

Client: Roux Environmental Engineering and Geology DPC
Job ID: 480-215961-1
Project/Site: Roux-Peter Cooper sites

Client Sample ID: MW-5S
Lab Sample ID: 480-215961-2
Date Collected: 12/21/23 10:31
Matrix: Water
Date Received: 12/21/23 14:44

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		12/27/23 08:34	12/27/23 23:49	1
Chromium	**0.0040**		0.0040	0.0010	mg/L		12/27/23 08:34	12/27/23 23:49	1
Iron	**0.12**		0.050	0.019	mg/L		12/27/23 08:34	12/29/23 14:50	1
Manganese	**2.3**		0.0030	0.00040	mg/L		12/27/23 08:34	12/27/23 23:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (EPA 310.2)	**492**		240	96.0	mg/L			12/23/23 13:26	24
Ammonia (as N) (EPA 350.1)	**8.3**		0.10	0.045	mg/L			12/28/23 15:47	5
Nitrate as N (EPA 353.2)	**7.2**		0.050	0.020	mg/L			12/21/23 16:42	1
Chromium (hexavalent) (SW846 7196A)	**0.012**		0.010	0.0050	mg/L			12/21/23 16:02	1
Sulfide (SM 4500 S2 F)	ND		1.0	0.67	mg/L			12/23/23 14:11	1

Client Sample ID: MW-7S
Lab Sample ID: 480-215961-3

Date Collected: 12/21/23 11:54
Matrix: Water

Date Received: 12/21/23 14:44

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		12/27/23 08:34	12/28/23 00:02	1
Chromium	**0.0030**	**J**	0.0040	0.0010	mg/L		12/27/23 08:34	12/28/23 00:02	1
Iron	**11.1**	**^2**	0.050	0.019	mg/L		12/27/23 08:34	12/28/23 00:02	1
Manganese	**0.19**		0.0030	0.00040	mg/L		12/27/23 08:34	12/28/23 00:02	1

Method: SW846 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	ND		0.015	0.0056	mg/L		12/27/23 08:35	12/27/23 22:40	1
Chromium, Dissolved	**0.0028**	**J**	0.0040	0.0010	mg/L		12/27/23 08:35	12/27/23 22:40	1
Iron, Dissolved	**6.5**		0.050	0.019	mg/L		12/27/23 08:35	12/27/23 22:40	1
Manganese, Dissolved	**0.15**	**B**	0.0030	0.00040	mg/L		12/27/23 08:35	12/27/23 22:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (EPA 310.2)	**420**		50.0	20.0	mg/L			12/23/23 12:18	5
Ammonia (as N) (EPA 350.1)	ND		0.020	0.0090	mg/L			12/28/23 15:14	1
Nitrate as N (EPA 353.2)	**0.037**	**J**	0.050	0.020	mg/L			12/21/23 16:43	1
Chromium (hexavalent) (SW846 7196A)	**0.010**		0.010	0.0050	mg/L			12/21/23 16:02	1
Sulfide (SM 4500 S2 F)	ND		1.0	0.67	mg/L			12/23/23 14:11	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent (dissolved) (SW846 7196A)	ND		0.010	0.0050	mg/L			12/22/23 07:28	1

Client Sample ID: MW-8S
Lab Sample ID: 480-215961-4

Date Collected: 12/21/23 11:26
Matrix: Water

Date Received: 12/21/23 14:44

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		12/27/23 08:34	12/28/23 00:06	1
Chromium	**0.0017**	**J**	0.0040	0.0010	mg/L		12/27/23 08:34	12/28/23 00:06	1
Iron	**0.035**	**J**	0.050	0.019	mg/L		12/27/23 08:34	12/29/23 14:54	1
Manganese	**0.49**		0.0030	0.00040	mg/L		12/27/23 08:34	12/28/23 00:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (EPA 310.2)	**330**		50.0	20.0	mg/L			12/23/23 12:19	5
Ammonia (as N) (EPA 350.1)	ND		0.020	0.0090	mg/L			12/28/23 15:15	1
Nitrate as N (EPA 353.2)	**0.81**		0.050	0.020	mg/L			12/21/23 16:45	1
Chromium (hexavalent) (SW846 7196A)	**0.012**		0.010	0.0050	mg/L			12/21/23 16:02	1
Sulfide (SM 4500 S2 F)	ND		1.0	0.67	mg/L			12/23/23 14:11	1

Client: Roux Environmental Engineering and Geology DPC
Job ID: 480-215961-1
Project/Site: Roux-Peter Cooper sites

Client Sample ID: MW-9S
Lab Sample ID: 480-215961-5

Date Collected: 12/21/23 09:50
Matrix: Water

Date Received: 12/21/23 14:44

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		12/27/23 08:34	12/28/23 00:09	1
Chromium	ND		0.0040	0.0010	mg/L		12/27/23 08:34	12/28/23 00:09	1
Iron	**0.037**	**J**	0.050	0.019	mg/L		12/27/23 08:34	12/29/23 14:57	1
Manganese	**0.0029**	**J**	0.0030	0.00040	mg/L		12/27/23 08:34	12/28/23 00:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (EPA 310.2)	**126**		50.0	20.0	mg/L			12/23/23 12:19	5
Ammonia (as N) (EPA 350.1)	ND	F1	0.020	0.0090	mg/L			12/28/23 15:20	1
Nitrate as N (EPA 353.2)	**5.5**		0.050	0.020	mg/L			12/21/23 16:46	1
Chromium (hexavalent) (SW846 7196A)	**0.0091**	**J**	0.010	0.0050	mg/L			12/21/23 16:02	1
Sulfide (SM 4500 S2 F)	ND		1.0	0.67	mg/L			12/23/23 14:11	1

Client Sample Results

Client: Roux Environmental Engineering and Geology DPC
Job ID: 480-215961-1
Project/Site: Roux-Peter Cooper sites

Client Sample ID: WETLAND F
Lab Sample ID: 480-215961-6

Date Collected: 12/21/23 10:42
Matrix: Water
Date Received: 12/21/23 14:44

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		12/27/23 08:34	12/28/23 00:20	1
Chromium	**0.0022**	**J**	0.0040	0.0010	mg/L		12/27/23 08:34	12/28/23 00:20	1
Iron	**0.57**	**^2**	0.050	0.019	mg/L		12/27/23 08:34	12/28/23 00:20	1
Manganese	**0.13**		0.0030	0.00040	mg/L		12/27/23 08:34	12/28/23 00:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total (EPA 310.2)	**91.2**		10.0	4.0	mg/L			12/23/23 12:08	1
Ammonia (as N) (EPA 350.1)	ND		0.020	0.0090	mg/L			12/28/23 15:24	1
Nitrate as N (EPA 353.2)	**0.67**		0.050	0.020	mg/L			12/21/23 16:47	1
Chromium (hexavalent) (SW846 7196A)	**0.020**	**F1**	0.010	0.0050	mg/L			12/21/23 16:02	1
Sulfide (SM 4500 S2 F)	ND		1.0	0.67	mg/L			12/23/23 14:11	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-696356/1-A
Matrix: Water
Analysis Batch: 696598

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 696356

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		12/27/23 08:34	12/27/23 22:43	1
Chromium	ND		0.0040	0.0010	mg/L		12/27/23 08:34	12/27/23 22:43	1
Iron	ND		0.050	0.019	mg/L		12/27/23 08:34	12/27/23 22:43	1
Manganese	ND		0.0030	0.00040	mg/L		12/27/23 08:34	12/27/23 22:43	1

Lab Sample ID: LCS 480-696356/2-A
Matrix: Water
Analysis Batch: 696598

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 696356

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.203		mg/L		102	80 - 120
Chromium	0.200	0.206		mg/L		103	80 - 120
Iron	10.0	9.78		mg/L		98	80 - 120
Manganese	0.200	0.205		mg/L		103	80 - 120

Lab Sample ID: 480-215961-5 MS
Matrix: Water
Analysis Batch: 696598

Client Sample ID: MW-9S
Prep Type: Total/NA
Prep Batch: 696356

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	ND		0.200	0.206		mg/L		103	75 - 125
Chromium	ND		0.200	0.203		mg/L		102	75 - 125
Manganese	0.0029	J	0.200	0.204		mg/L		100	75 - 125

Lab Sample ID: 480-215961-5 MS
Matrix: Water
Analysis Batch: 696848

Client Sample ID: MW-9S
Prep Type: Total/NA
Prep Batch: 696356

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	0.037	J	10.0	9.78		mg/L		97	75 - 125

Lab Sample ID: 480-215961-5 MSD
Matrix: Water
Analysis Batch: 696598

Client Sample ID: MW-9S
Prep Type: Total/NA
Prep Batch: 696356

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	ND		0.200	0.205		mg/L		103	75 - 125	0	20
Chromium	ND		0.200	0.203		mg/L		101	75 - 125	0	20
Manganese	0.0029	J	0.200	0.204		mg/L		100	75 - 125	0	20

Lab Sample ID: 480-215961-5 MSD
Matrix: Water
Analysis Batch: 696848

Client Sample ID: MW-9S
Prep Type: Total/NA
Prep Batch: 696356

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	0.037	J	10.0	9.85		mg/L		98	75 - 125	1	20

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 480-696360/1-A
Matrix: Water
Analysis Batch: 696597
Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 696360

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	ND		0.015	0.0056	mg/L		12/27/23 08:35	12/27/23 20:22	1
Chromium, Dissolved	ND		0.0040	0.0010	mg/L		12/27/23 08:35	12/27/23 20:22	1
Iron, Dissolved	ND		0.050	0.019	mg/L		12/27/23 08:35	12/27/23 20:22	1
Manganese, Dissolved	0.00120	J	0.0030	0.00040	mg/L		12/27/23 08:35	12/27/23 20:22	1

Lab Sample ID: LCS 480-696360/2-A
Matrix: Water
Analysis Batch: 696597
Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 696360

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic, Dissolved	0.200	0.201		mg/L		100	80 - 120
Chromium, Dissolved	0.200	0.202		mg/L		101	80 - 120
Iron, Dissolved	10.0	9.68		mg/L		97	80 - 120
Manganese, Dissolved	0.200	0.202		mg/L		101	80 - 120

Lab Sample ID: LCSD 480-696360/3-A
Matrix: Water
Analysis Batch: 696597
Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 696360

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic, Dissolved	0.200	0.201		mg/L		100	80 - 120	0	20
Chromium, Dissolved	0.200	0.200		mg/L		100	80 - 120	1	20
Iron, Dissolved	10.0	9.70		mg/L		97	80 - 120	0	20
Manganese, Dissolved	0.200	0.202		mg/L		101	80 - 120	0	20

Method: 310.2 - Alkalinity

Lab Sample ID: MB 480-696401/101
Matrix: Water
Analysis Batch: 696401
Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		10.0	4.0	mg/L			12/23/23 12:07	1

Lab Sample ID: MB 480-696401/117
Matrix: Water
Analysis Batch: 696401
Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		10.0	4.0	mg/L			12/23/23 12:20	1

Lab Sample ID: MB 480-696401/12
Matrix: Water
Analysis Batch: 696401
Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		10.0	4.0	mg/L			12/23/23 10:36	1

Method: 310.2 - Alkalinity (Continued)

Lab Sample ID: MB 480-696401/33
Matrix: Water
Analysis Batch: 696401
Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		10.0	4.0	mg/L			12/23/23 11:17	1

Lab Sample ID: MB 480-696401/41
Matrix: Water
Analysis Batch: 696401
Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		10.0	4.0	mg/L			12/23/23 11:22	1

Lab Sample ID: MB 480-696401/94
Matrix: Water
Analysis Batch: 696401
Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		10.0	4.0	mg/L			12/23/23 12:02	1

Lab Sample ID: LCS 480-696401/100
Matrix: Water
Analysis Batch: 696401
Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity, Total	50.0	51.64		mg/L		103	90 - 110

Lab Sample ID: LCS 480-696401/11
Matrix: Water
Analysis Batch: 696401
Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity, Total	50.0	48.84		mg/L		98	90 - 110

Lab Sample ID: LCS 480-696401/116
Matrix: Water
Analysis Batch: 696401
Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity, Total	50.0	49.47		mg/L		99	90 - 110

Lab Sample ID: LCS 480-696401/40
Matrix: Water
Analysis Batch: 696401
Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity, Total	50.0	50.87		mg/L		102	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-696678/51
Matrix: Water
Analysis Batch: 696678

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.020	0.0090	mg/L			12/28/23 14:52	1

Lab Sample ID: MB 480-696678/75
Matrix: Water
Analysis Batch: 696678

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.020	0.0090	mg/L			12/28/23 15:18	1

Lab Sample ID: MB 480-696678/99
Matrix: Water
Analysis Batch: 696678

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.020	0.0090	mg/L			12/28/23 15:44	1

Lab Sample ID: LCS 480-696678/100
Matrix: Water
Analysis Batch: 696678

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia (as N)	1.00	0.984		mg/L		98	90 - 110

Lab Sample ID: LCS 480-696678/52
Matrix: Water
Analysis Batch: 696678

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia (as N)	1.00	0.991		mg/L		99	90 - 110

Lab Sample ID: LCS 480-696678/76
Matrix: Water
Analysis Batch: 696678

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia (as N)	1.00	0.994		mg/L		99	90 - 110

Lab Sample ID: 480-215961-2 MS
Matrix: Water
Analysis Batch: 696678

Client Sample ID: MW-5S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia (as N)	8.3		1.00	8.85	4	mg/L		60	90 - 110

Lab Sample ID: 480-215961-2 MSD
Matrix: Water
Analysis Batch: 696678

Client Sample ID: MW-5S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia (as N)	8.3		1.00	8.95	4	mg/L		70	90 - 110	1	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: 480-215961-5 MS
Matrix: Water
Analysis Batch: 696678

Client Sample ID: MW-9S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia (as N)	ND	F1	0.200	0.167	F1	mg/L		84	90 - 110		

Lab Sample ID: 480-215961-5 MSD
Matrix: Water
Analysis Batch: 696678

Client Sample ID: MW-9S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia (as N)	ND	F1	0.200	0.162	F1	mg/L		81	90 - 110	3	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 480-696253/3
Matrix: Water
Analysis Batch: 696253

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium (hexavalent)	ND		0.010	0.0050	mg/L			12/21/23 16:02	1

Lab Sample ID: LCS 480-696253/4
Matrix: Water
Analysis Batch: 696253

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium (hexavalent)			0.0500	0.0545		mg/L		109	85 - 115		

Lab Sample ID: 480-215961-5 MS
Matrix: Water
Analysis Batch: 696253

Client Sample ID: MW-9S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium (hexavalent)	0.0091	J	0.0500	0.0659		mg/L		113	85 - 115		

Lab Sample ID: 480-215961-5 MSD
Matrix: Water
Analysis Batch: 696253

Client Sample ID: MW-9S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium (hexavalent)	0.0091	J	0.0500	0.0621		mg/L		106	85 - 115	6	20

Lab Sample ID: 480-215961-6 MS
Matrix: Water
Analysis Batch: 696253

Client Sample ID: WETLAND F
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium (hexavalent)	0.020	F1	0.0500	0.0798	F1	mg/L		119	85 - 115		

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: 480-215961-6 DU — **Client Sample ID: WETLAND F**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 696253

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chromium (hexavalent)	0.020	F1		0.0218		mg/L				6	20

Lab Sample ID: MB 480-696290/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 696290

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent (dissolved)	ND		0.010	0.0050	mg/L			12/22/23 07:28	1

Lab Sample ID: LCS 480-696290/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 696290

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent (dissolved)			0.0500	0.0520		mg/L		104	85 - 115		

Lab Sample ID: 480-215961-3 MS — **Client Sample ID: MW-7S**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 696290

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent (dissolved)	ND		0.0500	0.0432		mg/L		86	85 - 115		

Lab Sample ID: 480-215961-3 DU — **Client Sample ID: MW-7S**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 696290

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chromium, hexavalent (dissolved)	ND			ND		mg/L				NC	20

Method: SM 4500 S2 F - Sulfide, Total

Lab Sample ID: MB 480-696402/27 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 696402

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		1.0	0.67	mg/L			12/23/23 14:11	1

Lab Sample ID: MB 480-696402/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 696402

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		1.0	0.67	mg/L			12/23/23 14:11	1

Method: SM 4500 S2 F - Sulfide, Total (Continued)

Lab Sample ID: LCS 480-696402/28
Matrix: Water
Analysis Batch: 696402

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide			8.60	8.80		mg/L		102	90 - 110		

Lab Sample ID: LCS 480-696402/4
Matrix: Water
Analysis Batch: 696402

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide			8.60	8.80		mg/L		102	90 - 110		

Lab Sample ID: 480-215961-4 DU
Matrix: Water
Analysis Batch: 696402

Client Sample ID: MW-8S
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Sulfide	ND			ND		mg/L				NC	20

Metals

Prep Batch: 696356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-215961-1	Blind Duplicate	Total/NA	Water	3005A	
480-215961-2	MW-5S	Total/NA	Water	3005A	
480-215961-3	MW-7S	Total/NA	Water	3005A	
480-215961-4	MW-8S	Total/NA	Water	3005A	
480-215961-5	MW-9S	Total/NA	Water	3005A	
480-215961-6	WETLAND F	Total/NA	Water	3005A	
MB 480-696356/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-696356/2-A	Lab Control Sample	Total/NA	Water	3005A	
480-215961-5 MS	MW-9S	Total/NA	Water	3005A	
480-215961-5 MSD	MW-9S	Total/NA	Water	3005A	

Prep Batch: 696360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-215961-3	MW-7S	Dissolved	Water	3005A	
MB 480-696360/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 480-696360/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 480-696360/3-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	

Analysis Batch: 696597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-215961-3	MW-7S	Dissolved	Water	6010C	696360
MB 480-696360/1-A	Method Blank	Total Recoverable	Water	6010C	696360
LCS 480-696360/2-A	Lab Control Sample	Total Recoverable	Water	6010C	696360
LCSD 480-696360/3-A	Lab Control Sample Dup	Total Recoverable	Water	6010C	696360

Analysis Batch: 696598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-215961-1	Blind Duplicate	Total/NA	Water	6010C	696356
480-215961-2	MW-5S	Total/NA	Water	6010C	696356
480-215961-3	MW-7S	Total/NA	Water	6010C	696356
480-215961-4	MW-8S	Total/NA	Water	6010C	696356
480-215961-5	MW-9S	Total/NA	Water	6010C	696356
480-215961-6	WETLAND F	Total/NA	Water	6010C	696356
MB 480-696356/1-A	Method Blank	Total/NA	Water	6010C	696356
LCS 480-696356/2-A	Lab Control Sample	Total/NA	Water	6010C	696356
480-215961-5 MS	MW-9S	Total/NA	Water	6010C	696356
480-215961-5 MSD	MW-9S	Total/NA	Water	6010C	696356

Analysis Batch: 696848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-215961-1	Blind Duplicate	Total/NA	Water	6010C	696356
480-215961-2	MW-5S	Total/NA	Water	6010C	696356
480-215961-4	MW-8S	Total/NA	Water	6010C	696356
480-215961-5	MW-9S	Total/NA	Water	6010C	696356
480-215961-5 MS	MW-9S	Total/NA	Water	6010C	696356
480-215961-5 MSD	MW-9S	Total/NA	Water	6010C	696356

General Chemistry

Analysis Batch: 696247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-215961-2	MW-5S	Total/NA	Water	353.2	
480-215961-3	MW-7S	Total/NA	Water	353.2	
480-215961-4	MW-8S	Total/NA	Water	353.2	
480-215961-5	MW-9S	Total/NA	Water	353.2	
480-215961-6	WETLAND F	Total/NA	Water	353.2	

Analysis Batch: 696253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-215961-1	Blind Duplicate	Total/NA	Water	7196A	
480-215961-2	MW-5S	Total/NA	Water	7196A	
480-215961-3	MW-7S	Total/NA	Water	7196A	
480-215961-4	MW-8S	Total/NA	Water	7196A	
480-215961-5	MW-9S	Total/NA	Water	7196A	
480-215961-6	WETLAND F	Total/NA	Water	7196A	
MB 480-696253/3	Method Blank	Total/NA	Water	7196A	
LCS 480-696253/4	Lab Control Sample	Total/NA	Water	7196A	
480-215961-5 MS	MW-9S	Total/NA	Water	7196A	
480-215961-5 MSD	MW-9S	Total/NA	Water	7196A	
480-215961-6 MS	WETLAND F	Total/NA	Water	7196A	
480-215961-6 DU	WETLAND F	Total/NA	Water	7196A	

Filtration Batch: 696288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-215961-3	MW-7S	Dissolved	Water	Filtration	
480-215961-3 MS	MW-7S	Dissolved	Water	Filtration	
480-215961-3 DU	MW-7S	Dissolved	Water	Filtration	

Analysis Batch: 696290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-215961-3	MW-7S	Dissolved	Water	7196A	696288
MB 480-696290/3	Method Blank	Total/NA	Water	7196A	
LCS 480-696290/4	Lab Control Sample	Total/NA	Water	7196A	
480-215961-3 MS	MW-7S	Dissolved	Water	7196A	696288
480-215961-3 DU	MW-7S	Dissolved	Water	7196A	696288

Analysis Batch: 696401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-215961-2	MW-5S	Total/NA	Water	310.2	
480-215961-3	MW-7S	Total/NA	Water	310.2	
480-215961-4	MW-8S	Total/NA	Water	310.2	
480-215961-5	MW-9S	Total/NA	Water	310.2	
480-215961-6	WETLAND F	Total/NA	Water	310.2	
MB 480-696401/101	Method Blank	Total/NA	Water	310.2	
MB 480-696401/117	Method Blank	Total/NA	Water	310.2	
MB 480-696401/12	Method Blank	Total/NA	Water	310.2	
MB 480-696401/33	Method Blank	Total/NA	Water	310.2	
MB 480-696401/41	Method Blank	Total/NA	Water	310.2	
MB 480-696401/94	Method Blank	Total/NA	Water	310.2	
LCS 480-696401/100	Lab Control Sample	Total/NA	Water	310.2	
LCS 480-696401/11	Lab Control Sample	Total/NA	Water	310.2	
LCS 480-696401/116	Lab Control Sample	Total/NA	Water	310.2	

General Chemistry (Continued)

Analysis Batch: 696401 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-696401/40	Lab Control Sample	Total/NA	Water	310.2	

Analysis Batch: 696402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-215961-2	MW-5S	Total/NA	Water	SM 4500 S2 F	
480-215961-3	MW-7S	Total/NA	Water	SM 4500 S2 F	
480-215961-4	MW-8S	Total/NA	Water	SM 4500 S2 F	
480-215961-5	MW-9S	Total/NA	Water	SM 4500 S2 F	
480-215961-6	WETLAND F	Total/NA	Water	SM 4500 S2 F	
MB 480-696402/27	Method Blank	Total/NA	Water	SM 4500 S2 F	
MB 480-696402/3	Method Blank	Total/NA	Water	SM 4500 S2 F	
LCS 480-696402/28	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	
LCS 480-696402/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 F	
480-215961-4 DU	MW-8S	Total/NA	Water	SM 4500 S2 F	

Analysis Batch: 696678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-215961-2	MW-5S	Total/NA	Water	350.1	
480-215961-3	MW-7S	Total/NA	Water	350.1	
480-215961-4	MW-8S	Total/NA	Water	350.1	
480-215961-5	MW-9S	Total/NA	Water	350.1	
480-215961-6	WETLAND F	Total/NA	Water	350.1	
MB 480-696678/51	Method Blank	Total/NA	Water	350.1	
MB 480-696678/75	Method Blank	Total/NA	Water	350.1	
MB 480-696678/99	Method Blank	Total/NA	Water	350.1	
LCS 480-696678/100	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-696678/52	Lab Control Sample	Total/NA	Water	350.1	
LCS 480-696678/76	Lab Control Sample	Total/NA	Water	350.1	
480-215961-2 MS	MW-5S	Total/NA	Water	350.1	
480-215961-2 MSD	MW-5S	Total/NA	Water	350.1	
480-215961-5 MS	MW-9S	Total/NA	Water	350.1	
480-215961-5 MSD	MW-9S	Total/NA	Water	350.1	

Lab Chronicle

Client: Roux Environmental Engineering and Geology DPC
Job ID: 480-215961-1
Project/Site: Roux-Peter Cooper sites

Client Sample ID: Blind Duplicate
Lab Sample ID: 480-215961-1
Date Collected: 12/21/23 12:00
Matrix: Water
Date Received: 12/21/23 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			696356	EMO	EET BUF	12/27/23 08:34
Total/NA	Analysis	6010C		1	696598	BMB	EET BUF	12/27/23 23:45
Total/NA	Prep	3005A			696356	EMO	EET BUF	12/27/23 08:34
Total/NA	Analysis	6010C		1	696848	BMB	EET BUF	12/29/23 14:47
Total/NA	Analysis	7196A		1	696253	GW	EET BUF	12/21/23 16:02

Client Sample ID: MW-5S
Lab Sample ID: 480-215961-2
Date Collected: 12/21/23 10:31
Matrix: Water
Date Received: 12/21/23 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			696356	EMO	EET BUF	12/27/23 08:34
Total/NA	Analysis	6010C		1	696598	BMB	EET BUF	12/27/23 23:49
Total/NA	Prep	3005A			696356	EMO	EET BUF	12/27/23 08:34
Total/NA	Analysis	6010C		1	696848	BMB	EET BUF	12/29/23 14:50
Total/NA	Analysis	310.2		24	696401	CG	EET BUF	12/23/23 13:26
Total/NA	Analysis	350.1		5	696678	IMZ	EET BUF	12/28/23 15:47
Total/NA	Analysis	353.2		1	696247	IMZ	EET BUF	12/21/23 16:42
Total/NA	Analysis	7196A		1	696253	GW	EET BUF	12/21/23 16:02
Total/NA	Analysis	SM 4500 S2 F		1	696402	AM	EET BUF	12/23/23 14:11

Client Sample ID: MW-7S
Lab Sample ID: 480-215961-3
Date Collected: 12/21/23 11:54
Matrix: Water
Date Received: 12/21/23 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			696360	EMO	EET BUF	12/27/23 08:35
Dissolved	Analysis	6010C		1	696597	BMB	EET BUF	12/27/23 22:40
Total/NA	Prep	3005A			696356	EMO	EET BUF	12/27/23 08:34
Total/NA	Analysis	6010C		1	696598	BMB	EET BUF	12/28/23 00:02
Total/NA	Analysis	310.2		5	696401	CG	EET BUF	12/23/23 12:18
Total/NA	Analysis	350.1		1	696678	IMZ	EET BUF	12/28/23 15:14
Total/NA	Analysis	353.2		1	696247	IMZ	EET BUF	12/21/23 16:43
Dissolved	Filtration	Filtration			696288	KM	EET BUF	12/22/23 07:28
Dissolved	Analysis	7196A		1	696290	KM	EET BUF	12/22/23 07:28
Total/NA	Analysis	7196A		1	696253	GW	EET BUF	12/21/23 16:02
Total/NA	Analysis	SM 4500 S2 F		1	696402	AM	EET BUF	12/23/23 14:11

Lab Chronicle

Client: Roux Environmental Engineering and Geology DPC
Job ID: 480-215961-1
Project/Site: Roux-Peter Cooper sites

Client Sample ID: MW-8S
Lab Sample ID: 480-215961-4
Date Collected: 12/21/23 11:26
Matrix: Water
Date Received: 12/21/23 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			696356	EMO	EET BUF	12/27/23 08:34
Total/NA	Analysis	6010C		1	696598	BMB	EET BUF	12/28/23 00:06
Total/NA	Prep	3005A			696356	EMO	EET BUF	12/27/23 08:34
Total/NA	Analysis	6010C		1	696848	BMB	EET BUF	12/29/23 14:54
Total/NA	Analysis	310.2		5	696401	CG	EET BUF	12/23/23 12:19
Total/NA	Analysis	350.1		1	696678	IMZ	EET BUF	12/28/23 15:15
Total/NA	Analysis	353.2		1	696247	IMZ	EET BUF	12/21/23 16:45
Total/NA	Analysis	7196A		1	696253	GW	EET BUF	12/21/23 16:02
Total/NA	Analysis	SM 4500 S2 F		1	696402	AM	EET BUF	12/23/23 14:11

Client Sample ID: MW-9S
Lab Sample ID: 480-215961-5
Date Collected: 12/21/23 09:50
Matrix: Water
Date Received: 12/21/23 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			696356	EMO	EET BUF	12/27/23 08:34
Total/NA	Analysis	6010C		1	696598	BMB	EET BUF	12/28/23 00:09
Total/NA	Prep	3005A			696356	EMO	EET BUF	12/27/23 08:34
Total/NA	Analysis	6010C		1	696848	BMB	EET BUF	12/29/23 14:57
Total/NA	Analysis	310.2		5	696401	CG	EET BUF	12/23/23 12:19
Total/NA	Analysis	350.1		1	696678	IMZ	EET BUF	12/28/23 15:20
Total/NA	Analysis	353.2		1	696247	IMZ	EET BUF	12/21/23 16:46
Total/NA	Analysis	7196A		1	696253	GW	EET BUF	12/21/23 16:02
Total/NA	Analysis	SM 4500 S2 F		1	696402	AM	EET BUF	12/23/23 14:11

Client Sample ID: WETLAND F
Lab Sample ID: 480-215961-6
Date Collected: 12/21/23 10:42
Matrix: Water
Date Received: 12/21/23 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			696356	EMO	EET BUF	12/27/23 08:34
Total/NA	Analysis	6010C		1	696598	BMB	EET BUF	12/28/23 00:20
Total/NA	Analysis	310.2		1	696401	CG	EET BUF	12/23/23 12:08
Total/NA	Analysis	350.1		1	696678	IMZ	EET BUF	12/28/23 15:24
Total/NA	Analysis	353.2		1	696247	IMZ	EET BUF	12/21/23 16:47
Total/NA	Analysis	7196A		1	696253	GW	EET BUF	12/21/23 16:02
Total/NA	Analysis	SM 4500 S2 F		1	696402	AM	EET BUF	12/23/23 14:11

Laboratory References:
EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: Roux Environmental Engineering and Geology DPC
Job ID: 480-215961-1
Project/Site: Roux-Peter Cooper sites

Laboratory: Eurofins Buffalo

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	03-31-24

Method Summary

Client: Roux Environmental Engineering and Geology DPC
Job ID: 480-215961-1
Project/Site: Roux-Peter Cooper sites

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	EET BUF
310.2	Alkalinity	EPA	EET BUF
350.1	Nitrogen, Ammonia	EPA	EET BUF
353.2	Nitrate	EPA	EET BUF
7196A	Chromium, Hexavalent	SW846	EET BUF
SM 4500 S2 F	Sulfide, Total	SM	EET BUF
3005A	Preparation, Total Metals	SW846	EET BUF
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET BUF
Filtration	Sample Filtration	None	EET BUF

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

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

Sample Summary

Client: Roux Environmental Engineering and Geology DPC
Job ID: 480-215961-1
Project/Site: Roux-Peter Cooper sites

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-215961-1	Blind Duplicate	Water	12/21/23 12:00	12/21/23 14:44
480-215961-2	MW-5S	Water	12/21/23 10:31	12/21/23 14:44
480-215961-3	MW-7S	Water	12/21/23 11:54	12/21/23 14:44
480-215961-4	MW-8S	Water	12/21/23 11:26	12/21/23 14:44
480-215961-5	MW-9S	Water	12/21/23 09:50	12/21/23 14:44
480-215961-6	WETLAND F	Water	12/21/23 10:42	12/21/23 14:44

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins Environment Testing

Client Information	Sampler: Tom Behrendt	Lab PM: Fischer, Brian J	Carrier Tracking No(s):	COC No: 480-190711-27561.1
Client Contact: Mr. ~~Rick Dubisz~~ Tom Behrendt	Phone: 716-796-4962	E-Mail: Brian.Fischer@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: Roux Environmental Engineering and Geology DPC	PWSID:			Job #:
Address: 2558 Hamburg Turnpike Suite 300	Due Date Requested:			
City: Lackawanna	TAT Requested (days): STANDARD			
State, Zip: NY, 14218	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order Requested			
Email: rdubisz@rouxinc.com	WO #:			
Project Name: Roux [illegible]-Peter Cooper (Markhams)	Project #: 48004066			
Site: New York	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1 - (MOD) Local Method	6010C - (MOD)As/Cr/Fe/Mn only (Markhams)	6010C - (MOD) D. As/Cr/Fe/Mn only (Markhams) *	SM4500_S2_D - Local Method	353.2, 353.2_Nitrite, Nitrate_Calc	7196A - Local Method	310.2 - (MOD) Local Method	7196A - Local Mod Diss	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	D	D	CB	N	N	N			
WETLAND F	12/21/23	1042	grab	Water												
MW-5S	↓	1031	↓	Water			X	X		X	X	X	X			
MW-7S		1154		Water			X	X	X	X	X	X	X	X		
MW-8S		1426		Water			X	X		X	X	X	X			
MW-9S		~~[illegible]~~ 950		Water			X	X		X	X	X	X			
BLIND DUPLICATE		~~[illegible]~~ 1200		Water				X				X				
MS 9S		950		Water				X				X				
MSD 9S		950		Water				X				X				

480-215961 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify) CAT B

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by: [signature]	12/21/23 1444	Roux	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by: [signature]	12/21/23 1444	TA BF

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.6 #1 IR

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Roux Environmental Engineering and Geology DPC

Job Number: 480-215961-1

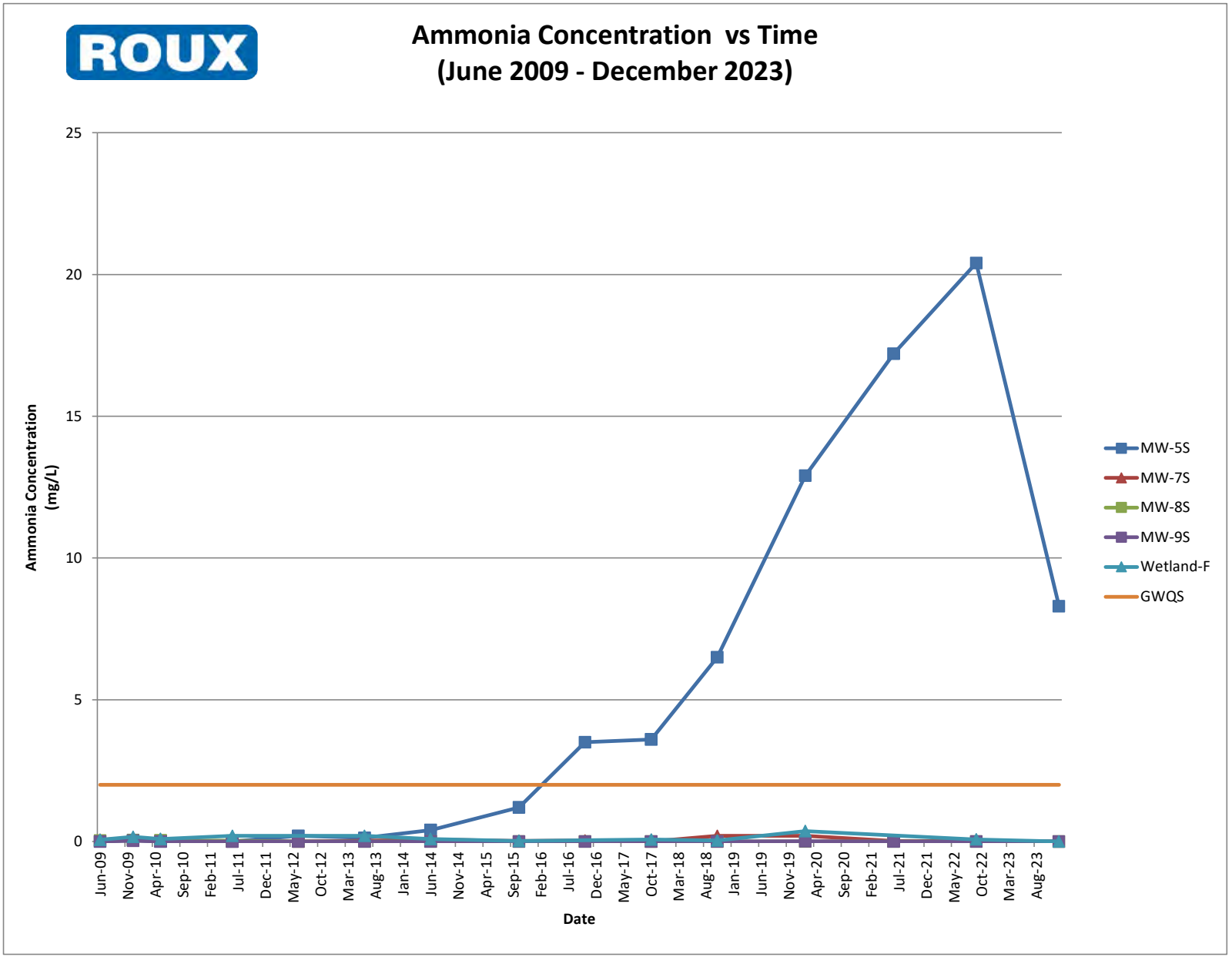
Login Number: 215961
List Number: 1
Creator: Stopa, Erik S

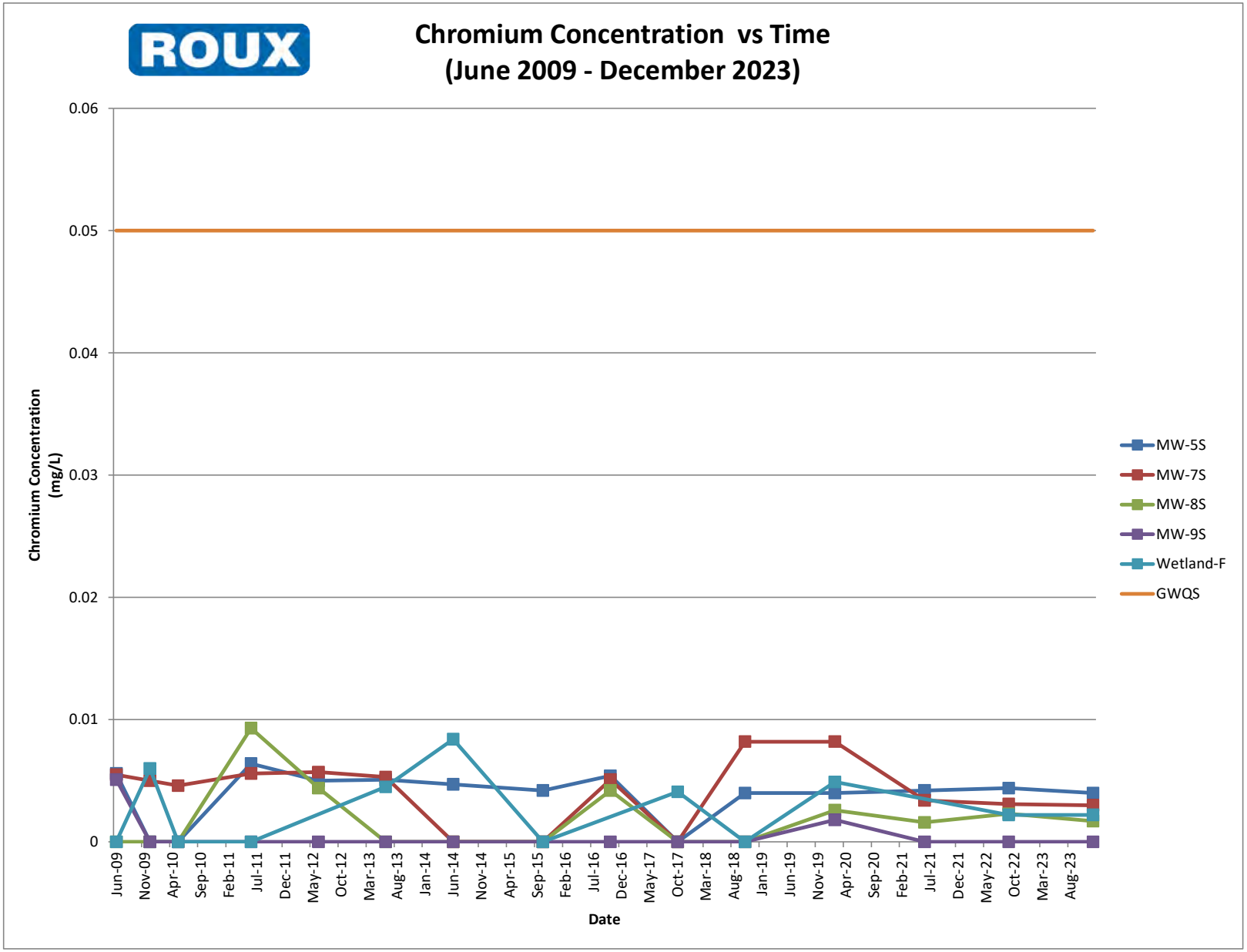
List Source: Eurofins Buffalo

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	ROUX
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	

ATTACHMENT 3

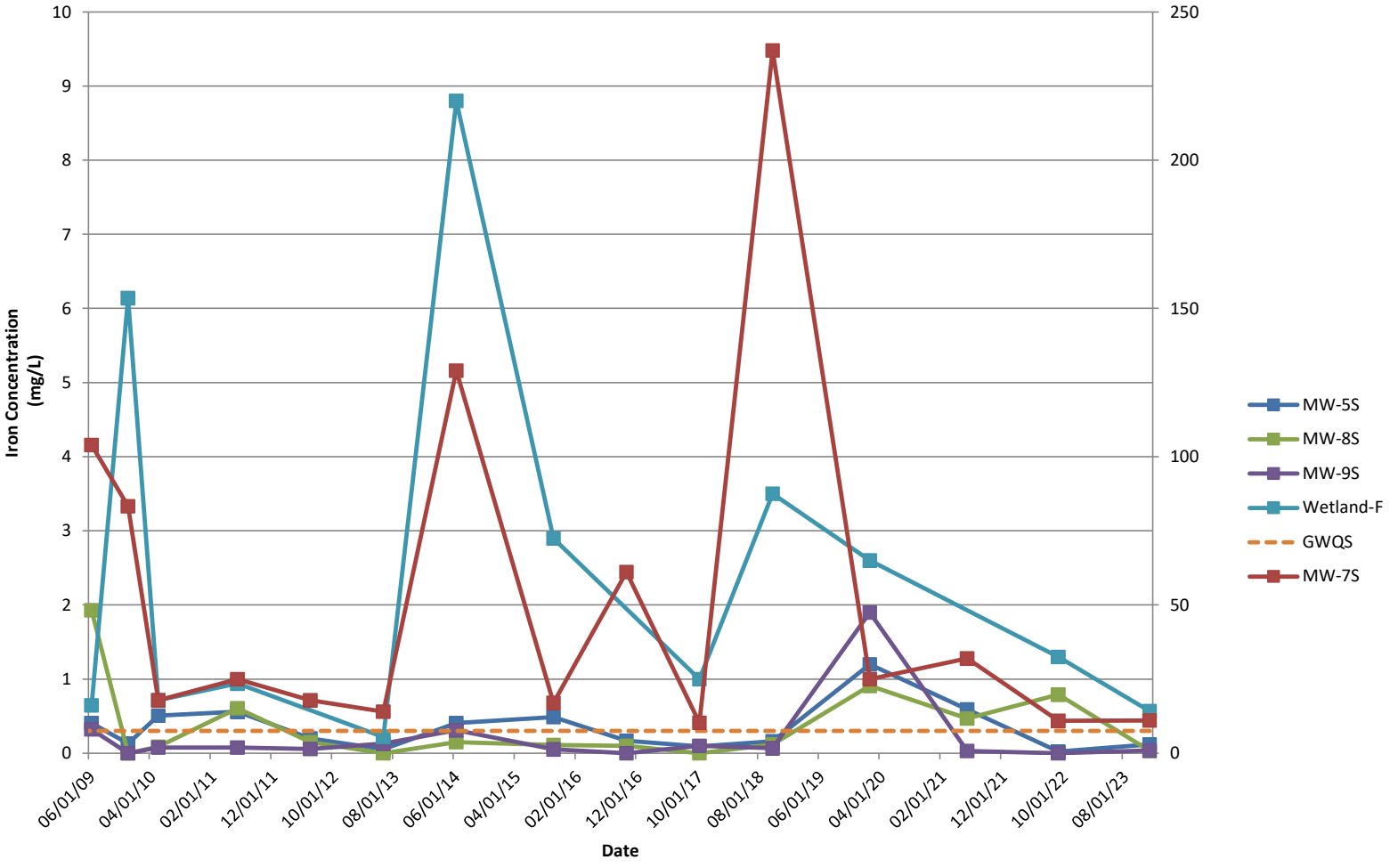
HISTORIC DATA CHARTS


ROUX
Ammonia Concentration vs Time
(June 2009 - December 2023)
Ammonia Concentration (mg/L)
25
20
15
10
5
0
Jun-09
Nov-09
Apr-10
Sep-10
Feb-11
Jul-11
Dec-11
May-12
Oct-12
Mar-13
Aug-13
Jan-14
Jun-14
Nov-14
Apr-15
Sep-15
Feb-16
Jul-16
Dec-16
May-17
Oct-17
Mar-18
Aug-18
Jan-19
Jun-19
Nov-19
Apr-20
Sep-20
Feb-21
Jul-21
Dec-21
May-22
Oct-22
Mar-23
Aug-23
Date
MW-5S
MW-7S
MW-8S
MW-9S
Wetland-F
GWQS

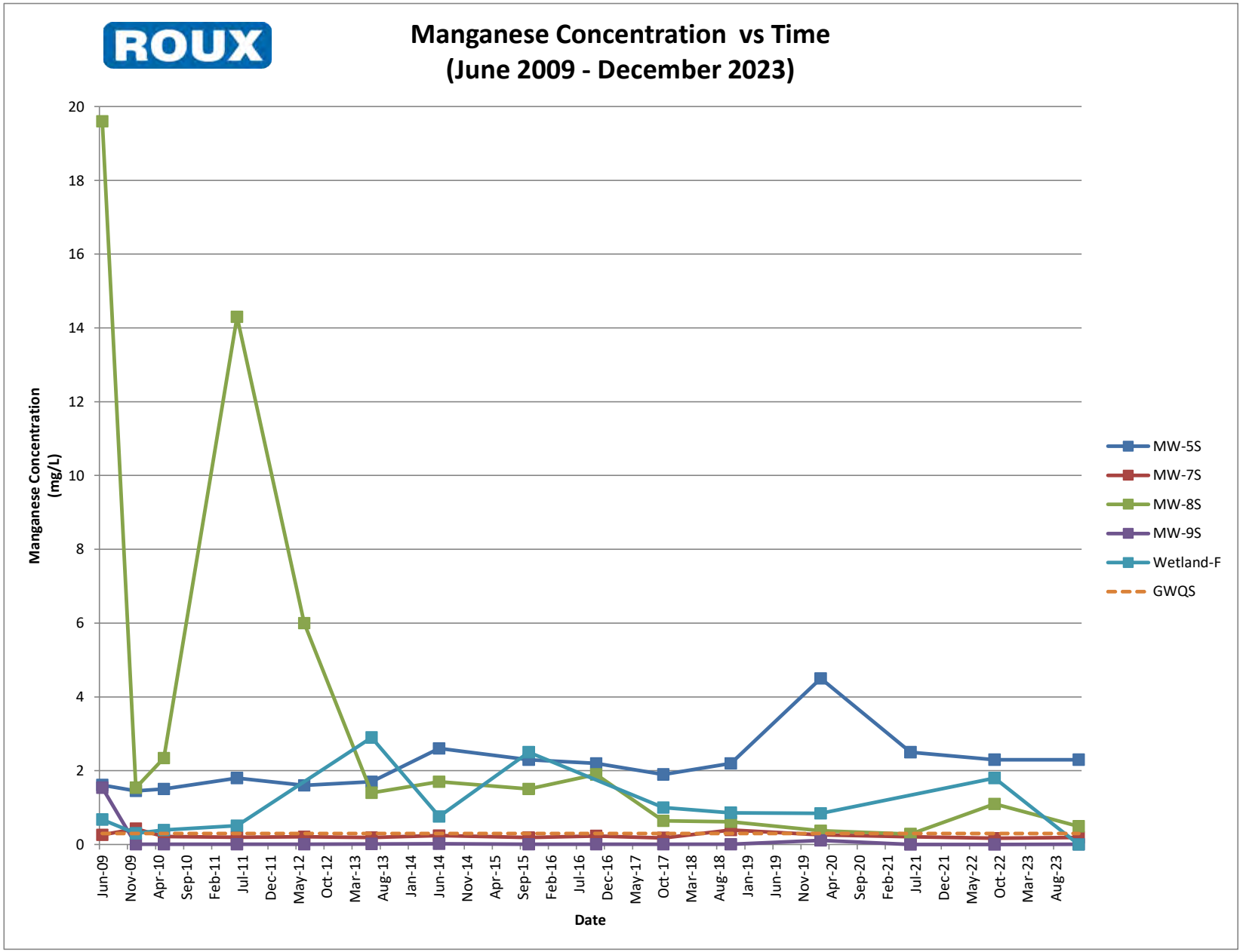

ROUX
Chromium Concentration vs Time
(June 2009 - December 2023)
Chromium Concentration (mg/L)
0.06
0.05
0.04
0.03
0.02
0.01
0
Jun-09
Nov-09
Apr-10
Sep-10
Feb-11
Jul-11
Dec-11
May-12
Oct-12
Mar-13
Aug-13
Jan-14
Jun-14
Nov-14
Apr-15
Sep-15
Feb-16
Jul-16
Dec-16
May-17
Oct-17
Mar-18
Aug-18
Jan-19
Jun-19
Nov-19
Apr-20
Sep-20
Feb-21
Jul-21
Dec-21
May-22
Oct-22
Mar-23
Aug-23
Date
MW-5S
MW-7S
MW-8S
MW-9S
Wetland-F
GWQS

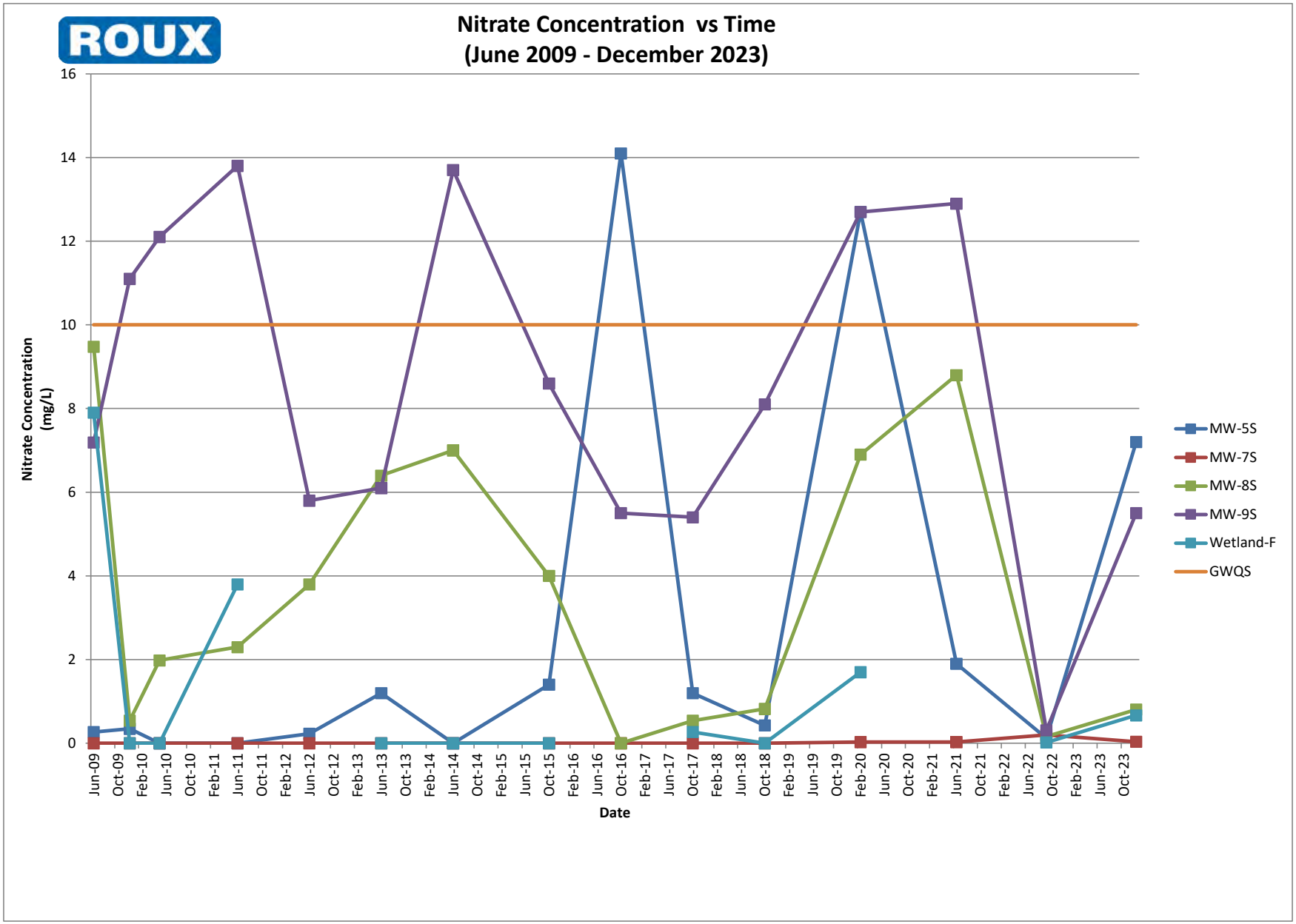
ROUX

Iron Concentration vs Time
(June 2009 - December 2023)



NOTE: IRON CONCENTRATION FOR WELL MW-7S IS PLOTTED ON THE RIGHT HAND SCALE; ALL OTHE DATA IS ON THE LEFT HAND SCALE


ROUX
Manganese Concentration vs Time
(June 2009 - December 2023)
Manganese Concentration (mg/L)
Date
MW-5S
MW-7S
MW-8S
MW-9S
Wetland-F
GWQS


ROUX
Nitrate Concentration vs Time
(June 2009 - December 2023)
Nitrate Concentration (mg/L)
16
14
12
10
8
6
4
2
0
Jun-09
Oct-09
Feb-10
Jun-10
Oct-10
Feb-11
Jun-11
Oct-11
Feb-12
Jun-12
Oct-12
Feb-13
Jun-13
Oct-13
Feb-14
Jun-14
Oct-14
Feb-15
Jun-15
Oct-15
Feb-16
Jun-16
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Oct-20
Feb-21
Jun-21
Oct-21
Feb-22
Jun-22
Oct-22
Feb-23
Jun-23
Oct-23
Date
MW-5S
MW-7S
MW-8S
MW-9S
Wetland-F
GWQS

ATTACHMENT 4

FIELD INSPECTION FORM & PHOTOLOG

ROUX

Field Inspection Report
Post-Remedial Operation & Maintenance Plan

Property Name: Peter Cooper Markhams Site Project No.: 4548.00018

Client: Biltekoff & Pullen

Property Address: Bentley Road Dayton, NY 14041

Property ID: (Tax Assessment Map) Section: Block: Lot(s):

Preparer's Name: Tom Behrendt Date/Time: 12/21/23 1300

CERTIFICATION

The results of this inspection were discussed with the Site Manager. Any corrective actions required have been identified and noted in this report, and a supplemental Corrective Action Form has been completed. Proper implementation of these corrective actions have been discussed with the Site Manager, agreed upon, and scheduled.

Preparer / Inspector: Tom Behrendt **Date:** 12/21/23

Signature:

Next Scheduled Inspection Date:

Property Access

1. Is the access road in need of repair?	☐ yes	☒ no	☐ N/A
2. Sufficient signage posted (No Trespassing)?	☒ yes	☐ no	☐ N/A
3. Has there been any noted or reported trespassing?	☐ yes	☒ no	☐ N/A

Please note any irregularities/ changes in site access and security:

Final Surface Cover / Vegetation

The integrity of the vegetative soil cover or other surface coverage (e.g., asphalt, concrete) over the entire Site must be maintained. The following documents the condition of the above.

1. Final Cover is in Place and in good condition?	☒ yes	☐ no	☐ N/A
Cover consists of (mainly): Wild Vegatative Grass Cover			
2. Evidence of erosion?	☐ yes	☒ no	☐ N/A
3. Cracks visible in pavement?	☐ yes	☐ no	☒ N/A
4. Evidence of distressed vegetation/turf?	☐ yes	☒ no	☐ N/A
5. Evidence of unintended traffic and/or rutting?	☐ yes	☒ no	☐ N/A
6. Evidence of uneven settlement and/or ponding?	☐ yes	☒ no	☐ N/A

ROUX

Field Inspection Report
Post-Remedial Operation & Maintenance Plan

Final Surface Cover / Vegetation

7. Damage to any surface coverage? ☐ yes ☒ no ☐ N/A

If yes to any question above, please provide more information below.

Gas Vent System Monitoring and Maintenance

Are there signs of stressed vegetation around gas vents? ☐ yes ☑ no ☐ N/A

Are the gas vents currently intact and operational? ☒ yes ☐ no ☐ N/A

Has regular maintenance and monitoring been documented and enclosed or referenced? ☐ yes ☐ no ☒ N/A

Groundwater Monitoring

Is there a plan in place and currently being followed? ☒ yes ☐ no ☐ N/A

Are the wells currently intact and operational? ☒ yes ☐ no ☐ N/A

When was the most recent sampling event report and submittal? Date: 12/21/23

When is the next projected sampling event? Date: 3rd March 2025

Property Use Changes / Site Development

Has the property usage changed, or site been redeveloped since the last inspection? ☐ yes ☒ no ☐ N/A

If yes, please list with date:

ROUX

Field Inspection Report
Post-Remedial Operation & Maintenance Plan

New Information

Has any new information been brought to the owner/engineer's attention regarding any and/or all engineering and institutional controls and their operation and effectiveness?

☐ yes ☒ no ☐ N/A

Comments:

This space for Notes and Comments

Please include the following Attachments:

1. Site Sketch
2. Photographs

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
	Peter Cooper -Markhams Site	0199-001-100

Photo No.	Date
3	12/21/23

Direction Photo Taken:
West

Description:
PVC Vent pipe on elevated fill area.

Photo No.	Date
4	12/21/23

Direction Photo Taken:
West

Description:
Top of containment fill area facing west.

Prepared By: TAB

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
	Peter Cooper -Markhams Site	0199-001-100

Photo No.	Date
1	12/21/23

Direction Photo Taken:
East

Description:
Elevated fill area.

Photo No.	Date
2	12/21/23

Direction Photo Taken:
East

Description:
Elevated fill area.

Prepared By: TAB